Analysis of Converted Historical Mediterranean Churches and Mosques

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ABSTRACT

Mediterranean shores are one of the early places, which were inhabited by human beings. Different ethnic groups, religions and architecture were originated and spread on these shores, which are Mesopotamian, Egyptian, Canaanite, Phoenician, Hebrew, Carthaginian, Greek, Roman, Byzantine, Ottoman, Christian and Islamic cultures. These cultures are based on different of idolatry (paganism), polytheism and Monotheism.

Monotheistic religions are the most popular widespread religions in the world especially around the Mediterranean Sea. More than 54% of the world's population believes in Monotheistic religions (in the years between 2006 & 2010); 30% believes in Christianity, 20% in Islam, 3.77% in Baha'i and 0.23% in Judaism. Christianity and Islam were accepted by Mediterranean shores, hence being separating from each other. The largest religion in the northern shore of the Mediterranean for at least a millennium and a half has been Christianity. While the eastern and southern shores of the Mediterranean for at least a half of the millennium has been Islam. The Mediterranean basin has seen religious alterations from Christianity to Islam and from Islam to Christianity between 7th till 20th century. As a result, many changes took place in people's lives, traditions, communities, behaviors and architecture. Religious buildings were also mostly influenced by such shift of religions in which different Roman, Greek and Jewish temples (synagogues) were converted to churches and mosques. In addition, churches were converted to mosques and mosques to churches.

Because of their religious value, mosques and churches are very important buildings and are of two types, basilica church and chapel in Christianity, Friday mosque and chapel (musala or mosque) in Islam. In general, churches and mosques as the symbols of religions are mostly situated in the centers of the old cities which carry an architectural and historical value in people's minds.

This study concentrated on individual Friday mosque and basilica church, which were converted in Mediterranean countries between 13^{th} to 20^{th} centuries and are situated in old cities. The study aims to make a comparative analysis of church conversions and mosque conversions in order to find out similarities and differences between architectural sacred spaces, architectural religious elements and structural elements of churches and mosques.

Following a qualitative research approach through literature review and site survey, literature survey was made in order to introduce and categorize the components of religious buildings and their conversion factors, levels and types. Moreover, the components of each building are kept in a systematic way, using a table for each building consisting of drawings and photography. The last step was the thesis writing which included a theoretical part to explain the historical background of the study and the analysis of some cases. The analysis was based on comparative study focusing on the study of architectural and structural features of mosques and churches.

Keywords: Converted religious buildings, Converted Churches, Converted Mosques, Mediterranean region, Architectural features.

ÖZ

Akdeniz kıyıları insanoğlu tarafından yerleşilen ilk yerlerden biridir. Farklı birçok etnik grup, din ve mimari bu kıyılardan doğmuş ve yayılmıştır. Bunlar arasında en önemlileri Mezopotamya, Mısır, Kenan, Fenike, İbrani, Kartaca, Yunan, Roma, Bizans, Osmanlı, Hristiyan ve İslam kültürleridir. Bu kültürler Pagan, çok tanrılı ve tek tanrılı çeşitli dinlere dayanmaktadır.

Tek tanrılı dinlerde (2006 – 2010 yılları arasında) bölge nüfusunun %30'u Hristiyanlık, %20'si İslam, %3.77'si Bahai ve %0.23'ü Musevilik dinlerine mensuptur. Yüzyıllar boyu Hristiyanlık ve İslam Akdeniz kıyılarında yaşayan nüfus tarafından inanılan ve kıyıları birbirinden ayıran en büyük iki din olmuştur.

Akdeniz'in Kuzey kıyılarında en yaygın dini inanç Hristiyanlık olarak görülmektedir 1000 ve 500 yıl öncesi periyodda. Buna karşın Akdeniz'in Güney ve Doğu Kesinlerinde 500 yıllık süreç içerisinde en yaygın inanç İslam olmuştur. Akdeniz Havzasında dini etkileşimler sıkça görülmektedir, Hristiyanlık'tan İslam'a, İslam'dan Hristiyanlığa geçişler özellikle 7. Be 20. Yüzyıllar arasında görülmektedir. Sonuç olarak, İnsanların yaşadıkları bölgelerde bir çok değişiklik gerçekleşmiştir. Bu değişiklikler en çok da dini binaları etkilemekteydi. Bu bağlamda farklı birçok Roma, Yunan ve Yahudi tapınakları (Sinegog) kilise ve camilere dönüştürülmüştür. Buna ek olarak, belli bölgelerde kiliseler camilere camiler de kiliselerer dönüştürülmüştür.

Cami ve kiliseler dini değerleri açısından oldukça önemli yapılardır. Bu tip binaların iki türü vardır. Bunlar Hristiyanlık'ta bazilika kilise ve şapel, İslam'da ise Cuma

Camii ve şapel (musala veya cami)'dir. Genel olarak kilise ve camiler bir dinin varlığını ve gücünü yansıtan sembol ve şahitlerdir. Bu sebeple genelde antik kentlerin tam merkezinde yer almaktadırlar. Antik kentler insaların zihninde mimari ve tarihi değere sahiptir.

Bu çalışma 13. Ve 20. Yüzyıllar arasında dönüştürülmüş olan ve Akdeniz bölgesindeki antik kentlerde yer alan tekil Cuma Camileri ve Bazilika kiliseleri üzerinde yoğunlaşmaktadır. Bu tezin amacı, kutsal mimari yerler arasındaki ve cami ve kiliselerde yer alan mimari dini elementler ve yapısal elementler arasındaki benzerlik ve farkları belirlemek için Cami ve kilise dönüştürmeleri arasında karşılaştırmalı analiz yapmaktır.

Bu çalışmada nitel araştırma yöntemi kullanılmıştır. Önemli bir adım olan metodoloji literatür taraması ve yerinde inceleme yöntemleri kullanılarak elde edilen verilere dayandırılmıştır. Veri toplama süreci konuyla ilgili literatürün taranması ile gerçekleştirilmiştir. Literatür taraması dini binaların unsurlarını ve dönüştürlme yöntem seviye ve çeşitlerini bulgulamak ve sınıflandırmak için uygulanmıştır. Her binaya ait unsurlar çizi ve fotoğraflardan oluşan bir tablo kullanmak suretiyle sistematik bir şekilde kayıt altına alınmıştır. Son adım olarak, amaçlanan çalışmanın tarihi geçmişini anlatmak için yapılan teorik bölüm ve bazı örneklerin analizinden oluşan tezin yazılması gerçekleştirilmiştir. Analiz karşılaştırma çalımasına dayanmaktadır. Bu analiz cami ve kiliselerin mimari ve yapısal özellikleri üzerinde yoğunlaşmıştır.

Anahtar Kelimeler: Dönüştürülmüş Dini Yapılar, Dönüştürülmüş Kiliseler, Dönüştürülmüş Camiler, Akdeniz Bölgesi, Mimari Özellikler.

DEDICATION

DEDICATED TO MY FATHER

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The process of earning a master and writing an interior architectural thesis in Eastern Mediterranean University was hard and long. The study took me 3 years. It was impossible to have been done single handedly.

I extremely grateful to my parents, who are supporting me during all my life and while I continue this academic career. I thank my wife and son for putting up with an absence of husband and father during most times. I left my home and my family to save their future.

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Chapter 1

INTRODUCTION

Converting a building is a common practice, which has existed for many centuries. Historically, it has been common for emperors or conquerors to convert conquered properties in such a way to symbolize their power.

Conversion process expresses the relation between architecture and human needs. Architecture is a shelter and response to people needs. Human life is in continual change. Architecture reflects this change and the new needs of human being and conversion also contributes to the continuous use of original building. That is, instead of eliminating the pre-existing building or allowing it to become a deserted building, it is adapted and renovated to meet new functions and new users' needs. The research on conversion can shed light on how such process has taken place. Thus, it helps to create the theoretical framework about architectural conversion, which can be used further as a strategy to convert buildings. This may also help in the evaluation of the converted buildings as well as to resolve problems that have appeared after the conversion.

Throughout the history, different types of buildings, especially religious buildings have been converted such as mosques and churches since religious buildings are the most permanent and influential in any community. Thus, when the dominant religion of a community is changed the religious building is converted according to the new

needs (Gowans, 2014). It should be mentioned here that there are two types of churches and mosques – individual and complex buildings.

This study concentrated on individual churches converted to mosques and individual mosques converted to churches, since these buildings have been built for performing prayers. On the other hand, complex churches and mosques consist of church/mosque with some other facilities, such as, residential complex, hospital, school and library. This thesis makes several significant contributions to the fields. First, converted religious buildings are widely spread within Muslim and Christian communities. Second, converted religious buildings have been largely ignored in architectural academic research. Conversion can also illuminate how belief and practice determine the creation of places. Further, this thesis analyzed the conversion of the mosques and churches to one another in order to find out how the conversion between churches and mosques has taken place. Since the Mediterranean Sea is a common route between Asia, Africa and Europe, and Abrahamic religions originated from Mediterranean shores to the whole world, then this thesis will focus on this region for its case studies.

1.1 Aim of the Study

The aim of this thesis is to make a comparative analysis of church conversions and mosque conversions in order to find out similarities and differences between sacred architectural spaces, architectural religious elements and structural elements of churches and mosques. In some cases, churches have been converted to mosques and mosques to churches from the 7th to 20th centuries. In this study, cases were selected between the 13th and 20th centuries, which can be a limitation of the research.

Moreover, the study will help to understand how architectural conversion has been done.

1.2 Research Question

Churches and mosques have been converted to serve special purposes. Muslims have converted churches to mosques and Christians have done the same to mosques. The main issue has been the conversion of these buildings in a way that it would be possible for the followers of the new religion to use the building for religious purposes. From this point of view the main research question is:

- How architectural space and components/elements were influenced in Mediterranean churches and mosques following such conversions?

1.3 Methodology of the Research

The Data collection method used in the study draws on the relevant published sources and literature review. The data were collected from various sources (books, articles, journals, websites, interviews) and site survey (personal visits to site, 3d and 360° online virtual tour). Moreover, literature survey was made in order to introduce and categorize the components of religious buildings and their conversion factors, ways, levels and types.

A qualitative research method was used in this study. Online site survey was used in the following cases: Cordoba Mosque in Spain, Seville Mosque in Spain, Ketchaoua Mosque in Algeria, St John Church in Lebanon, Saint John the Baptist in Lebanon, Cathedral John the Baptist in Palestine and St. Philippe Church in Algeria in order to collect the information about original buildings (pre-existing) and after conversion (existing buildings). 3d-Google Earth, online 3d and 360 virtual tours were used in this type of site survey. Further, the information about St. Sophia church in Northern

Cyprus and Saint Nicholas church in Northern Cyprus was collected during the site visits. The collected data was compared with the recorded images, personal notes and drawings that were taken by personal and online visits to these sites to explain and analyze the selected cases.

Further, each case study was explained using the following steps: original name, country, city, construction period, name after conversion, conversion period, conversion order, justifying the reason for selecting these case studies due to the limitations of the study. A table was designed for each case study as shown in Table (1.1).

Table 1.1. Historical Analysis

	General Historical Information	
1	**Original name**	
2	**Country**	
3	**City**	
4	**Construction period**	
5	**Name after Conversion**	
6	**Conversion period**	
7	**Conversion order**	
8	**Reason of selection as a case study**	It is situated on one of Mediterranean Country and in Old City. Also, it is a historical individual Church or Mosque.

The analysis was based on comparative study in this thesis, while the architectural analysis was conducted according to architectural and structural features as it is shown in Table (1.2). Each case was analyzed by comparing architectural and structural features of the original building with the same building after conversion.

Table 1.2. Architectural and Structural Features

From Christianity/Islam to Islam/Christianity			
Architectural Features			
Architectural sacred spaces			
		Original building	After Conversion
Courtyard			
Prayer hall	Spatial organization		
	Orientation		
	Openings		
Architectural religious elements			
		Original building	After Conversion
Fountain			
Altar/niche			
Pulpit			
Bell tower/Minaret			
Structural Features			
		Original building	After Conversion
Floor			
Ceiling			
Wall			
Column			

1.4 Limitations of the Thesis

This study investigated the cases located within Mediterranean region, since Christianity and Islam emerged in Middle East and spread through Mediterranean Sea as a common route between Asia, Africa and Europe. Mediterranean countries have a number of converted Islamic and Christian religious buildings. In this study, our main concern was converted historical churches and mosques. Thus, case selection was made according to the following points:

- There are two types of mosques and churches: complex and individual. The complex type contains other facilities such as religious school, hospital, house for both mosques and churches. The individual type of mosques and churches used for prayer performance only, were considered in this work.
- There are many types of churches and mosques. In Christianity, there are chapels and basilica churches; while there are chapels (Musala) and Friday

mosques in Islam. Basilica church is used in all prayers and for gathering Christians during Sunday prayers, while chapel is not used on Sunday. On the other hand, Friday mosque is used in all prayers and for Muslims assembling during Friday prayers, while chapel is not used on Friday. This study was based only on basilica churches and Friday mosques because these types have the capacity for group gatherings; which this can be one of the limitations of the study.

- Historical mosques and churches were chosen from the countries that are located around Mediterranean Sea, such as Northern Cyprus, Lebanon, Palestine, Algeria and Spain. The reason for this selection is that these historical mosques and churches are situated in old cities and an Old city in architecture is a historical or original core of the city, where buildings have retained their original character. Throughout the history, the old city has been home to the most key sites of religious importance especially churches and mosques. These types of religious buildings are situated in important locations.
- Another limitation of the research is that only those mosques and churches that were converted between 13th and 20th centuries have been taken into consideration in this study.

  From the 1st till 19th century, Christian acceptance led to the conversion of people's religion to Christianity. In the 7th century Islam emerged and spread in Mediterranean regions and attempts were made to convert people's religion to Islam until 19th century. A series of political and religious wars (Islamic and Crusades) took place between the 11th to 19th centuries to spread either Islam or Christianity in the regions under consideration. In the 20th

century, a period of colonization started in Mediterranean countries which were followed by countries gaining independence. All these changes led to conversion of the official and dominant religions in Mediterranean countries. These conversions in religions were reflected in people's lives, traditions, communities, behaviors and architecture. These changes also manifested themselves mainly in religious buildings, where different Roman, Greek and Jewish temples (synagogues) were converted to churches and mosques. As a result, churches were converted to mosques and mosques to churches. An important point to consider in this regard is that converted churches and mosques are situated in old cities.

- All the plan types of mosques and churches, such as hypostyle, Iwan, central dome plan of mosques, and basilica plan types with rectangular plan, cross plan, central cross plan were included into analysis.
- The historical and architectural analyses were made based on the architectural and structural features of converted churches and mosques. Therefore, the structural features are limited to the structural elements of the buildings, which are the load-bearing walls with a system of columns.

1.5 Focus of the Study

This study focuses exclusively on architectural and structural features of the converted churches and mosques. Specifically, it concentrates on courtyard, prayer hall, niche/altar, pulpit, bell tower/minaret, floor, ceiling, columns, and walls.

All the cases were selected from the regions around the Mediterranean Sea. These cases are categorized into two types from Christianity to Islam (churches converted to mosques) and from Islam to Christianity (mosques converted to churches).

From Christianity to Islam contains the analysis of the following cases: Cordoba Mosque in Spain (Cathedral of Our Lady of the Assumption) converted in 16th century, Seville Mosque in Spain (Seville Cathedral) converted in 16th century, Ketchaoua Mosque (Cathedral of St. Philippe) in Algeria converted in 19th century.

From Islam to Christianity includes the analysis of St John Church (Great Omari Mosque) in Lebanon converted in 13th century, Saint John the Baptist (Al-Omari Mosque) in Lebanon converted in 13th century, Cathedral John the Baptist (Great Omari Mosque) in Palestine, St. Sophia (Selimiye Mosque) in Northern Cyprus converted in 16th century and Saint Nicholas (Lala Mustafa Pasha Mosque) in Northern Cyprus converted in 16th century, St. Philippe Church (Ketchaoua Mosque) in Algeria converted in 20th century.

Chapter 2

MEDITERRANEAN RELIGIOUS BUILDING AND THEIR CONVERSIONS

Mediterranean is the region of lands and countries with inhabitants around the Mediterranean Sea.

This sea is located at crossroads of Europe, Asia and Africa (Fig.2.1); it is an important route for merchants and travellers of ancient times that allowed trade and cultural exchange between emergent peoples of the region. The Mediterranean Basin (region) is one of the richest and complex regions on Earth, due to the region's high level of endemism, having been occupied by human for around eight thousand years. The name Mediterranean is derived from the Latin Mediterraneus, meaning "inland" or "in the middle of the land" (from medius, "middle" and terra, "land") (Merriam dictionary, 2015).

Figure 2.1. Location of Mediterranean Sea URL 1

The history of the Mediterranean region is crucial to understanding the origins and development of many ancient civilizations and modern societies. Several ancient civilizations were located around the Mediterranean shores, and were greatly influenced by their proximity to the sea. It provided routes with trade, colonization and war throughout the ages (Polycratis, 1992); (Abulafia, 2011). Due to the shared climate, geology, and access to the sea, cultures centered around the Mediterranean tended to have some extent of intertwined culture and history.

The history of the Mediterranean region is the history of the interaction of the cultures, religions and people of the lands surrounding the Mediterranean Sea. There are many civilizations (cultures) that have been created and spread from Mediterranean shores, which are Mesopotamian, Egyptian, Canaanite, Phoenician, Hebrew, Carthaginian, Greek, Roman, Byzantine, Ottoman, Christian and Islamic cultures. These cultures are based on different religions which are idolatry (pagan), polytheism and Monotheistic religions (Judaism, Christianity, Islam and Baha'i) (Barbara, 2016); (URL 2).

In recent times (19^{th} and 20^{th} century), the Mediterranean Region encompasses fourteen states which are Spain, Italy, Greece, Turkey, Cyprus, Northern Cyprus, Syria, Lebanon, Palestine, Egypt, Libya, Algeria, Tunis and Morocco (Fig.2.2). These countries are now evenly divided between Monotheistic religions especially Christianity and Islam. The Mediterranean basin has undergone religious alterations from the Christianity to Islam and Islam to Christianity. Where, Spain, Italy, Greece and Cyprus have Christian majorities (The largest religion in these countries for at least a millennium and a half has been Christianity). While, Morocco, Tunis, Algeria, Libya, Egypt, Palestine, Lebanon, Syria, Turkey and T.R of Northern Cyprus have

Muslim majorities (The largest religion in these countries for at least a half millennium has been Islam) (Meri, 2006); (URL 3). In addition, between (2006-2010) more than 54% of world's population believes in Monotheistic religions; 30% believes in Christianity, 20% in Islam, 3.77% in Baha'i and 0.23% in Judaism; (Jenkins, Sep 12, 2011, p. 2). This study will focus on Christianity and Islam, as these religions are most widespread (prevalent) religions in Mediterranean countries and around the whole world.

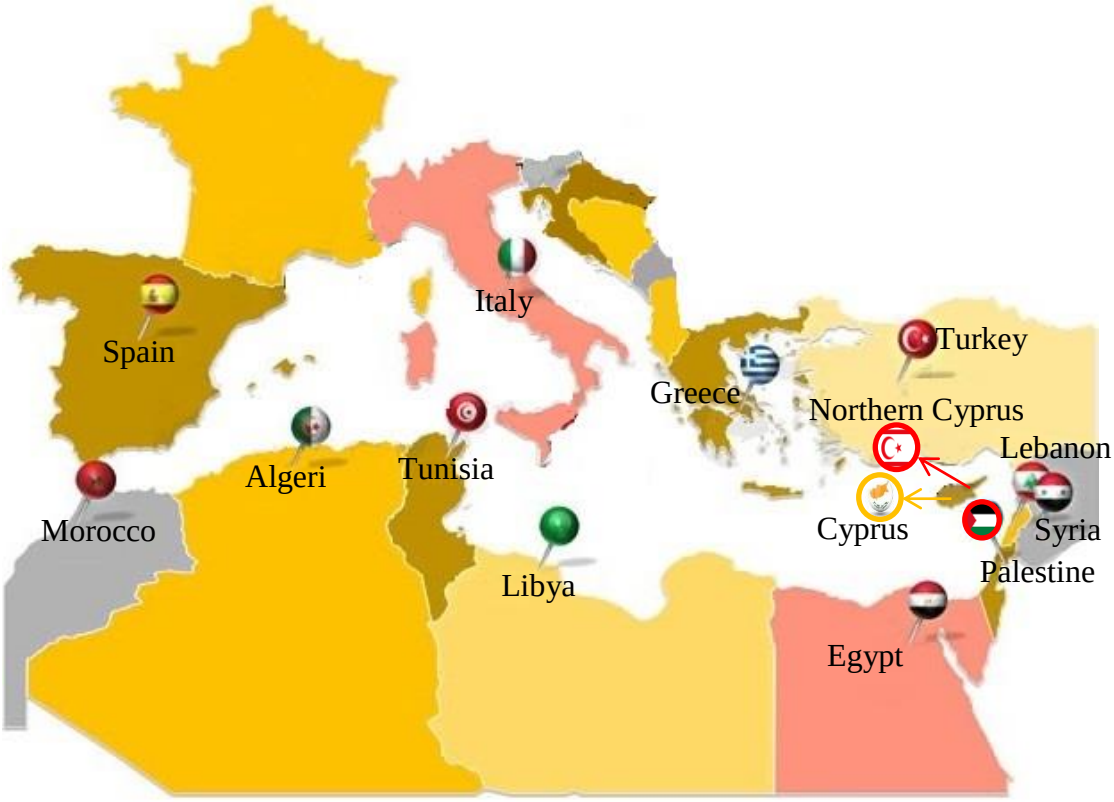


Figure 2.2. Mediterranean Countries URL 4

2. 1 Religion

Religion is a cultural system of behaviors and practices which is based on sacred texts. The word 'religion' is defined as worshiping any specific god, goddess, or any other thing that is holly for someone or a group of people (Merriam dictionary, 2015).

It roots in the Latin word “religio”, which in fact means reverence for God or the gods, being thoughtful of divine things. Religion is “a complex system with many social functions, one of which is to bind people together into cooperative communities organized around deities” (Haidt, 2010, p. 140). Different scholars and researchers have offered different definitions of religion. Mandaville & James (2010, p. 3), have noted, that "the religion is as a relatively-bounded system of beliefs, symbols and practices that addresses the nature of existence". Moreover, Miller described it as something that "strives for the immaterial beyond the material, it necessarily needs the material to evoke the immaterial" (2005). Furthermore, Durkheim defined religion as a “unified system of beliefs and practices relative to sacred things, that is to say, things set apart and forbidden beliefs and practices which unite into one single moral community called religious building, all those who adhere to them" (1915, p. 44).

To understand any historical architecture especially sacred types of buildings, it is required to highlight the religion and religious practice, which are spread in that era. It is axiom that prayer is a main duty and performance in all religion. Without understanding how prayers are performed, there is a gap in knowledge and facts.

In fact, followers of any religion need specific spaces for different purposes related to the religion; and this need has been the reason for creation of holly spaces and religious buildings. Religious buildings are witnesses of religion's existence and belief. The history of architecture is concerned more with religious buildings than with any other type, because in most past cultures the universal and exalted appeal of religion made the religious buildings the most expressive, the most permanent, and the most influential building in any community (Gowans, 2014).

2.2 Religious Buildings

Religious buildings are places within which followers of a religion gather and do certain activities based on the rules of the religion. It is a shelter that also prepares proper space according to religion's essence.

From decipher, the authoritative (formal) meaning of the religious building, it is a religious community center and building for this reason or function. Furthermore, Appadurai (1986) mentioned that the religious building is related to different groups of people and periods of time and for different purposes such as showing the power of religion or determining the religious identity of the majority community.

Religious buildings are the most important urban identity elements, landmarks of the towns, symbols of the towns, locate mostly in the heart of the district, most important element of the cityscape, differ from the monumental buildings with their non-secular space behaviors, they have very unique (otherworldly) space expressions (Tanac, 2012). Besides, these types of buildings are created for other purposes and significances. In some cases, these buildings have been built for various purposes. The mains are consigned in Table 2.1 below:

Table 2.1. Aims of the construction of Religious Buildings

The aims of religious buildings	1- Religious aims
	2- Political goals
	3- Social purposes
	4- Others
	5- A combination of mentioned features

These are the factors which gave rise to the erection of religious buildings. This study will focus on religious aim, which is related to worship as mentioned in limitation.

Considering the historical architectural heritage and according to the literature, Churches and Mosques are the most common religious buildings around the world and especially in Mediterranean countries (Ul-Majeed, 2007,2009), and each type has specific characteristics in terms of architecture. Therefore, this study will focus on Mosques and Churches.

2.3 Converted Religious buildings

According to terminology, the word conversion refers to the change of something implicitly or explicitly. This means the change of the essence or the nature of something. In addition, it is a process of making or becoming something different in some particular, as well as the replacement with other elements or items. Conversion is covering and modifying something (Merriam dictionary, 2015). In architecture, Conversion is an alteration of the building. It is defined as a change of use, adaptation and a form of adaptive reuse that usually requires major changes of the building. It is the adaptation of the existing building according to new needs and users. This process is reflected on interior and exterior design of the building. It is appeared through modifying elements of space and form (Al-Ta'ee, 2000). Conversion contributes to the continual use of historical buildings (Wilkinson & Remøy, 2015).

The buildings have always been subjects for change throughout their lifetime. Political regimes, religious and economic circumstances were changing. These

changes led to convert buildings. It is cheaper and less difficult to convert a building than to construct it from the scratch. The reuse of the existing buildings is a matter of economics, but at the same time, a common practice throughout history (Powell, 1999). “The buildings were always adapted to new uses, because the structure of a building tends to withstand longer than its function,” (Cantacuzino, 1975, p. 8).

Throughout the history, religious buildings have been converted to different functions or according to new religion and users. Several religious buildings were converted to museums, houses, hotels, bookstores, restaurants and offices (Peyravi, 2010). On the other hand, there are some religious buildings, converted according to new religion and users, which functions have not been changed.

As it was stated above, Mediterranean shores are divided between Christianity and Islam. Thus, it is axiom that many religious buildings are converted to mosques and churches. In addition, several churches are converted to mosques and mosques to churches. This type of converting has proliferated within Mediterranean countries, due to the unstable condition of communities. Converting historical churches and mosques is described as a successful strategy for city redevelopment. This strategy reduces the construction of new mosques and churches. Because most countries have an economic recession and there are high vacant rates of historical churches and Mosques (deserted or empty).

Historically, the first and earliest conversion was done in 705. St. John Damascus cathedral was bought by Umayyad and converted into a mosque. In exchange to that conversion, new churches have been built in the same capital city of Syria, Damascus (Houtsma, 1993). The process of turning churches into mosques was especially

intensive during Umayyad Empire, then it continued in Abbasid and other empires especially during Ottoman period (Hillenbrand, 2009). On the other hand, some instance mosques have been converted to Churches in Lebanon, Algeria and Spain, the most prominent of them is the Mosque of Cordoba in 1492 (Wagner, 2004). The above information is summarized in the table below.

Table 2.2. Summary of Architectural Conversion

Conversion types	• Functional conversion • Formal conversion • Spatial conversion
Conversion levels	Interior Exterior
Conversion ways	Elimination, Addition, Replacement, Covering
Factors of conversion	1- Political factor 2- Religious factor 3- Economic factor
Types of converted religious buildings	Religious buildings are converted to different functions (Museums, houses, hotels, bookstores, restaurants and offices)
	Religious buildings are converted according to new religion or users (same function)
Types of converted Mediterranean religious buildings	1. Different type of buildings are converted to mosques and churches
	2. Mosques are converted to churches and churches are converted to mosques

Converted mosques tend to lack references to high style Islamic architecture suggesting that the elements of Islamic design are inconsequential to creating a sacred place. Therefore, understanding how Muslims and Christians negotiate with a pre-existing building might shed light on the question of how the churches are converted to mosques and mosques to churches. This study sought to illustrate the ways Christians convert existing mosques into churches and Muslims convert churches to mosques. The focus of this study is important for several reasons. First, converted religious buildings are pervasive within Muslim and Christian

communities. Second, converted religious buildings have been largely ignored. Conversion is drawing a complete picture for understanding how belief and practice determine the creation of places.

2.4 Church and Mosque

Churches and Mosques are providing environment for performing needs of their religions and users. These types of building are built for conducting prayers and the gathering of people. Conducting prayers is one of the functions of the building. This religious duty is performed due to the needs of Christianity and Islam as a faith.

Mosque and church are noticeably different from the surrounding buildings; Mosque is recognizable as a Muslim's religious building throughout minaret, domes, prayer hall and Islamic crescent (Kuban, 1974). Church is recognizable as a Christian's religious building throughout prayer hall, bell tower, domes and symbolic cross shapes (Talipan, 2012). Churches and Mosques have been built with different types and components.

2.5 Church

Church is a religious building for Christians for worship purpose. Its origin came from the Greek word Ekklesia, meaning a calling out (Collins, 2016). The word Church was mentioned in the Christian's holy book. Also, church is called hall and a house for Christian god (Matthew, 2009).

A Church consists of an Altar or symbolic status, sign and picture that represent Christian God. Altar is considered as the soul and meaning of Church. This element is situated at the end of the prayer hall, which represents the orientation of prayer. Christians who pray inside a Church are always faced towards an Altar, having

people sitting on long wooden seats also facing the Altar; such seats are called pew (McNamara, 2009). The church is been divided into two kinds based on their functions:

1- Individual building: it refers to the church used for performing prayers and gathering of Christians. Individual church is the primary sacred architecture in Christianity and the first type of church (McGavran, 1990).
2- Complex building: it is an alternative building which contains church with other facilities like residential complex, hospital, school and library. For example, Abbey or called Monastery is the term used to describe the nuns' or monk's dwelling place (religious dwellers) and church (McGavran, 1990); (Julita, 2010).

Individual church is classified into two kinds namely: chapel and church. Chapel is a minor church which is not built for the gathering of huge number of people and it is not also used for Sunday prayers, while, Church is built for the gathering of people and it is also used for all kinds of prayer (Sunday prayer). So, this study will therefore focus on the second type of individual Churches which have the ability of gathering people inside and outside (Ramsay, 2012). Church is developed from roman basilica.

2.6 Basilica Church Plan Type

Basilica is a type of Roman architectural structure where the first appearance was in a market and court buildings. Basilica has the ability of accommodating people because, it was essentially a large rectangular hall with a gable roof (Raja, 2012).

In Christianity, basilica was adopted as the standard design for the Christian church. The reason for this is because basilica churches have a nave and aisles where the repetition of arches which flanked central nave from four or two sides; nave and

aisles are used for gathering people in other to assemble them for prayers (Fig.2.3; 2.4) (Pite, 1878).

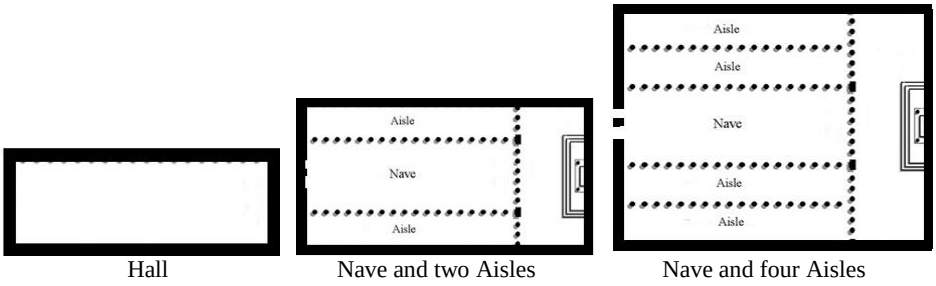


Figure 2.3. Architectural Basilica in Christianity (URL 5)

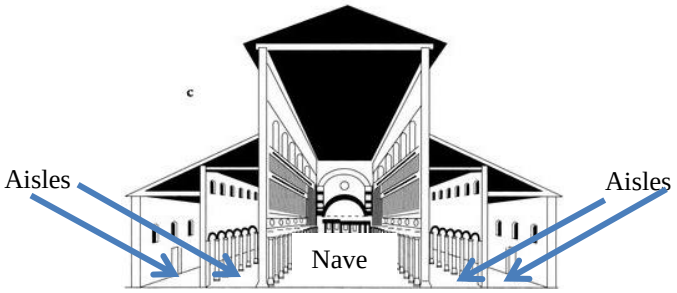


Figure 2.4. Basilica Section, Nave and Aisles (URL 6)

Early churches were physically the same as basilicas; they were simply used for Christian worships. The first basilica Church was built with transepts by Emperor Constantine in New Rome. Then, the basilica became a form of building which contain nave and side aisles. In recent times, the basilica term referred specifically to a large and important church that has been given special ceremonial rights by the Pope (Kavin, 2010). So, basilica has two meaning; first one is referred to as architectural form and the second is related with religious functions.

Architectural Basilica Church has two different plan types which are:

1- Rectangle plan type: it is a typical shape of basilica and it is described as the outcome of number of rectangles; where, we have the main and long rectangle

with small rectangle in the right ,left, and another rectangle in front of sanctuary (Fig.2.5) (Collins, 2003, 2012).

2- Cross plan type: it is designed as Christian cross shapes that appears clearly in view point, having a longest axis of the cross and an intersection also. Cross plan type have two kinds of shapes (Ousterhout, 2005):

a- Latin cross plan (Fig.2.6): It is a longitudinal cross plan (Kleinbauer, 1971).

b- Central cross plan (Fig.2.7): It is a centralized cross plan type (Farago, 1999).

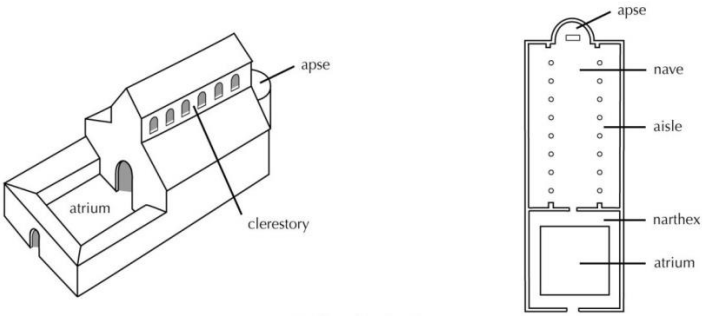


Figure 2.5. Rectangular Plan Type (URL 5)

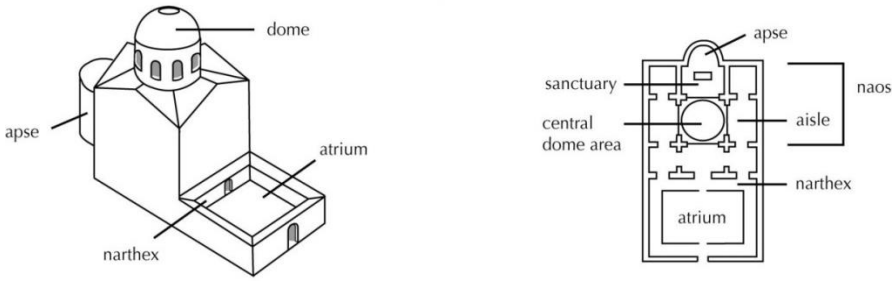


Figure 2.6. Latin Cross Plan (URL 5)

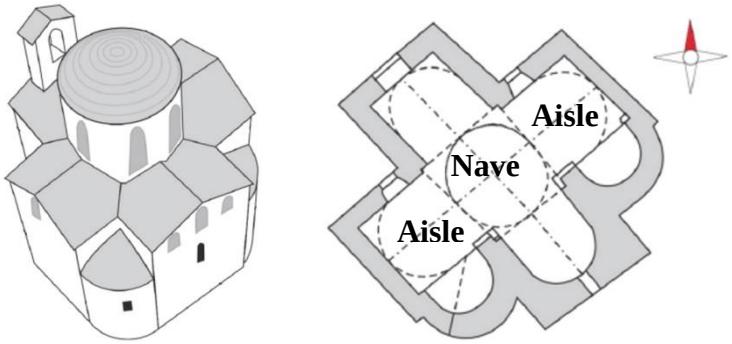


Figure 2.7.Central Cross Plan in Holy Cross in Nin, Croatia (URL 7)

Ernst Grube (1978) said that Christian basilica has physical and a functional orientation known in clear axial (Fig.2.8; 2.9). Where, the entrance of the Church is opposite to the Altar and it is Axial in many other churches. Then, portal, atrium, narthex, nave, the huge cross dome and chancel to Altar helps to clear the orientation side. Also, natural light enters the windows to the prayer hall and concentrates on the chancel space (Altar) through the openings above, behind the altar, or from the windows above the entrance of the church.

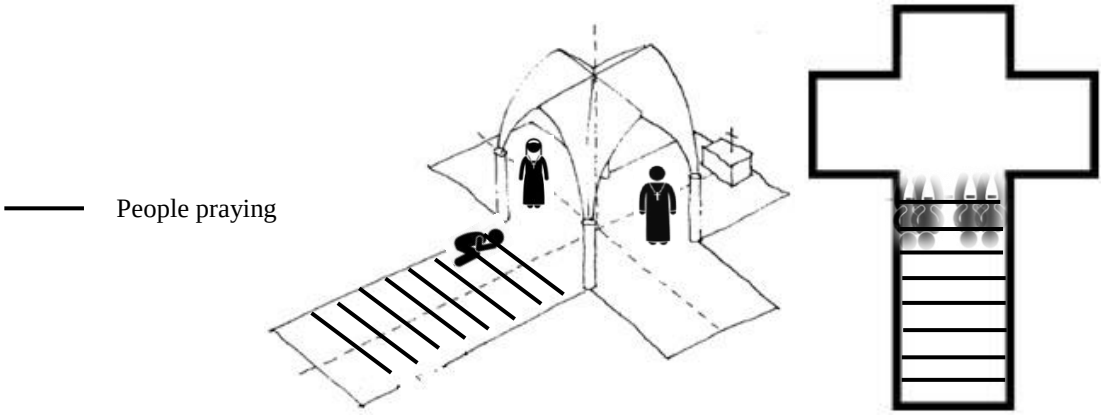


Figure 2.8. Functional Orientation in Church (the direction of prayer is toward Altar) (M.Albrifkany)

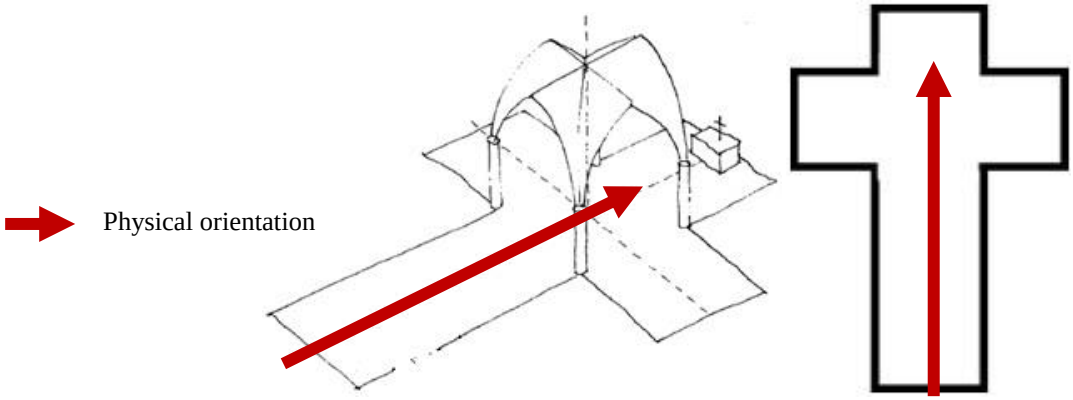


Figure 2.9. Physical Orientation of Church (represented through longitudinal axial axis toward Altar) (M.Albrifkany)

According to Davies (1982), natural light is used to define the orientation of prayer in historical churches. The space is revealed through darkness on light, as shade is a

vital element. The church can be defined according to the density of light. The level of natural light at the altar of the basilica is higher than that at the center of the basilica (Fig.2.10). This is known as transition from luminous Atrium to semi-Luminous narthex to dark place which is the prayer hall; then to central dome or nave's windows that allows light to enter, thus to the Altar and behind the Altar the apse allows light to Altar (Antonakaki, 2007). Thus, the natural light highlights the relationship between the entrance and the altar. The aim of using different levels of natural light is guiding Christian to the crest of the composition in the prayer hall; which is the chancel space (altar). The natural light in the chancel space is brighter than the light in the center of the hall. In addition, the natural light in the center of the hall is brighter than the light in the nave, and nave more than the one in the aisles (Davies, 1982).

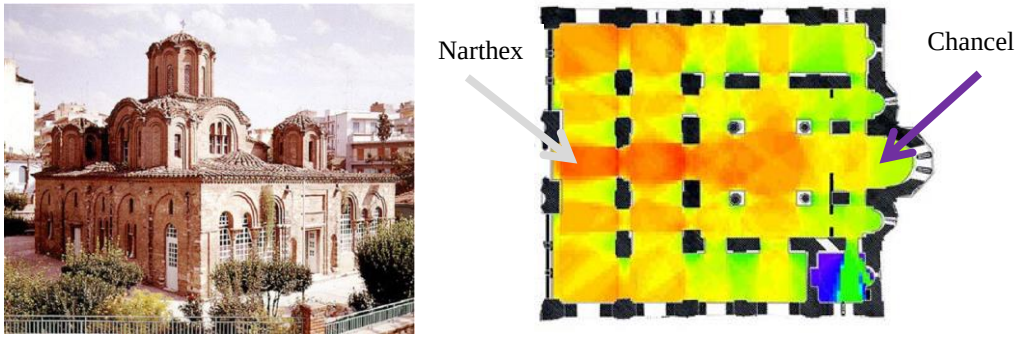


Figure 2.10. The natural Light Level decreasing at the Narthex and increasing in Chancel, Holy apostle church in Thessaloniki, Greece (URL 8)

Church is designed in a way that it will lead all eyes to the Altar and captures the attention of the worshippers upon the altar that is situated at the far end of the church (Ryan, 2012, 2014). Therefore, altar is a holy and important element in every Church (Fig.2.11).

Figure 2.11.Saint Elias Church in Syria, axial relationship between main Entrance and Altar (URL 9)

Church components are classified into architectural and structural features, which identify the architectural characteristics of the building (Ardalan, 1979).

2.7 Architectural Features of Church

Architectural features are essential elements which are required for performing Christian prayers in the church. These elements can be divided according to needs of space and religion into architectural sacred spaces and architectural religious elements (Hillenbrand, 1985).

2.7.1 Architectural Sacred Spaces of Church

Architectural Sacred spaces are prayer hall and courtyard (atrium); which are needs of religious spaces. These spaces are places of worships which are also meant for gathering Christians (followers) for performing prayers.

Courtyard; is a large open space located within a building (Fig.2.12), providing light and ventilation to the interior and exterior spaces which give users feeling of space and light (Collins, 2016). It is a spatial element and has grid organization (Ching, 2007). It is the forecourt of a building and enclosed on three or four sides with galleries (arcades or porticoes). This open place or court is located in front of the prayer hall. Courtyard is situated in-between the porch or vestibule and the body of the church (Prayer hall). In addition, it has two types of shapes which are

rectangular and square (Patrich, 2001). This spatial organization is the first space that separated noisy business zone of the world and worship area (Prayer hall) which is the entrance for Christians from public area to the courtyard; then to galilee and narthex. Narthex reminds people that they are stepping out of a noisy world and stepping into a quiet place; thus, crossing into chancel area that is containing the altar. The reasons for organizing these spatial structures in church are for the purpose of retreating people with Christian God and moreover, reminding Christians that they are leaving behind the worries and cares of the world to ascend and be alone with God in the elevation of the Church (Ryan, 2012, 2014).

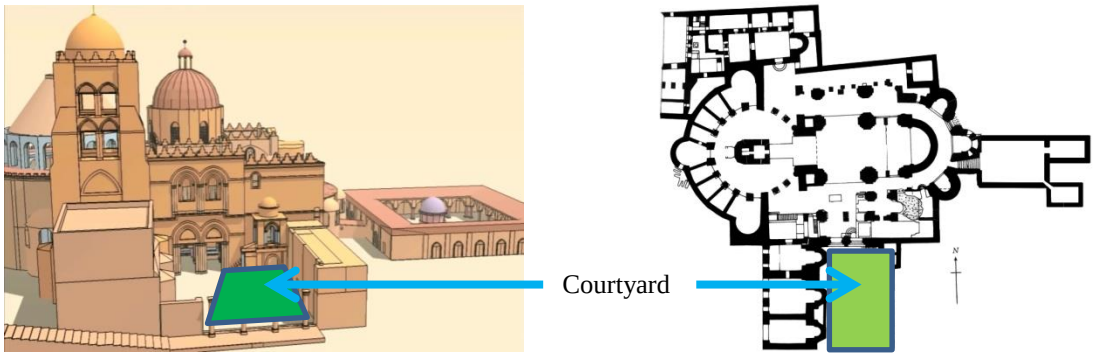


Figure 2.12. Courtyard in Holy Sepulchre Church in Jerusalem, Palestine (URL 10)

Prayer hall; is the main spatial space in the church. Prayer hall consist of portal (entrance), nave, aisles and chancel (apse and transepts). Prayer hall have two types of shape that are rectangular and cross plans. Both rectangular and cross prayer halls have one nave or central nave with side aisles (Burns, 2007). The differences between these types are in the shapes and types of the spatial organization; where rectangular is a grid type and cross plan is a centralized type (Ching, 2007). First type is created from one rectangular shape, while the second type has been designed from intersection of two rectangles. Most historical prayer hall have wider nave and higher than flanking aisles, so that light could penetrate through the clerestory

windows (Freedictionary, 2015) (URL 11). Most prayer halls are containing pews or wooden chairs in nave area for the convenience of Christians.

2.7.2 Architectural Religious Elements

Architectural religious elements are contained fountain, altar, pulpit and bell tower. These elements are basic needs of the religion. In the center of the atrium or prayer hall there is a fountain (baptismal water) or well, where the worshippers washed their hands before entering the church (Lampros, 1970); (Richard, 2003).

Altar; is a sacred place and element (table and cross sign) are located on the chancel space (Riga, 1963). This element and space is situated in front of apse (exedra) wall (Merriamdictionary, 2015). Altar is essential in the policy of the Church (Fig.2.13; 2.14). It should be the central point of attraction in doctrine and practice for priest and sacrifice (Pite, 1878.p.3). Altar represents the orientation of prayer in church.

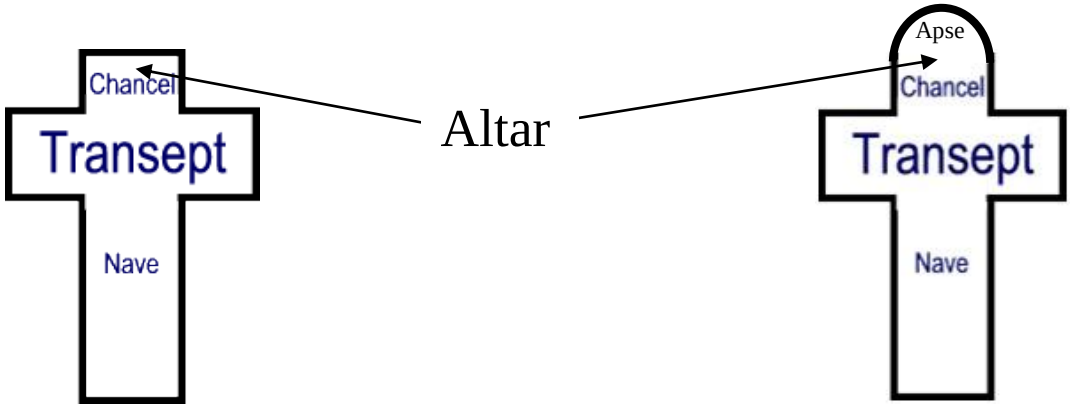


Figure 2.13. Altar is situated in Chancel place with or without Apse (URL 12).

Figure 2.14. Altar is place which distinct from Nave with elevated platform (URL 13)

Pulpit; is a lectern or a raised platform from which every Sundays the Christians hear sermon (Ryan, 2012, 2014). Lectern pulpit is a tall stand with a sloping top to hold a bible book. Platform pulpit is raised with steps up. This element is located beside the altar in a church. It is situated at the far end of the church where Altar is. Pulpit is usually situated upon the left hand or Gospel side of the church (Merriam dictionary, 2015).

Bell Tower; is an architectural feature. It is a structure taller than its diameter and stands attached or detached to the church (Freedictionary, 2015). The location of this tower can be in any sides of the building. Bell tower consists of tower and bell room (Fig.2.15). Tower is divided into two parts according to its structure which are base and body (staircase). Bell room is situated at the top of tower and contains bells that are rung to signify the time to call people to worship or for special events, like wedding, civil defense and fire alarm (Press, 1991, 2012); (Moore, 1996). Bell has a symbolic meaning where they were anciently supposed to have considerable powers especially against evil spirits (Regester, 2015). Bell tower have different names depending on their forms with shapes of base and head (Blondel, 2006).

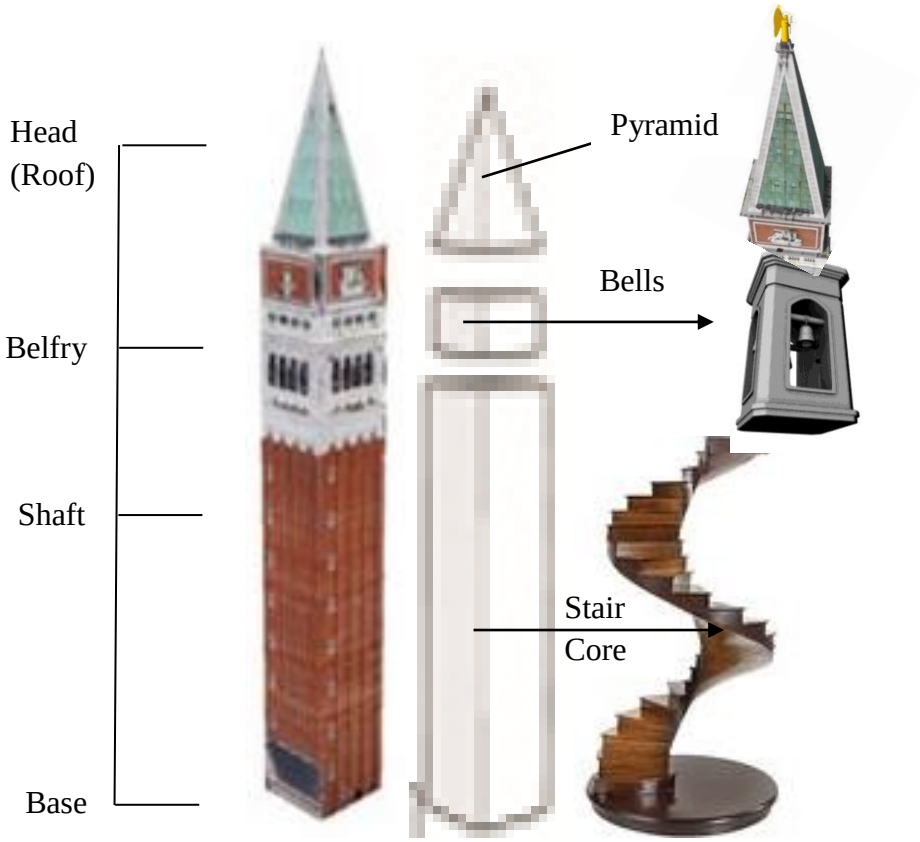


Figure 2.15. Components of Bell Tower (M.Albrifkany).

2.8 Structural Features of Church

Structural features are divided into horizontal and vertical structural elements; which are floor, ceiling, walls and columns. These elements helped to create the space, and also helped to define and divide the inner space (Miess, 1998);(Ching, 2007);(Evans & Ratliff, 2012).

Place has been identified by floor, ceiling, walls and columns (Unwin, 1997). In church, structural elements are organized to separate nave and aisles with chancel space in prayer hall.

2.8.1 Horizontal Elements of Church

Horizontal elements include floor and ceiling. Floor is a structural horizontal element and defines a simple field of space. It unifies walls, columns and ceiling elements. Space can be visually reinforced by dividing the floor into two levels

which are elevated and depressed floors (Krier, 1988). In church, there are two levels of floor in prayer hall; one is the chancel space which is raised on platform with steps (elevated); while nave and aisles are lower than chancel's level.

Ceiling is a structural horizontal element located overheads; it defines a volume of space between itself and the floor (Miess, 1998). It is an overhead interior surface that covers the sacred place of a prayer hall. In church, ceiling has different types for covering a prayer hall; which are vaults and domes and trusses.

2.8.2 Vertical Elements of Church

Walls and columns are vertical structural elements that have their base on the floor and also support the ceiling of prayer hall. These elements are organized to define the space and separate the inner spaces (Unwin, 1997); (Miess, 1998).

In church, parallel walls and repetition of columns are used to define the space to indicate with chancel. Flying buttress and apse are types of walls. There are different types of columns which are piers and pillars.

After collecting all data about historical churches, Mosque was analyzed depending on the same systematic classification or way. Starting from kinds of mosque, plan types, architectural and structural features of mosques.

2.9 Mosque

It is a holy place, a private building built for the general worship of Muslims. The original word emanated from the French word “mosque”, via Italian “moschea” and Spanish “mezquita” from Arabic “masjid” or “musjid”, which the derivative from sajda literally means to prostrate oneself and worship. In addition, it is called a Jami

that means assembling or gathering people in one place for worship activities and Friday prayers (Collins, 2012). There are two types of Mosques which are:

1- Individual building: it is referred to as the Mosque which is use for performing prayer and gathering Muslims people without other activities (Saud, 2007).
2- Complex building: it is an alternative building which contains Mosque with other facilities that are residential complex or hospital, school and library (Omar et al., 2015).

Individual Mosque has two different names and types which are (Cantone, 2012):

1- Mosque or Jami Mosque (Chapel/Musala) is a minor building that is not use for Friday prayers.
2- "Friday Mosque or called a congregational mosque", it is distinguished from the first mosque for having a pulpit element which is used for Friday prayers (Hashmi, 2015).

According to people, Mosque has many names including: Jami Mosque, Masjid, Masjid Jami, Al-Masjid Al-jami. In architecture, these synonyms means that Mosque are built for prayers only. While, Friday Mosque or called a congregational mosque came from Masjid Al-Jami which is used for performance all prayers and gathering of people for Friday (Milad, 2006). This study will focus on the second type of individual Mosques which have the ability to gather people inside and outside.

Individual Friday Mosque is the great type and most commonly known around the world and especially in Mediterranean countries. So, the study will select the second type of mosque. Historical Friday mosques have different forms which are built according to place, time and tradition of each area (Braswell, 2000).

2.10 Mosque Plan Types

Mosque has functional orientation where people are oriented towards a niche while the shape of plan type is not oriented towards a niche (Grube, 1978) (Fig.2. 16).

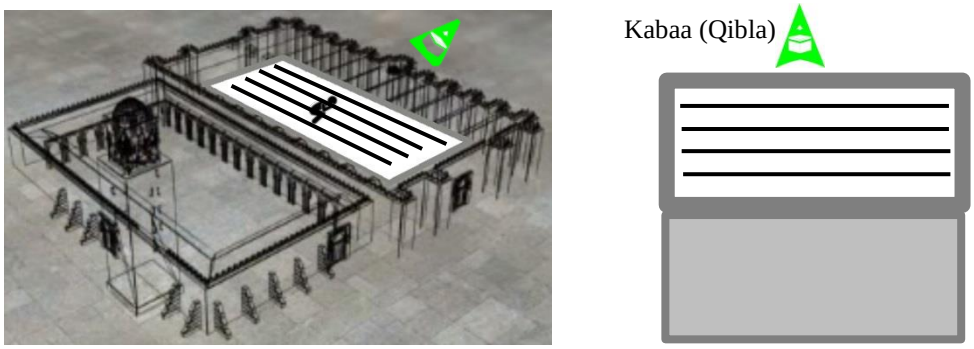


Figure 2.16. Functional Orientation (which is the direction of Prayer toward Kabaa) (M.Albrifkany).

Mosque is designed to lead the eye to prayer hall and especially to niche; where niche represents the orientation of Kabaa (Fig.2.17) (Kuban, 1974). According to Graber and Hill (1964) the relationship between the entrance and the niche is the most important relationship in the Islamic space where this axiality determines the orientation of prayer. Most historical mosques have between one to three doors that are opened in courtyard or prayer hall. The main door is opened opposite and axial to the niche. Doors can be opened from any side of mosque except Qibla wall because; it will lead to cut the rows of people during congregational prayers.

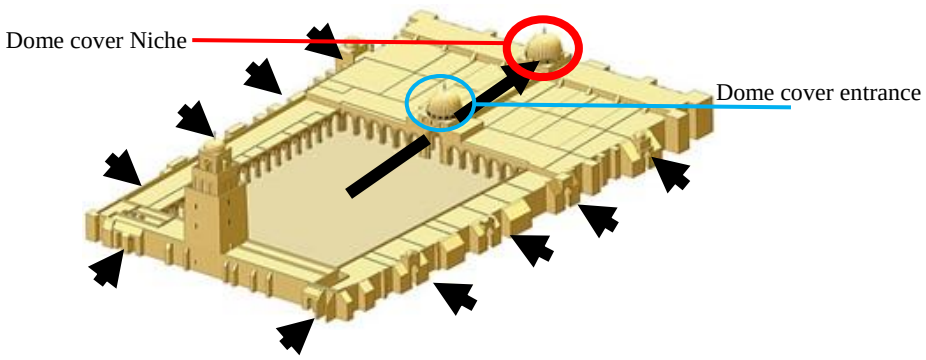


Figure 2.17. Kairouan Mosque in Tunisia, Main entrance is axial to Niche (URL 14).

According to Davies (1982), the form of the interior is revealed through light on darkness in the historical mosque (Fig.2.18). Windows surrounds prayer hall from four sides. Density of windows is distributed equally from each sides of the prayer hall. Natural lighting is equal in all directions and the eyes of people were directed forward during prayers (Nasr, 1987); (Haider, 1988); (Antonakaki, 2007).

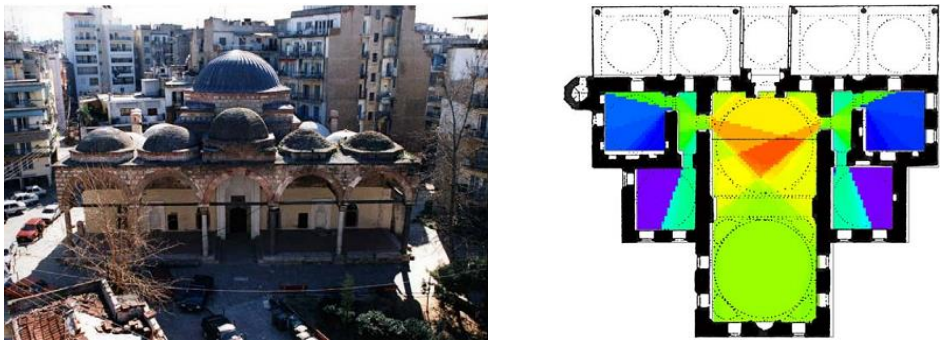


Figure 2.18. Alaca Imaret Mosque, Greece, Natural light enters equality from all sides, (URL 8).

Mosque is shaped most strongly by the regional traditions of the time and place where it was built. As a result, style, layout, and decoration can vary greatly. Nevertheless, because of the common function of the mosque as a place of congregational prayer, certain architectural features appear in mosques all over the world.

There are three main plan types of Friday mosques which are (Kamiya, 2006):

1- The hypostyle mosque: The first and earliest type is a hypostyle Mosque. This type spread widely throughout Islamic lands. It is a large rectangular mosque with a hypostyle prayer hall and a large inner courtyard which is supported by columns (Stegers, 2008). Also, it is a Mosque in which the prayer hall forms the rows of vertical supports or columns that can multiply indefinitely as in Kairouan mosque in Tunisia (Fig.2.19). Dominant type in the early period (Flood, 2001).

2- The four-Iwan mosque: It appeared in early Islamic period; the 11th century showed the emergence of new form, the four-Iwan mosque. This mosque has a rectangular shape with prayer hall and four Iwan surrounding a courtyard as in Mosque of Isfahan in Iran (Fig.2.20). It was the most popular type in the medieval period which remains dominant in Iran and some eastern Mediterranean countries. An iwan is a vaulted space that opens on one side to a courtyard. The Iwan developed in pre-Islamic Iran where it was used in imperial architecture. Strongly associated with Persian architecture, the Iwan continued to be used in the Islamic era (Baer, 1989).

3- The centrally-planned mosque: The Ottoman architects were strongly influenced by Hagia Sophia in Istanbul, the greatest of all Byzantine churches and one that features a huge central dome and high over its large nave. Ottoman Mosque is introduced by the Ottomans in the 15th century. It has a rectangular shape with courtyard and prayer hall. The courtyard is covered by small domes and supported by columns. Prayer hall's space is dominated by a central dome surrounded by smaller and lower semi-domes as in Selimiye Mosque in Turkey (Fig.2.21);(Ring et al., 1995); (Watenpaugh, 2004).

The three mosque types described above are the most common and historically significant mosque in the Islamic world. There are common architectural and structural features in these mosques. These components have been found in Friday mosques.

Figure 2.19. The hypostyle mosque, Great Mosque of Kairouan, Tunisia (URL 15) (URL 16)

Figure 2.20. The four-Iwan mosque, Great Mosque of Isfahan, Iran (URL 15)

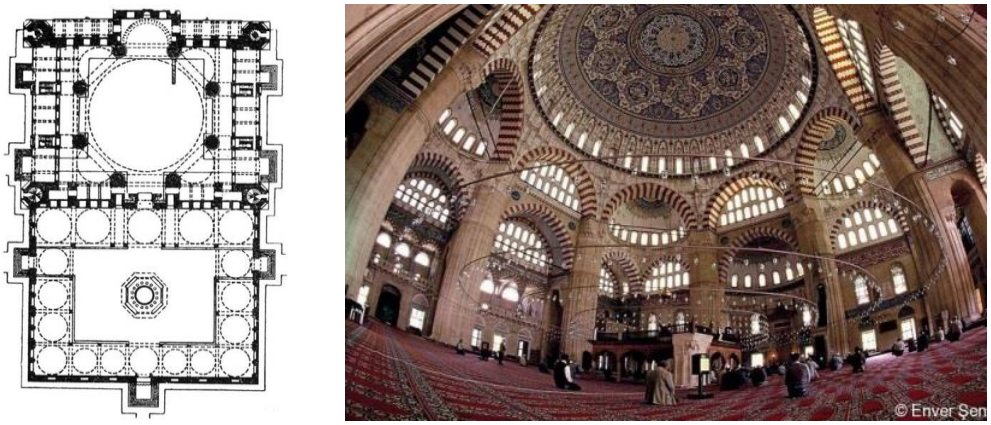


Figure 2.21. The centrally-planned mosque, Selimiye Mosque, Edirne, Turkey. (URL 17)

Friday mosque is containing a specific architectural and structural feature which responds to religious needs of Muslims (Ardalan, 1979).

2.11Architectural Features of mosque

In mosque, the architectural features are created during Mohammed's life (6th century) who built a first, second and third mosques; containing prayer hall, courtyard, niche, pulpit and fountain. During the Umayyad period (7th century), these elements are developed while minaret element is evolved. Prayer hall, courtyard, niche, pulpit, fountain and minaret are considered as architectural features (elements) in Mosque (Greebstein et al., 2006). Architectural features are essential elements which are required for performing Muslims prayers and responsive to liturgical needs in Mosque. These elements are divided into architectural sacred spaces and architectural religious elements according to needs of space and religion (Hillenbrand, 1985).

2.11.1 Architectural Sacred Spaces of Mosque

Architectural Sacred spaces are places of worships and gathering of followers for performing prayers. It contains courtyard and prayer hall.

Courtyard; is a large open spatial space flanked by prayer hall, entrance, ablution place, arcades or gallery, corridors from all sides at most (Grube, 1978b). This is an open place located in front of prayer hall (Fig.2.22) (Netton, 2013).It is a spatial element and has grid organization (Ching, 2007). Courtyard is used as a gathering place for performing Friday prayers and worship activities. This spatial organization is the first space that separated noisy business zone of the world and worship area (Prayer hall) (Berque, 1978). In addition, the courtyard has different types of forms, which are rectangular and square (Collins, 2012); (Harper, 2010). Most of Islamic religious preachers confirmed that Muslims should engage in ablution before entering the entrance of Mosque. While, others assures that ablution place should be

near to entrance of courtyard. Thus, this means that courtyard have a religious value and is the first step to leave all things in other to concentrate on religious worships which will be performed on prayer hall of the Mosque (Moorcroft, 2004).

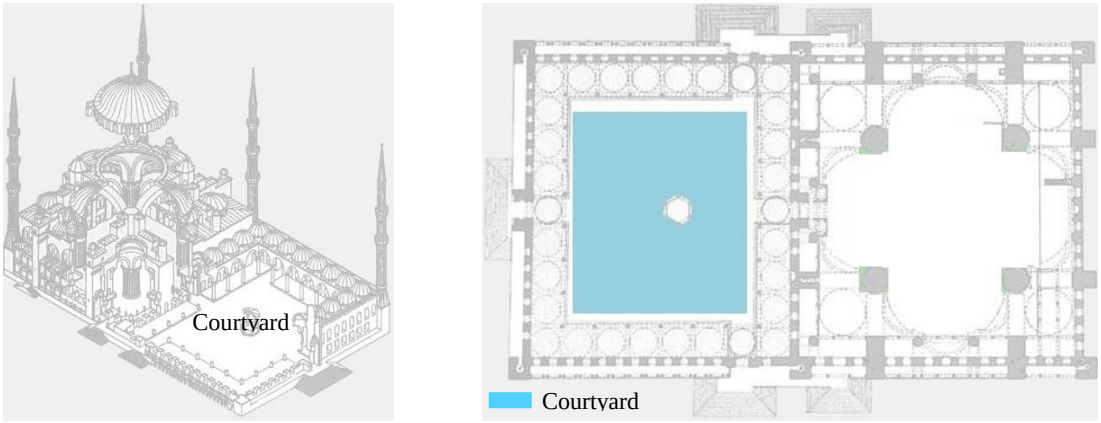


Figure 2.22. Rectangular Courtyard in Sultan Ahmed Mosque in Istanbul, Turkey, (URL 18).

Prayer hall; is a spatial space and main part of the mosque (Cambridgedictionary, 2015). It has two forms which are hypostyle and central dome prayer hall. The differences between these two forms are concentrated on vertical and horizontal elements. Where, hypostyle columns and flat roof is used in the first type while the second has central dome supporting by half domes (Khan et al., 2008). Prayer hall has two main forms of plans that are rectangle and square (Weisbin, 2014). Rectangular plan is a grid spatial organization and the square is centralized type (Ching, 2007). Both rectangular and squared hall have entrances, worship area and niche. The rectangular prayer hall has perfect functional shape for performing prayer. Because, Muslims are praying as group in prayer hall in rows parallel to the Qibla, and arrange themselves toward Kabaa. Usually opposite the entrance to the prayer hall, Qibla's wall or niche is situated (Kahera et al., 2009).

2.11.2 Architectural Religious Elements of Mosque

Architectural religious elements comprised; fountain, niche, pulpit, and minaret (Lampros, 1970). In the center of the courtyard there is a fountain water basin for ritual purification, cleansing and performing of Islamic ablutions, and flowing fountains for drinking water (Norberg- Schulz, 1985); (Bin Saleh, 1999).

Niche; (Mihrab) is a semicircular space and element in the wall of a mosque that indicates to the Qibla (Fig.2.23); that is, the direction that Muslims should face when praying. This wall in which a Mihrab appears is thus the Qibla wall. Niche is usually situated in the prayer hall but it can be set in the courtyard. In addition, pulpit is a platform with steps up and constructed as a single item/structure. This element is located beside niche in a mosque (Diez, 1936); (Fehérvári, 1993).

Figure 2.23. Niche in Mosque is directed to Kabaa Orientation (URL 19).

Minaret; is a tall tower of a mosque having one or more balconies; where muezzin calls people to prayer. It is derived from the Arabic nur word, meaning light. It is situated attached or detached to the Mosque (Merriam dictionary, 2015). Location of this tower can be in any sides of building. Minaret tower is consisted of tower and gallery (Fig.2.24). Tower is divided into two parts according to its structure which are base and body (shaft or staircase). Gallery is a balcony that encircles the upper

sections from which the muezzin may give the call to prayer or for special events. Minarets may be conical tapering, square, cylindrical, or polygonal shaped. Stairs circle the shaft in a counter-clockwise fashion, providing necessary structural support to the highly elongated shaft (Šārôn, 1986).

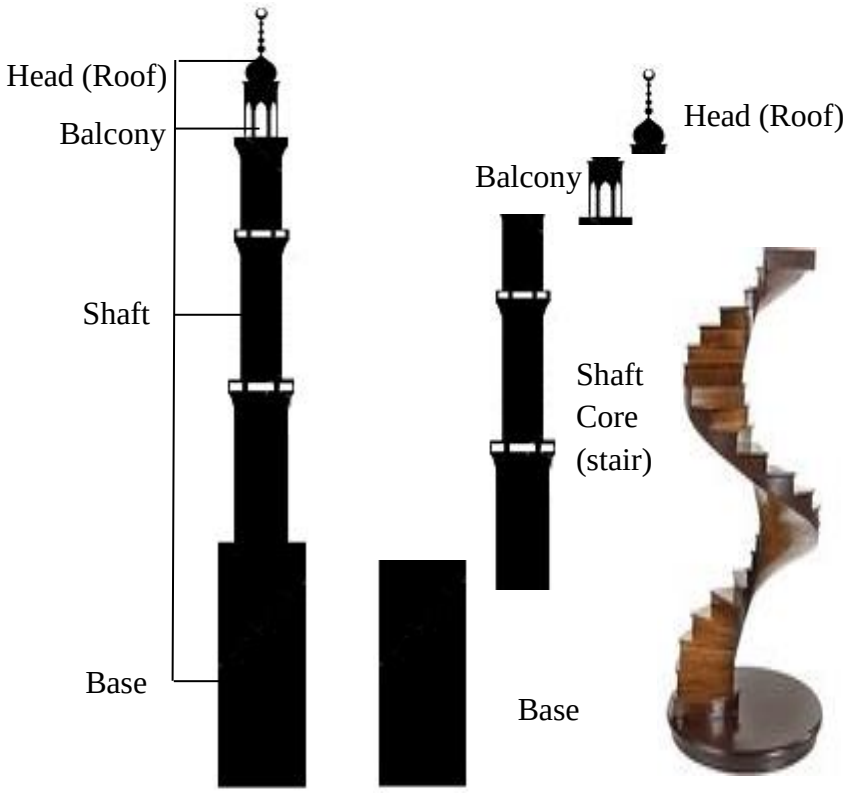


Figure 2.24. Components of Minaret (M.Albrifkany).

2.12 Structural Features of Mosque

Structural features are divided into horizontal and vertical structural elements; which are floor, ceiling, walls and columns. These elements helps to create the space, also help to define and divide the inner space (Ching, 2007).

Place has been identified by floor, ceiling, walls and columns (Unwin, 1997). In mosque, structural elements are organized to unify aisles with niche's space in prayer hall.

2.12.1 Horizontal Elements of Mosque

Horizontal elements include floor and ceiling. Floor is a structural horizontal element and defines a simple field of space. It unifies walls, columns and ceiling elements (Krier, 1988). In mosque, floor has one unifying level.

Ceiling is a structural horizontal element located overheads which defines a volume of space between itself and the floor (Miess 1998). It is an overhead interior surface that covers the sacred place of a prayer hall. In mosque, ceiling has different types for covering prayer hall; which are flat, domes, vaults and trusses.

2.12.2 Vertical Elements of Mosque

Walls and columns are vertical structural elements that have its base on the floor and supported the ceiling of the prayer hall. These elements are organized to define the space and separated inner space.

In mosque, parallel walls and repetition of columns are used to define the space. There are different types of columns which are piers and pillars (Unwin, 1997). Using columns or walls structures, system of covering are depending on the style and location of the Mosque (Houtsma, 1993).

After collecting all information about Churches and Mosques, it is clarified that there are some common architectural and structural features, in both building, while there are some other architectural elements that discriminate these building types in specific. To be aware of those mutual and different characteristics it will be helpful to understand the process of conversion and also the analysis of such process. Therefore, in the next chapter the case studies and analyzes will be based on the gathered data within this chapter. In the following tables, Church and mosque

components have been listed; and these tables (data) are going to be used due to case analyzes.

Table 2.3. Mosque and Church components

<table>
<tr><td rowspan="8">Architectural features</td><td rowspan="4">Architectural sacred space</td><td>Courtyard</td><td></td></tr>
<tr><td rowspan="3">Prayer hall</td><td>Spatial organization</td></tr>
<tr><td>Orientation</td></tr>
<tr><td>Openings</td></tr>
<tr><td rowspan="4">Architectural religious features</td><td colspan="2">Fountain</td></tr>
<tr><td colspan="2">Niche/Altar</td></tr>
<tr><td colspan="2">Pulpit</td></tr>
<tr><td colspan="2">Bell Tower/minaret</td></tr>
<tr><td rowspan="4">Structural features</td><td rowspan="2">Horizontal elements</td><td colspan="2">Floor</td></tr>
<tr><td colspan="2">Ceiling</td></tr>
<tr><td rowspan="2">Vertical elements</td><td colspan="2">Wall</td></tr>
<tr><td colspan="2">Columns</td></tr>
</table>

Chapter 3

CASE STUDIES AND ANALYSIS

Christianity began in the 1st century and Islam is resurrected in the 7th century. Each religion controlled some of the Mediterranean regions. This led to conflict between these religions. A series of Islamic and Crusades wars started mainly between 11th and 15th centuries around all the Mediterranean shores. These wars continued to 19th century because of Muslim and Christian expansion in these lands. In the 20th century, colonization period started in these areas following by their independence (Regan, 2001); (Lock, 2006); (Pierson, 2009). All these wars led to change the official religion in Mediterranean countries. These changes led to conversion of many religious buildings especially churches to mosques and mosques to churches.

3.1 Selection of the Cases

A Number of converted Churches and Mosques between 13th to 20th centuries are selected from different Mediterranean countries according to research area and limitation of the study. As mentioned in previous chapters, this study will analyze converted, historical, individual basilica Churches and Friday Mosques. Also, selection of the case studies are limited to converted Churches and Mosques that are located in old cities during that period.

According to the limitation of this thesis, three mosques have been converted to churches and six churches have been converted to mosques in old cities. Because Islam came after Christianity it is an axiom, that number of converted churches to

mosques is more than number of converted mosques to churches. Case studies are selected from Northern Cyprus, Lebanon, Palestine, Algeria and Spain (Fig.3.1) (Table 3.1, 3.2).

Figure 3.1. Case studies located in Mediterranean countries (6 churches, 3 Mosques) (M.Albrifkany)

Table 3.1. From Islam to Christianity

	From Islam to Christianity				
	Original name	**Country**	**Construction period**	**Conversion period**	**Rename Church**
1	Cordoba mosque	Spain	8th Century	16th Century	Cathedral of Our Lady of the Assumption (Cathedral of Cordoba)
2	Seville mosque	Spain	12th Century	16th Century	Seville Cathedral (Cathedral of Saint Mary)
3	Ketchaoua Mosque	Algeria	16th Century	19th Century	Cathedral of St. Philippe

Table 3.2 From Christianity to Islam

	From Christianity to Islam				
	Original name	**Country**	**Construction period**	**Conversion period**	**Rename Mosque**
1	St John Church in Sidon	Lebanon	12th Century	13th Century	Great Omari
2	Saint John the Baptist/ Beirut's cathedral	Lebanon	12th Century	13th Century	Al-Omari (Great Omari)
3	Cathedral John the Baptist in Gaza	Palestine	12th Century	13th Century	Great Omari (Great mosque of Gaza)
4	St. Sophia (Holy Wisdom) in Nicosia	Northern Cyprus	14th Century	16th Century	Selimiye
5	Saint Nicholas's (Saint Sophia) in Famagusta	Northern Cyprus	14th Century	16th Century	Lala Mustafa Pasha
6	St. Philippe	Algeria	19th Century	20th Century	Ketchaoua

3.2 Methods of the Study

The method used for explaining each case study includes parts as follows:

- General historical information.
- Architectural and structural features of the original building.
- Architectural and structural features of the converted building.

The historical analysis is determined in the table with: name of the original building, country, city, construction period, name after conversion, conversion period, conversion order and the reason of selection as a case study.

The architectural analysis method of the study is depending on architectural features which are classified into architectural sacred spaces [courtyard, prayer hall: (spatial organization, orientation, openings)] and architectural religious elements (altar or niche, pulpit, fountain, bell tower), structural features which are divided into horizontal (roof, floor) and vertical (columns, walls) elements.

After this data presentation, a theoretical approach to answer research question will be attempted which will be also summarized on a table in each case.

3.3 Great Mosque of Córdoba (Cathedral of Our Lady of the Assumption) in Spain

The mosque was built during Umayyad Empire of Cordoba in 784 by the Prince Abd al-Rahman I. This building is situated in the old Cordoba city in Spain (Fig.3.2). It is under Umayyad reign from (8^{th} -14^{th} CE) and expanded during this period (Ali, 1999).

The Great Mosque of Córdoba held a place of importance amongst the Islamic community of al-Andalus or called Córdoba that was the capital of Spain. The Mosque was seen as the heart and central focus of the city (Goodson et al., 2010).

During Christian conquest and in 1492, many voices were called to convert Cordoba mosque to church as it has happened in Seville church. In 1523, Emperor Charles commissioned the process conversion to Architect Hernan Ruiz, who converted Seville mosque to church. Thus, the existing building was converted to Cathedral of Our Lady of the Assumption (Ruiz, 2007). From collection historical information, Table (3.3) is shaped.

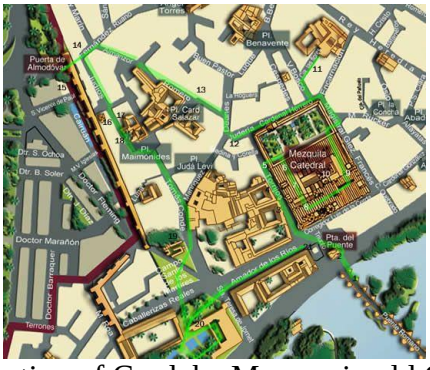


Figure 3.2. Location of Cordoba Mosque in old City (URL 20).

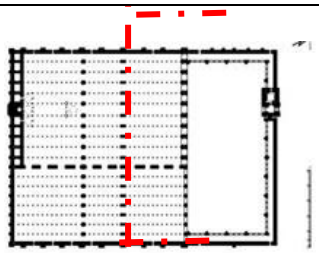
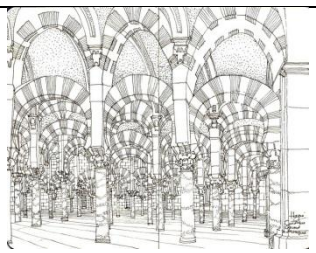
Table 3.3. General historical information of Cordoba Mosque in Cordoba, Spain

	General historical information	
1	**Original name**	Cordoba Mosque
2	**Country**	Spain
3	**City**	Old Cordoba city
4	**Construction period**	8th Century (784)
5	**Name after conversion**	Cathedral of Our Lady of the Assumption
6	**Conversion period**	16th Century (1523)
7	**Conversion order**	Emperor Charles (Process Conversion to Architect Hernan Ruiz)
8	**Reason of selection as a case study**	It is situated in Cordoba and in old city. Also, it is a historical individual mosque.

3.3.1 Architectural and Structural Features of the Original Great Mosque of Córdoba

The mosque was built as a Moorish style (Kahera, 2010). This building was built under the direction of Abd al-Rahman I (Table 3.4). The mosque was expanded four times between (7th - 10th century). These expansions has happened by Abd al-Rahman I, Abd al-Rahman II, Al-Hakam II and the last of such reforms was carried out by Almanzor in 987. The outcome of expansion has led to embody in one rectangular composition (Silverman, 2010). The area of the mosque later became measured at 23,400 square meters (180×130 meters).

Table 3.4. Main documents of Cordoba Mosque (URL 21) (URL 22) (URL 23).

Main Documents		
		
Plan	Perspective	Interior

The mosque consisted of courtyard and prayer hall (Table 3.5). Courtyard is located in northeast side of the prayer hall and has a rectangular shape. It has six outer doors (entrances) and opened with the prayer hall. Prayer hall has been built as a rectangular shape and arcade hypostyle plan type. It included eighteen perpendicular aisles to Qibla's wall (Burckhardt, 2009).

Prayer hall has a grid spatial organization. Physical and functional orientations were directed toward southwest. There are three doors in the southeast side and then two from the northwest side of the prayer hall. Windows are opened from southeast and northwest sides. Also, windows are opened in the ceiling to allow natural light enter.

Fountain was located in the center of the courtyard. Pulpit and niche were situated in the southwest side of the prayer hall. Minaret is located in the northeast part of the courtyard (Table 3.6).

Floor has one level in this prayer hall. Prayer hall was covered with timber flat roof. In another hand, the niche is capped with dome (Table 3.7).

The prayer hall is described as a forest of vertical elements (columns) where there are more than five hundred slender columns. Columns and double arches (horseshoe arches) supported the ceiling and perpendicular to Qibla wall. Double arches and high columns enabled the building of a higher ceiling (Gerli & Armistead, 2003). Walls are surrounding the prayer hall from southeast, southwest and northwest sides; while the northeast part is opened and contained arcade columns.

3.3.2 Architectural and Structural Features of the Converted Cathedral Church of Our Lady of the Assumption

Christians built a prayer hall in the center of the hypostyle hall (Nash, 2005). This new prayer hall contained narthex, nave and chancel spaces. Narthex is located in the northwest side of this prayer hall. Nave contained a pews and it is the extension of the narthex. Chancel is the southeast side of the prayer hall.

The hypostyle hall has a grid spatial organization. Physical and functional orientations were directed toward southeast. There are three doors in each northwest and southeast side (Semple, 1809). Windows are opened from southeast, southwest, northwest, northeast sides of hypostyle and central halls.

The central prayer hall has a linear spatial organization. Physical and functional orientations were directed toward southeast. It has threes entrances and opened with hypostyle hall from northwest, northeast and southwest. Windows are opened from southeast, southwest, northwest, northeast sides of the central prayer halls.

A fountain stood in the center of the courtyard (Facaros & Pauls, 2007). Altar and pulpit were erected in the southeast side of the central prayer hall. Bell tower is located in the northeast side of the courtyard (Dodds, 1992).

Floor has two levels; chancel was raised up one step, because the level of the new prayer hall and hypostyle hall was lower than chancel's level. Hypostyle's hall was covered with triangle trusses while the new prayer hall was covered with triangle truss and finished with cross rib vaults (Paúl, 1995).

The northeast of hypostyle hall was closed with arcade columns. Walls surrounded the central and hypostyle halls from four sides. Thirteen buttresses were raised from the existed columns in north and south side of the Christian prayer hall.

Table 3.5. Architectural Sacred Spaces of Cordoba Mosque (Cathedral of Our Lady of the Assumption) in Cordoba, Spain

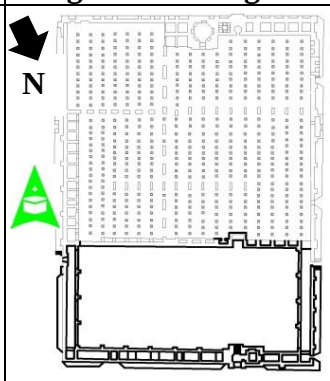
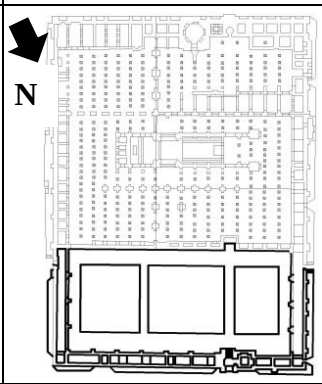
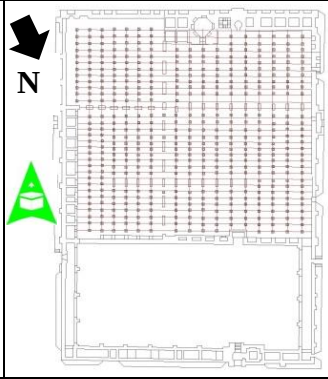
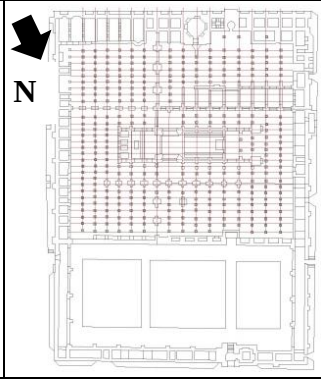
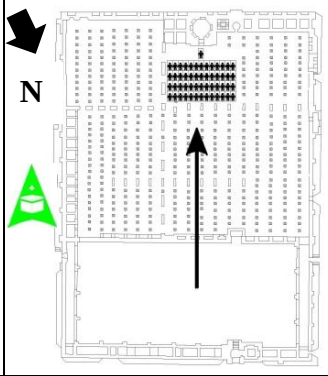
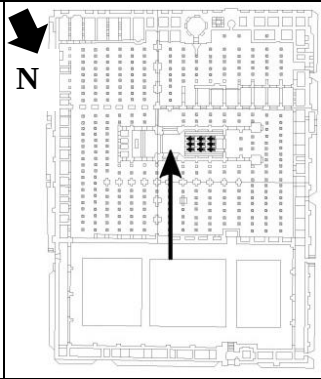
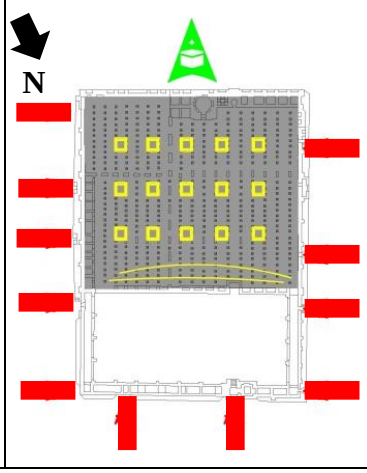
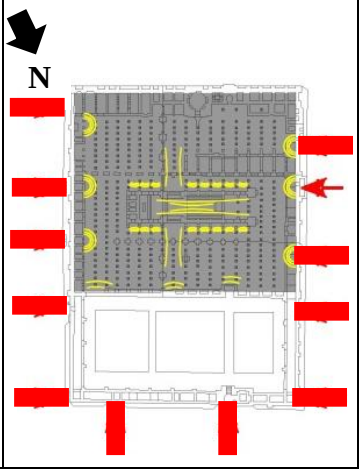
From Islam to Christianity		**Cordoba Mosque**	
Architectural Features			
Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard			
Prayer hall	Spatial organization Grid		
	Orientation Physical orientation People praying		
	Openings Door Additive doors Window Additive windows Light		

Table 3.6. Architectural Religious Elements of Cordoba Mosque (Cathedral of Our Lady of the Assumption) in Cordoba, Spain

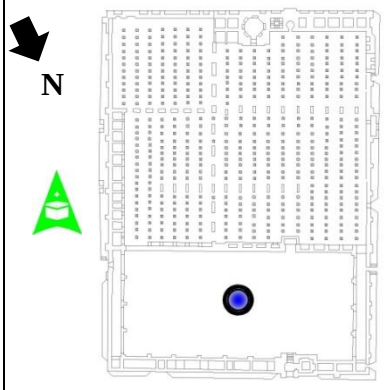
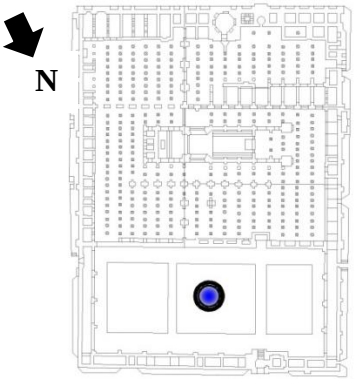
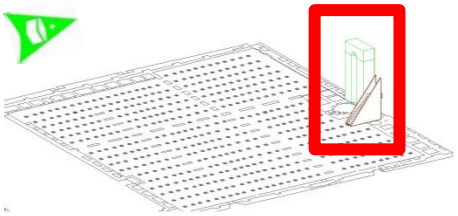
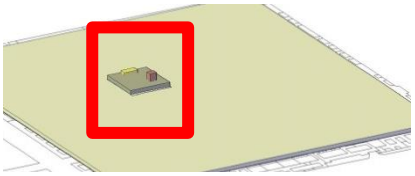
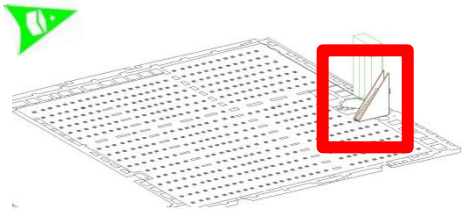
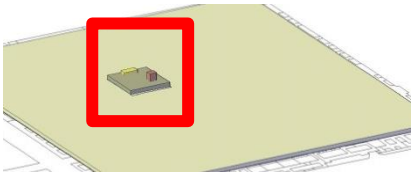
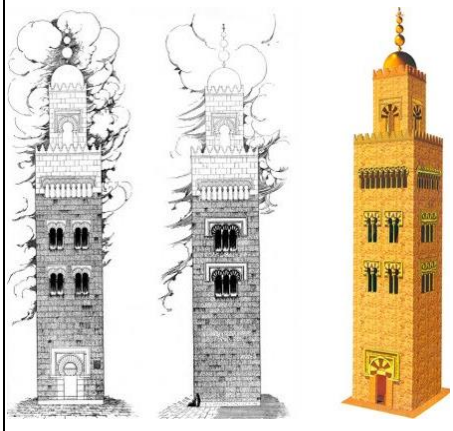
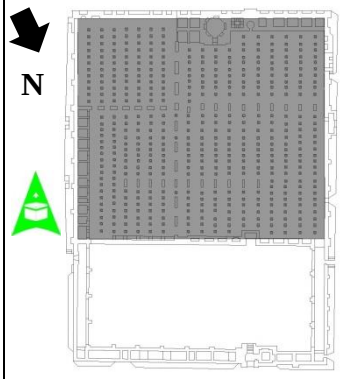
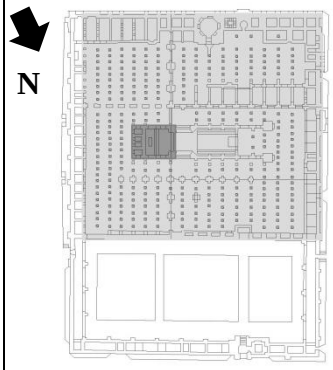
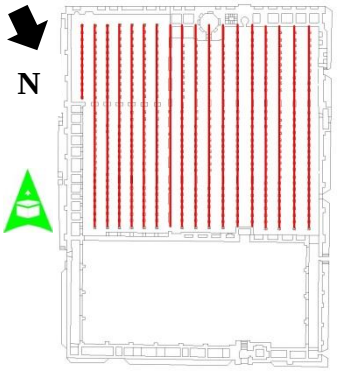
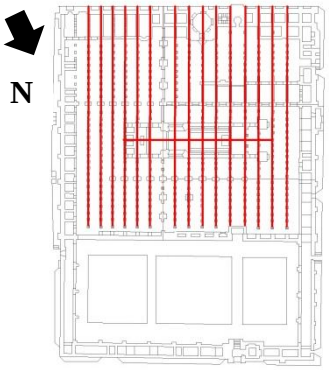
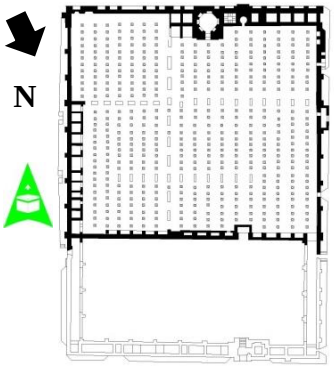
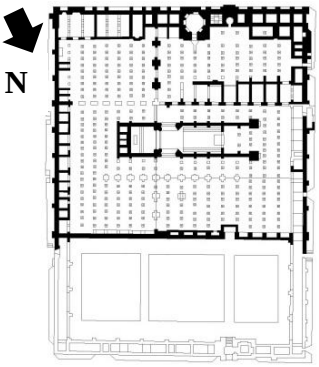
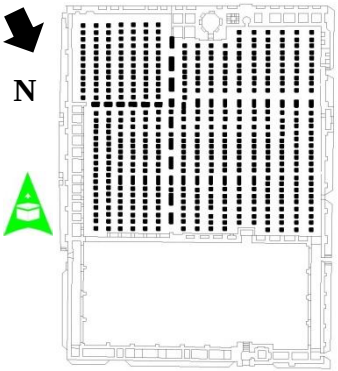
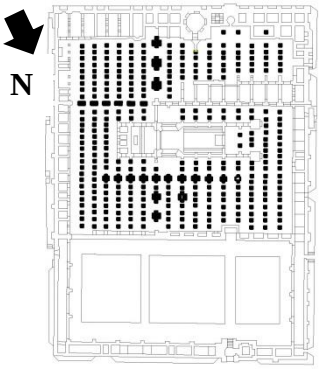
From Islam to Christianity	**Cordoba Mosque**
Architectural Features	
Architectural Religious Elements	
Part of the building	**Original Building** / **After conversion**
Fountain	 
Niche & Altar	 
Pulpit	 
Minaret & Bell Tower	  URL 24

Table 3.7. Structural Features of Cordoba Mosque (Cathedral of Our Lady of the Assumption) in Cordoba, Spain

From Islam to Christianity		**Cordoba Mosque**	
Structural Features			
Part of the building		**Original Building**	**After conversion**
Horizontal elements	Floor		
	Ceiling		
Vertical elements	Wall		
	Column		

3.4 Seville Mosque (Seville Church) in Seville, Spain

This mosque was built in 1184 and completed in 1198 by Islamic rules of the Almohad dynasty (Moors Muslims). It was situated in the old city (Fig.3.3). Seville mosque was a great Friday mosque and was the largest mosque in Seville city until 1248 when the Conquest of Seville by Ferdinand III (who commissioned the process conversion to Architect Hernan Ruiz) (Ruiz, 2007).

In the early 16^{th} century, Gothic church that has cross plan type was built in the central of the rectangular prayer hall (Mosque's hall) with some additions and this church renamed Seville or Saint Mary Cathedral (Ghazanfar, 1999).

Seville Cathedral glorious monument was Christendom's largest church of Gothic style and the third-largest when compared to the Neoclassical Saint Peter's Basilica in Vatican City and Saint Paul's Cathedral in London. The cathedral has been designated a UNESCO World Heritage Site which is reflecting its cultural and historic importance (Unesco, 2009). From collection historical information, Table (3.8) is shaped.

Figure 3.3. Location of Seville Mosque in old City (URL 25).

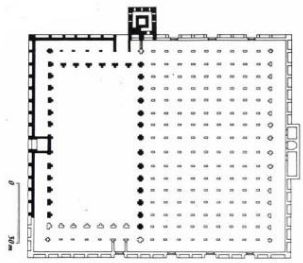
Table 3.8. General historical information of Seville Mosque in Seville, Spain

	General historical information	
1	**Original name**	Seville Mosque
2	**Country**	Spain
3	**City**	Old Seville city
4	**Construction period**	12th Century (1184-1198)
5	**Name after conversion**	Seville or Saint Mary Cathedral
6	**Conversion period**	16th Century
7	**Conversion order**	Ferdinand III (Process Conversion to Architect Hernan Ruiz and completed by group of architects)
8	**Reason of selection as a case study**	It is situated in Seville and in old city. Also, it is a historical individual mosque.

3.4.1 Architectural and Structural Features of the Original Seville Mosque

The Mosque is built as a Moorish style (Table 3.9) (Lucot, 1972). Almohad or Seville mosque is built as a high arcaded hypostyle plan type (Khalili, 2008).

Table 3.9. Main documents of Seville Mosque (URL 26); (URL 27); (URL 27).

Main Documents		
		
Plan	Perspective	Section

The mosque comprised of a courtyard and a prayer hall (Table 3.10). Courtyard has been built in the north side with a rectangular shape. It contained seven entrances. Prayer hall has a rectangular shape and contained seventeen aisles and niche space. Each aisle was divided into eleven bays. These aisles are perpendicular to niche space. Niche space is made from three side section and located in the south part of the prayer hall.

The prayer hall has a grid spatial organization (hypostyle columns). Physical orientation is directed to east and west sides. Functional orientation is directed toward the south side. There are six doors opened to the prayer hall; three in west and three from east side. Windows are opened from east and west sides. Also, there are some windows that are opened in the ceiling.

Fountain was situated in the center of the courtyard (Table 3.11). Niche and pulpit stood in the south side of the prayer hall (Meri, 2006). Minaret was located in the east side. It was built together with prayer hall and courtyard (Nurul-Islam, 2006).

Floor has been built with one level (Table 3.12). Triangle timber truss are used as a ceiling structure to cover the prayer hall. Walls are parallel and ended with Qibla. Walls surrounded the hall from east, south and west sides. The north side of this hall was opened to the courtyard. There are (176) rectangular columns and arcade in the prayer hall. These elements are perpendicular to Qibla's wall (niche's wall).

3.4.2 Architectural and Structural Features of the Converted Seville Church

The church consisted of courtyard, hypostyle hall and prayer hall (new Christian hall). Courtyard was located in the north side with a rectangular shape, it contained four doors. Hypostyle hall is situated in the south side; it has a rectangular shape and contained a central prayer hall (prayer hall within prayer hall). The central prayer hall is surrounded by two aisles from the west side, one in east side, two aisles from south and north sides. The central prayer hall comprised of one nave and a chancel space. Two chapels were added to the south side and one to east side of hypostyle hall.

The hypostyle hall has a grid spatial organization. Physical and functional orientations were directed toward east. It contained seven doors; the main door is opened from north side, the second from south side, three doors are in the west side and two in the east side (Facaros & Pauls, 2007). Windows are opened from south, east, north and west sides of the hypostyle prayer hall.

Central prayer hall has a linear spatial organization. Physical and functional orientations were directed toward east. It has three entrances and opened with hypostyle hall from the north, south and west sides. Windows were opened from four sides of the central prayer hall.

Fountain was located in the center of the courtyard (Ruggles, 2011). Altar and pulpit were erected in the east side of central prayer hall. Bell tower stood in the east side of hypostyle hall (Salamanca, 1974).

Floor of central prayer hall was divided into two levels; chancel is raised up one step, because the other parts of this hall are lower than the chancel's level. Cross vaults were used to cover the prayer hall. Pillars supported the ceiling. Walls surrounded the hall from four sides and more so, walls were added to flank chapels.

Table 3.10. Architectural Sacred Spaces of Seville Mosque (Seville Cathedral) in Seville, Spain

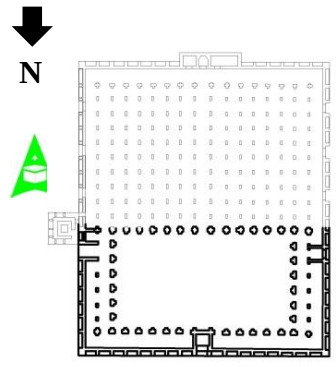
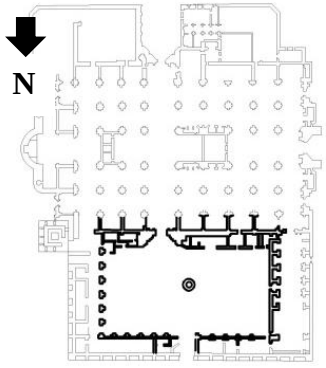
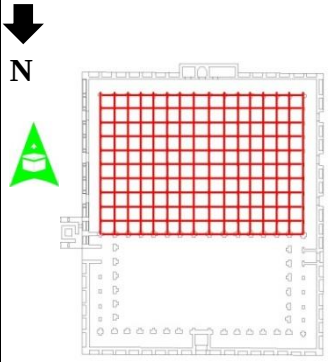
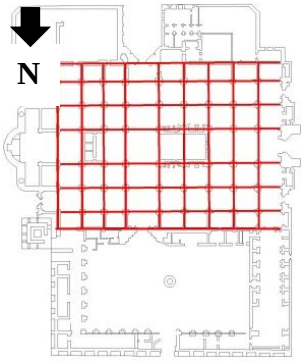
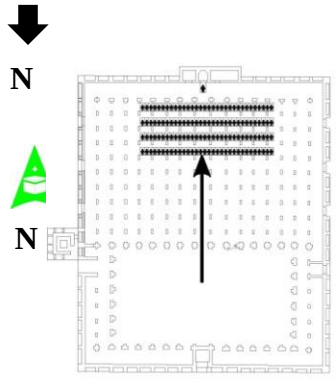
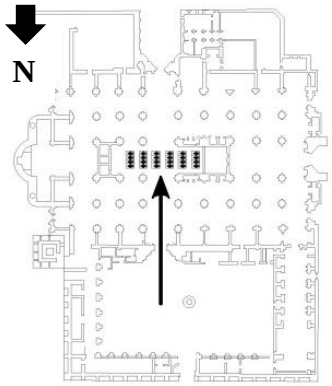
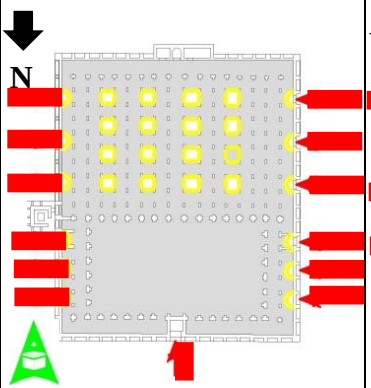
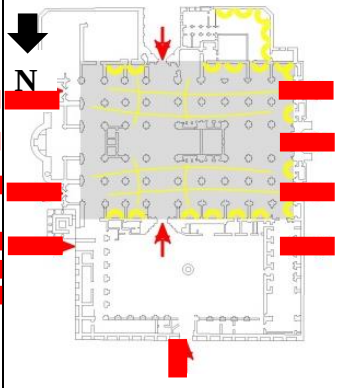
From Islam to Christianity		**Seville Mosque**	
Architectural Features			
Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard			
Prayer hall	Spatial organization Grid		
	Orientation Physical orientation People praying		
	Openings Door Additive doors Window Additive windows Light		

Table 3.11. Architectural Religious Elements of Seville Mosque (Seville Cathedral) in Seville, Spain

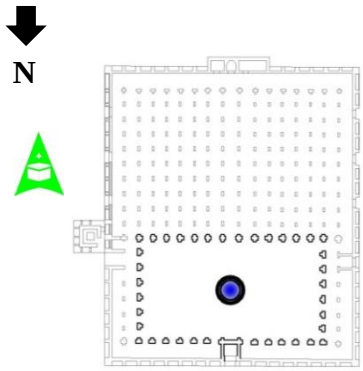
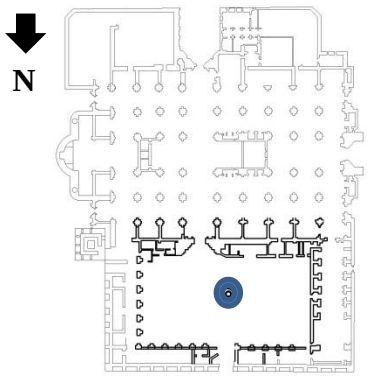
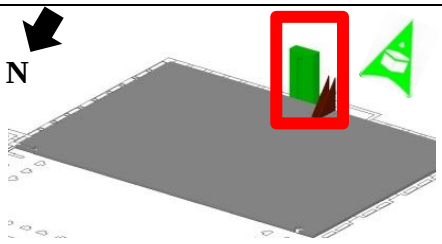
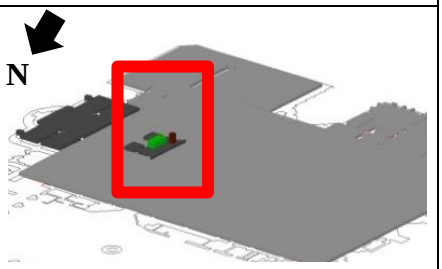
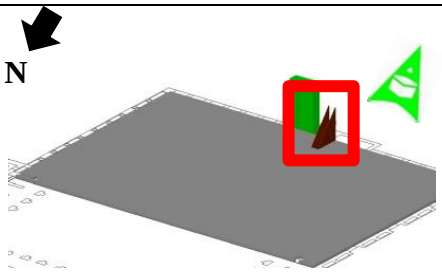
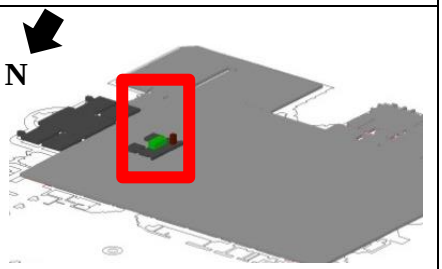
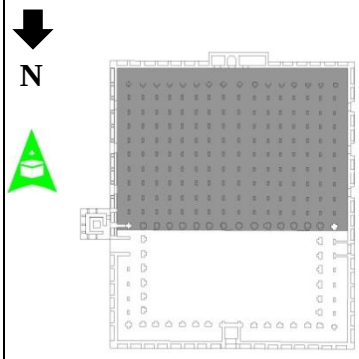
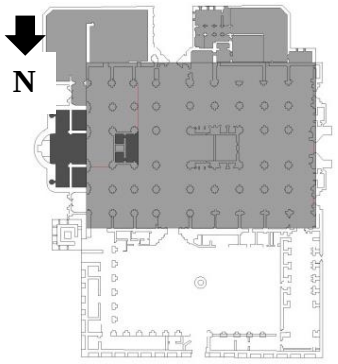
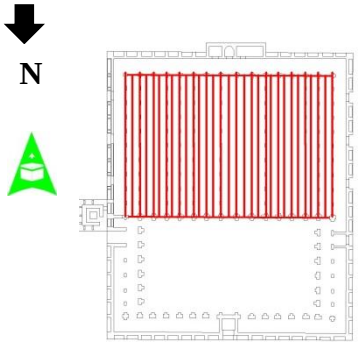
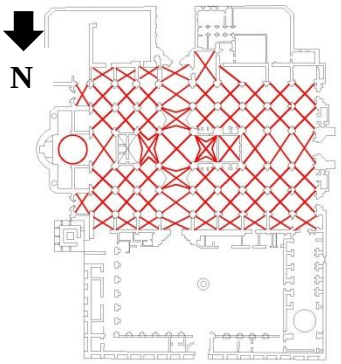
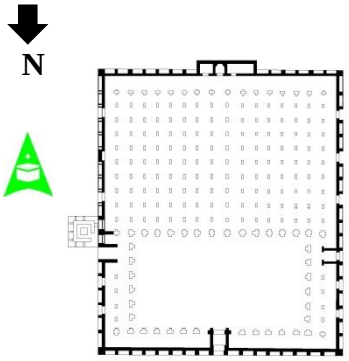
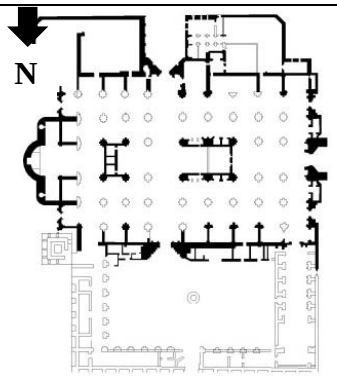
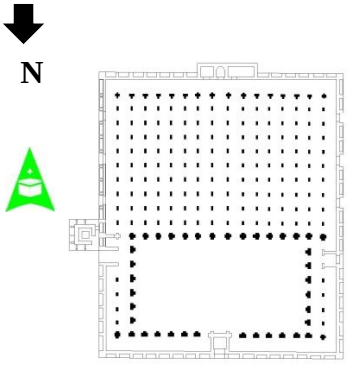
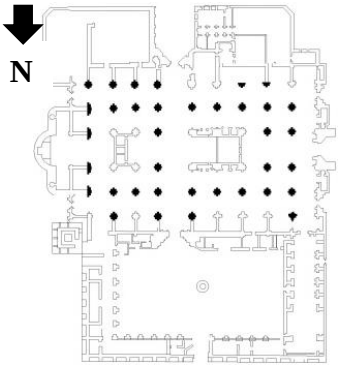
From Islam to Christianity	**Seville Mosque**
Architectural Features	
Architectural Religious Elements	
Part of the building	**Original Building** / **After conversion**
Fountain	 
Niche & Altar	 
Pulpit	 
Minaret & Bell Tower	 

Table 3.12. Structural Features of Seville Mosque (Seville Cathedral) in Seville, Spain

From Islam to Christianity		**Seville Mosque**	
Structural Features			
Part of the building		**Original Building**	**After conversion**
Horizontal elements	Floor		
	Ceiling		
Vertical elements	Wall		
	Column		

3.5 Ketchaoua Mosque (Cathedral of St Philippe Church) in Algerias, Algeria

It is situated in center of the old Algiers city (Casbah fortress) of Algeria republic (Fig.3.4). This mosque was built during the rule of the Ottoman's Empire in the 16th century. Ketchaoua was one of the most prestigious mosques of the city, with lavish decoration and monumentality devoted to Ottoman architecture in Algiers (Berque, 1930). The mosque is logistically and symbolically the cynosure of the Algiers city.

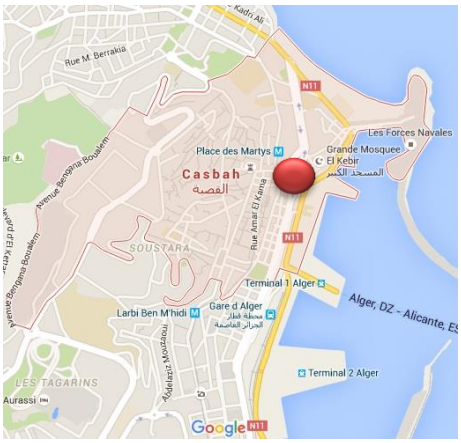


Figure 3.4. Location of Ketchaoua Mosque in old Algeria city (URL 28).

During the French rule, the Duke of Rovigo ordered to occupy the Mosque in 1831. In the 1832, the cross and flag of France are put on the top of minaret and dome then the mosque was converted to church (Lucien, 1985).

Conversion of the building projects had been initiated by architect engineer Guiauchain Pierre Auguste who had provided a project to convert in the mid of 1830 (Nedjari, 2012). From collection historical information, Table (3.13) is shaped.

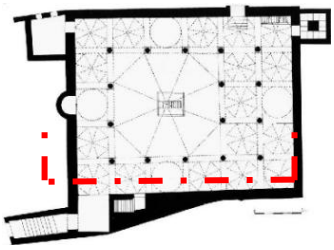
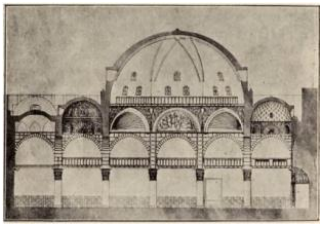
Table 3.13. General historical information of Ketchaoua Mosque in Algerias, Algeria

	General historical information	
1	**Original name**	Ketchaoua Mosque
2	**Country**	Algeria
3	**City**	Old Algeria city
4	**Construction period**	16th Century
5	**Name after conversion**	Cathedral of St Philippe Church
6	**Conversion period**	19th Century (1832)
7	**Conversion order**	French rule, by architect engineer
8	**Reason of selection as a case study**	It is situated in Algeria and in old city. Also, it is a historical individual mosque.

3.5.1 Architectural and Structural Features of the Original Ketchaoua Mosque

The mosque was built as a rectangular prayer hall (Table 3.14). The prayer hall has a central and hypostyle plan type, with 24m×20m interior dimensions.

Table 3.14. Main documents of Ketchaoua Mosque (URL 29)

Main Documents		
		
Plan	Interior elevation	Section

The prayer hall has a centralized and grid spatial organization (Table 3.15). Physical and functional orientations were directed toward east. This mosque's hall has two doors; the first door is opened from east and the second from south. Windows are opened in domes.

Fountain is located in the east side of prayer hall (Table 3.16). Niche is located east and pulpit is situated in the center of the prayer hall. Bell tower is situated in the

northwest and detached from prayer hall (Berque, 1930);(Ahmed & Chéhrazade, 2003).

Floor of the mosque has one level (Table 3.17). Octagonal cupola central dome (11.5m of each side) and twenty-one secondary small domes are used to cover this prayer hall. In addition, walls were parallel and directed toward niche. There are sixteen columns that supported the central dome and other domes (Lucien, 1985).

3.5.2 Architectural and Structural Features of the Converted Cathedral of St Philippe Church

The prayer hall has a grid and centralized spatial organization. Physical and functional orientations were directed toward east. There are three doors opened from east side and one from south side. Windows were opened from domes surfaces and from the east side of the prayer hall.

Original fountain (ablutions basin) is used as a Christian fountain (baptismal font) and located in the east side of the prayer hall. Altar is situated in the east side. Pulpit stood in the center of the prayer hall. Minaret became bell tower (Henri, 2003).

Floor of this hall was divided into two levels; floor of chancel (altar) and one bay (chancel) which were all raised up one step; while the other parts were lower than chancel' level. Octagonal cupola central dome (11.5m of each side) and twenty-one secondary small domes are used to cover this prayer hall. In addition, walls are parallel and directed toward niche. There are sixteen columns that supported the central dome and other domes (Lucien, 1985).

Table 3.15. Architectural Sacred Spaces of Ketchaoua Mosque (Cathedral of St. Philippe) in Algerias, Algeria

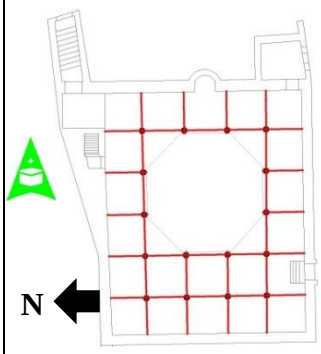
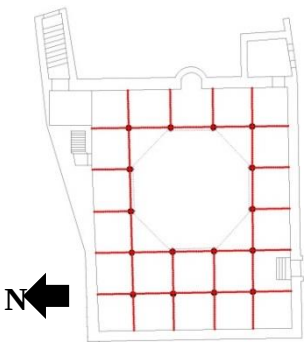
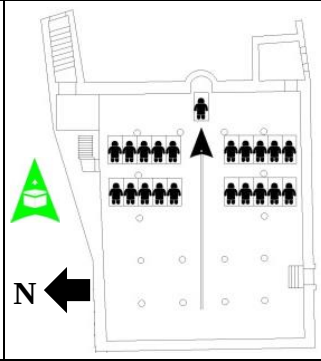
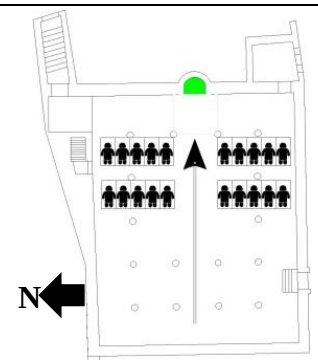
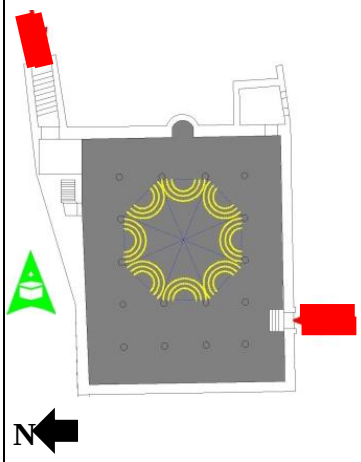
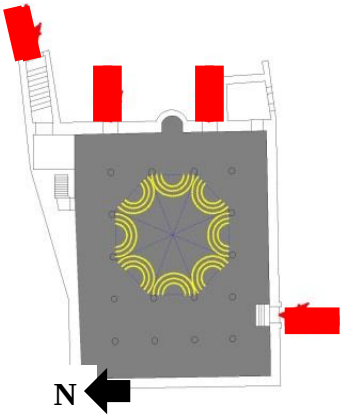
From Islam to Christianity		**Ketchaoua Mosque**
Architectural Features		
Architectural Sacred Spaces		
Part of the building	**Original Building**	**After conversion**
Courtyard	----------	----------
Prayer hall Spatial organization Grid & Centralized		
Orientation Physical orientation People praying		
Openings Door Additive doors Window Additive windows Light		

Table 3.16. Architectural Religious Elements of Ketchaoua Mosque (Cathedral of St. Philippe) in Algerias, Algeria

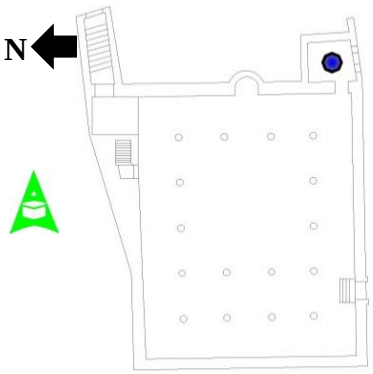
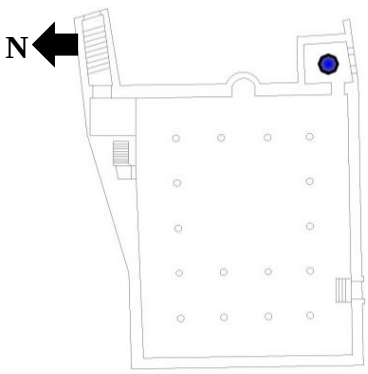
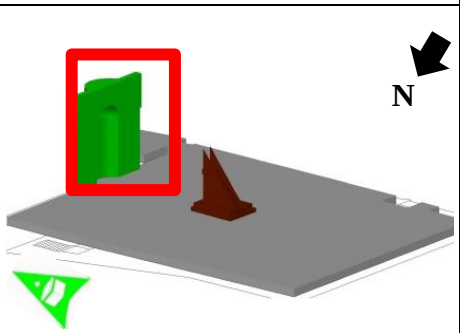
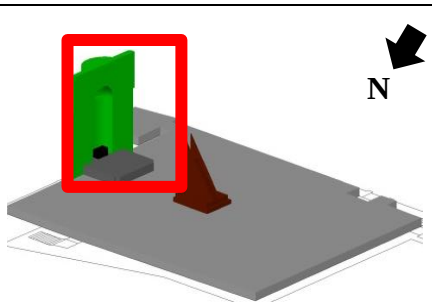
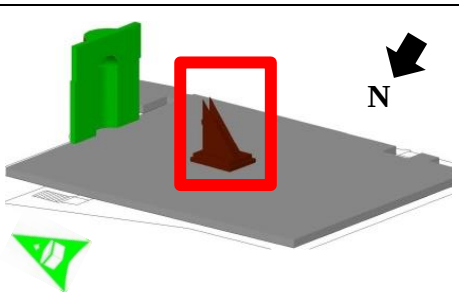
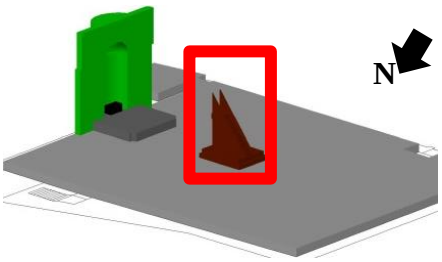
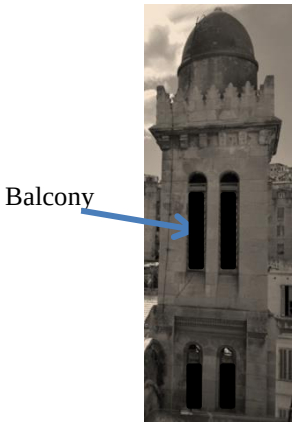
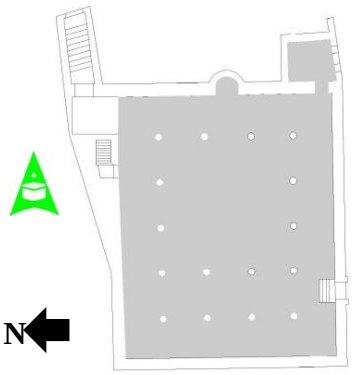
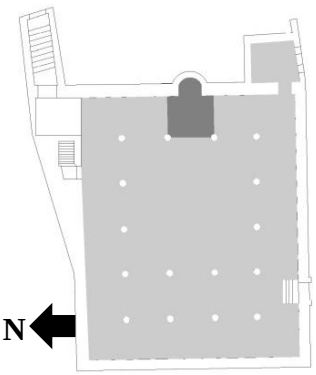
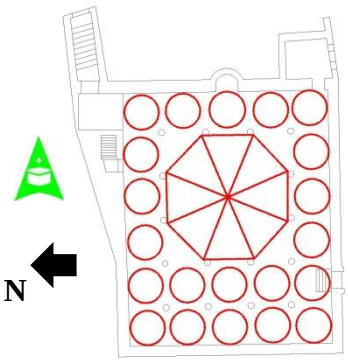
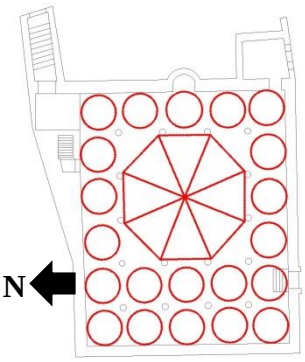
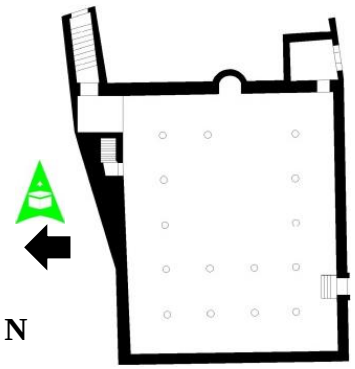
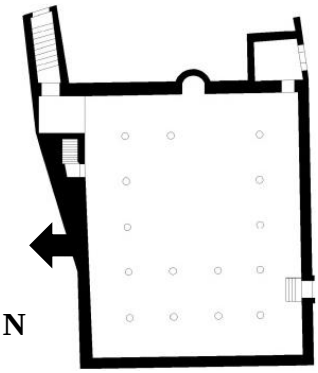
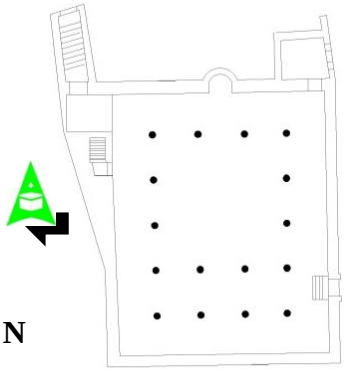
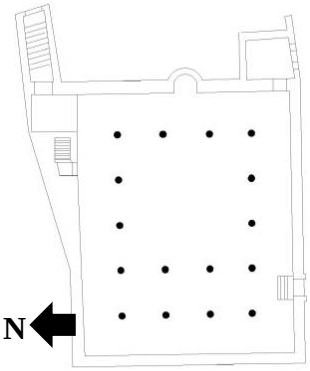
From Islam to Christianity	**Ketchaoua Mosque**
Architectural Features	
Architectural Religious Elements	
Part of the building	**Original Building** / **After conversion**
Fountain	 
Niche & Altar	 
Pulpit	 
Minaret &Bell Tower	 

Table 3.17. Structural Features of Ketchaoua Mosque (Cathedral of St. Philippe) in Algerias, Algeria

From Islam to Christianity		**Ketchaoua Mosque**	
Structural Features			
Part of the building		**Original Building**	**After conversion**
Horizontal elements	Floor		
	Ceiling		
Vertical elements	Wall		
	Column		

3.6 St John Church (Great Omari) in Sidon, Lebanon

It is situated in the old Sidon city in Lebanon (Fig.3.5). St. John church is part of the ramparts of the crusader fortress (Table 3.18). This church was built between 11th to 12th centuries and laid on a high mound to the west of the old city, overlooking the Mediterranean Sea. In 1260, it was destroyed by Mongols (Carter et al., 2008).

In the Mamluk period, this church was converted to mosque in 13th century and renamed to be called great Al-Omari or Omari mosque. The conversion happened during the Sultan Nasir Mohammed bin Qala'un period (who came from Egypt). It remained under Mamluk influence until the arrival of Ottomans whose rule lasted until World War I (Altınyıldız, 1989).

The Great Omari Mosque was the dominant architectural feature of the city. It was considered as the traditional symbol of the city. It is the oldest standing mosque in Sidon and served as a gathering place for all Muslims (URL 30).

Figure 3.5. Location of John Church in old Sidon City (Altınyıldız, 1989)

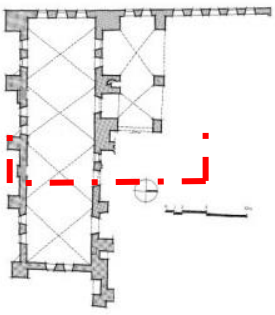
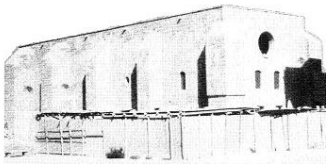
Table 3.18. General historical information of John Church in Sidon, Lebanon

	Building information	
1	**Original name**	Saint John Church
2	**Country**	Lebanon
3	**City**	Old Sidon city
4	**Construction period**	12th Century
5	**Name after conversion**	Great Omari Mosque
6	**Conversion period**	13th Century
7	**Conversion order**	Mamluk and Ottoman Islamic affairs (awqaf).
8	**Reason of selection as a case study**	It is situated in Lebanon and in old city. Also, it is a historical individual church.

3.6.1 Architectural and Structural Features of the Original St John Church

The church was built as a gothic style. The building is comprised of a porch, a prayer hall and the wall fragments which is the remains of this Crusader fortress (Table 3.19). Porch (entrance) is situated in the west side and consisted of two bays. It was covered with cross vaults. Prayer hall has been built as a rectangular shape with one nave (span) and chancel. Both nave and chancel has rectangular shapes.

Table 3.19. Main documents of Saint John Church, Hypothesis image based on (plans of Department of Islamic Awqaf, Sidon, Lebanon): drawn by M.Albrifkany.

Main Documents	
	
Plan	Elevation

The hall has a linear organization (Table 3.20). Physical and functional orientations are directed toward east side. There are two doors which are situated in the north side of prayer hall and opened with porch. In another hand, there are several windows

from eastern, western and southern sides. These windows allowed natural light to enter into the hall and focus on chancel space (Doyle, 2012).

Fountain was located in the north side of hall and beside the doors (Table 3.21). Niche and pulpit are located in the east side in the chancel space. Existence of the bell tower is unknown.

Floor is divided into two levels; chancel space is raised up one step, because nave's floor is lower than chancel's level (Table 3.22). The prayer hall was covered with cross vaults. Six pairs of buttress supported the roof. Walls surrounded the nave and chancel spaces.

3.6.2 Architectural and Structural Features of the Converted Great Omari Mosque

The Mamluks built courtyard in front of the north side of the prayer hall. Courtyard has two accesses; where the first is located in northern side and the second is from east side.

The prayer hall has a linear spatial organization. Physical orientation is directed toward east side while the functional orientation is oriented toward south side. Windows are opened from east, west, south and north sides of this prayer hall. Also, it has five doors which are opened from north side.

Fountain was added in the center of courtyard and in 19th century it was demolished. Niche and pulpit were added to the south side of prayer hall. In addition, niche was added to the south side of courtyard. Furthermore, minaret was built in north side and tagged to the prayer hall (Matar, 2007).

Floor is unified and became one level. Ceiling was covered with cross vaults. Six pairs of buttress supported the roof, while walls surrounded the nave space.

Table 3.20. Architectural Sacred Spaces of St John Church (Great Omari Mosque) in Sidon

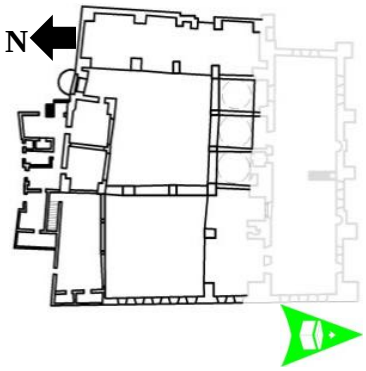
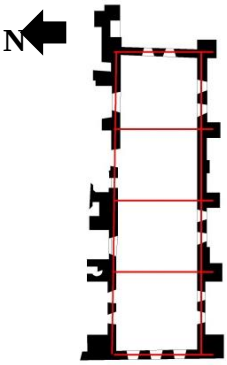
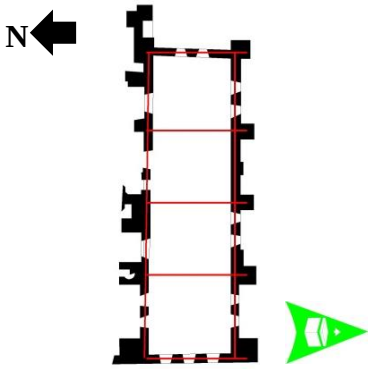
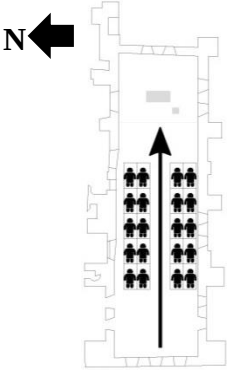
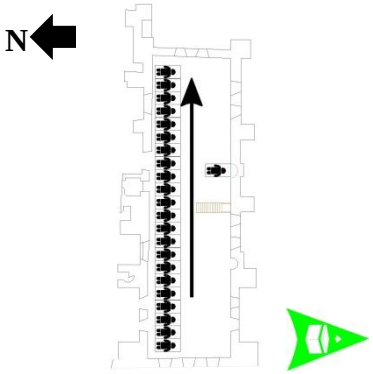
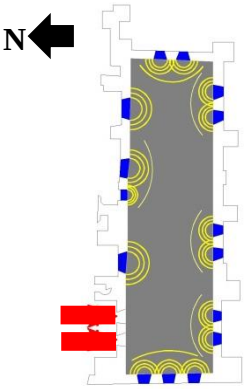
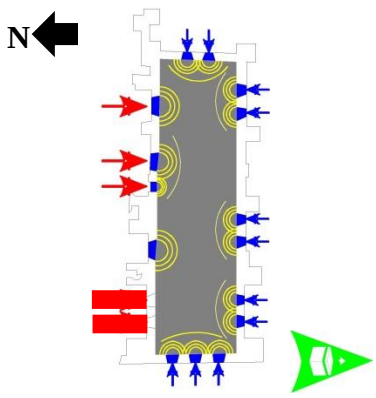
From Christianity to Islam		**St John Church**	
Architectural Features			
Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		No courtyard	
Prayer hall	Spatial organization Grid		
	Orientation Physical orientation People praying		
	Openings Door Additive doors Window Additive windows Light		

Table 3.21. Architectural Religious Elements of St John Church (Great Omari Mosque) in Sidon

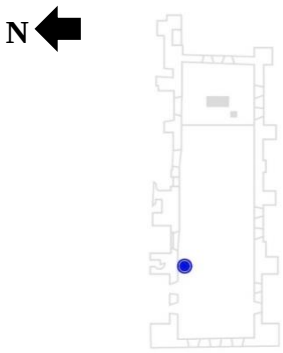
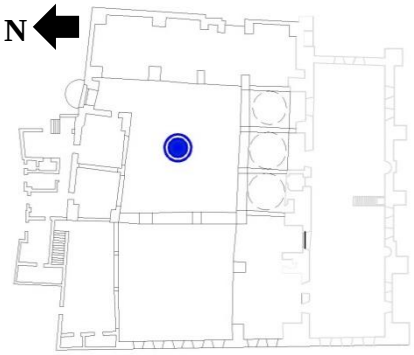
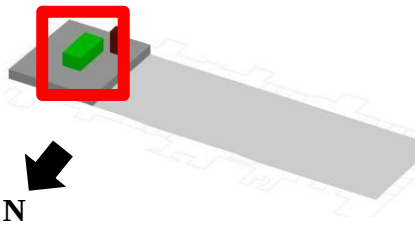
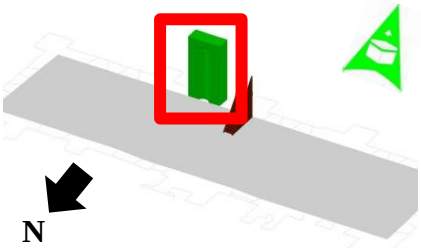
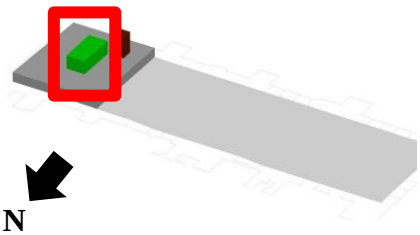
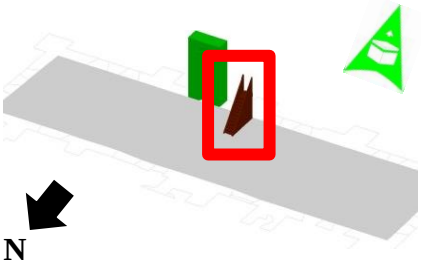
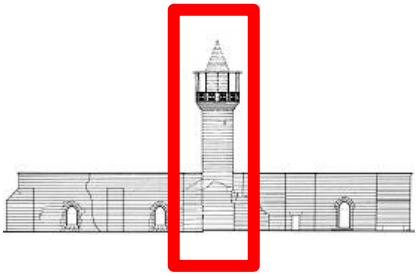
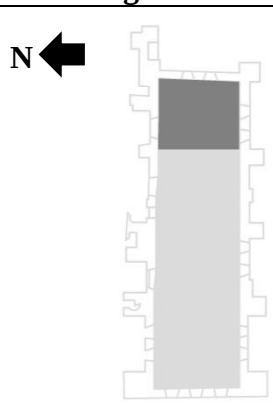
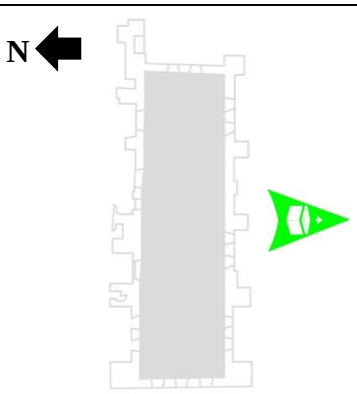
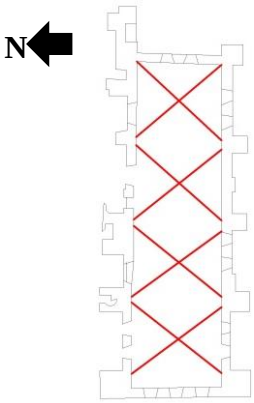
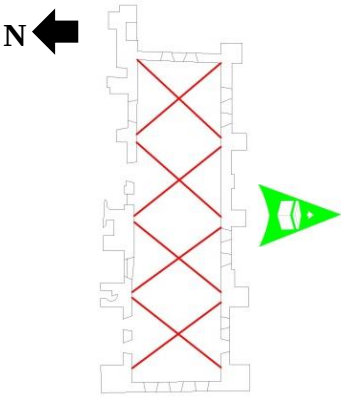
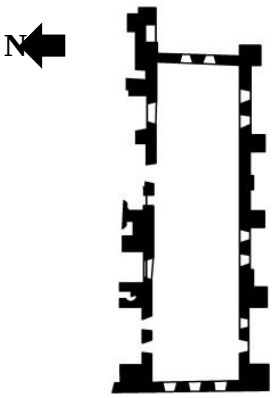
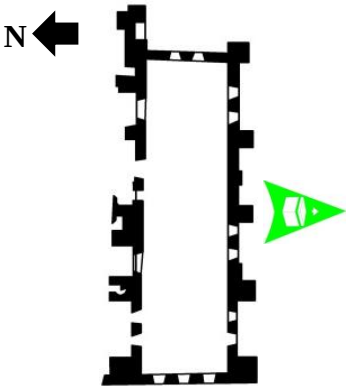
From Christianity to Islam	**St John Church**
Architectural Features	
Architectural Religious Elements	
Part of the building	**Original Building**	**After conversion**
Fountain		
Altar & Niche		
Pulpit		
Bell Tower & Minaret	It is unknown	

Table 3.22. Structural Features of St John Church (Great Omari Mosque) in Sidon

From Christianity to Islam		**St John Church**	
Structural Features			
Part of the building		**Original Building**	**After conversion**
Horizontal elements	Floor		
	Ceiling		
Vertical elements	Wall		
	Column	No Columns	No Columns

3.7 Saint John the Baptist Church (Al-Omari Mosque) in Beirut, Lebanon

Beirut's cathedral church (Saint John the Baptist) is situated in the old Beirut city, capital of Lebanon (Fig.3.6). This church was built in the 12th century and dedicated to Saint John the Baptist. This building has become in ruins and reminder of the Byzantine church (George & Barclay, 2011).

The church was converted to mosque in 13th century during Mamluk period that was considered as a Great Friday Mosque (Hachette, 1975). During ottoman's period, the mosque was renamed as Al-Omari Mosque or Great Omari who was the second caliph/chief of Muslims (644-654). Al-Omari mosque is located in the midst of a cluster of mosques in downtown. Since the fourteenth century, it has been the most important and largest mosque in Beirut. It is still regarded today as Beirut's most historical and important mosque (URL 31); (Kramer, 2015). Historical information is listed in Table (3.23).

Figure 3.6. Location of St. John the Baptism Church in old Beirut (URL 32).

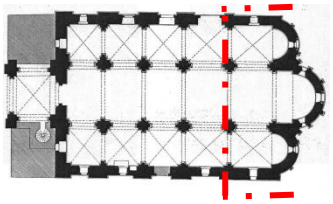
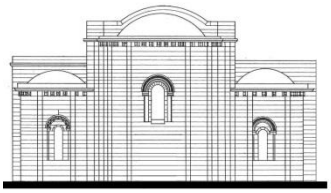
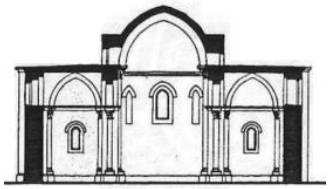
Table 3.23. General historical information of St. John the Baptism in Beirut, Lebanon

	General historical information	
1	**Original name**	Saint John the Baptist Church
2	**Country**	Lebanon
3	**City**	Old Beirut city
4	**Construction period**	12th Century
5	**Name after conversion**	Al-Omari (Great Omari) Mosque
6	**Conversion period**	13th Century (1291)
7	**Conversion order**	Mamluk and Ottoman Islamic affairs (awqaf).
8	**Reason of selection as a case study**	It is situated in Lebanon and in old city. Also, it is a historical individual church.

3.7.1 Architectural and Structural Features of the Original Saint John the Baptist Church

Saint John the Baptist is a Romanesque and Gothic basilica Church. The church is consisted of porch and a prayer hall (Table 3.24).

Table 3.24. Main documents of Saint John the Baptist Church (URL 33)

Main Documents		
		
Plan	Elevation	Section

Porch is consisted of one nave (Table 3.25). Prayer hall was built as a basilica form with 34.5m× 20m interior dimensions. It was comprised of nave, two side aisles and chancel. Each nave and aisle was divided into five bays. Chancel is the extension of the nave and located in the east side of the prayer hall.

The prayer hall has a grid spatial organization. Physical and functional orientations are directed toward east. This type of hall has one portal in the west side where the

door is axial to chancel. Windows were opened from east, north, west and south sides to allow natural light enter into the prayer hall and focus on the chancel space.

Fountain is located in the northwest side of the nave and near to the porch (Table 3.26). Niche and pulpit were situated in the east side and in the chancel space. Bell tower is located in the south side of the porch (Chahine, 1997).

Floor was divided into two levels; chancel's floor was raised up one step because the floor of the nave and aisles were lower than chancel's level (Table 3.27). Cross vaults were used to cover aisles and barrel vaults for nave of the prayer hall. Furthermore, there were four pairs of columns inside this prayer hall. Walls were parallel and ended with three semicircular apses.

3.7.2 Architectural and Structural Features of the Converted Al-Omari Mosque

Courtyard is added to the north side of the building. It included two accesses; the first one is from the north side while the second is from east side. The west side of courtyard was extended and covered the main porch of the building. Prayer hall of mosque are included to Islamic elements instead of Christian elements (Cini, 1964).

The prayer hall has grid organization. Physical orientation was directed toward east side. Functional orientation was oriented toward south side.

The main door was opened from west side. Three doors were located in the north side and one from the east side of prayer hall.

Fountain is added into the center of the courtyard. This element was eliminated in 1965 (Jamil, 1948). Two niches were added to the building; the first one was built in

the south side of the prayer hall and the second in the south part of the courtyard. Pulpit was located in south side of the prayer hall and on the left side of the main niche. Original bell tower in the south side of pre-existing porch became minaret. New minaret was added to the northwest of the courtyard

The prayer hall has one floor level (unified level). Cross vaults covered the aisles and barrel vaults for the nave of the prayer hall. Furthermore, there are four pairs of columns; walls were parallel and ended with three semicircular apses.

Table 3.25. Architectural Sacred Spaces of St John the Baptist (Al-Omari Mosque) in Beirut, Lebanon

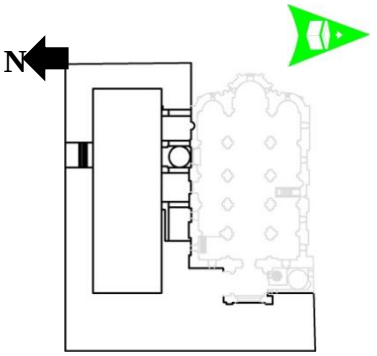
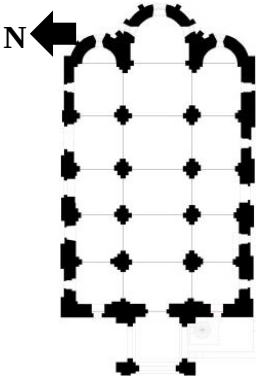
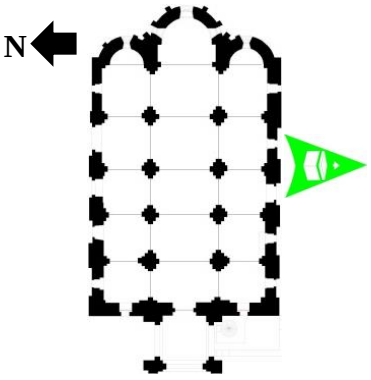
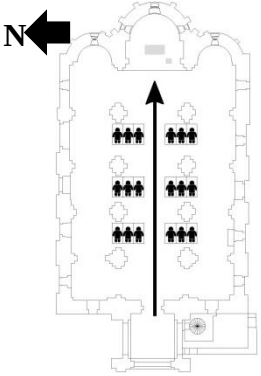
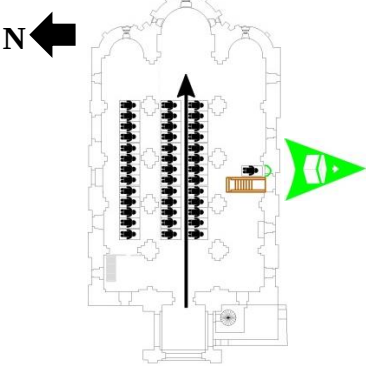
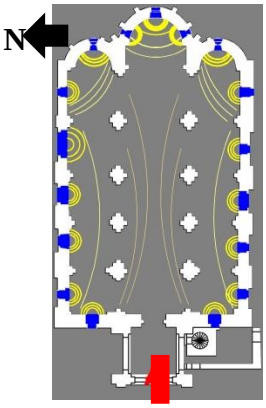
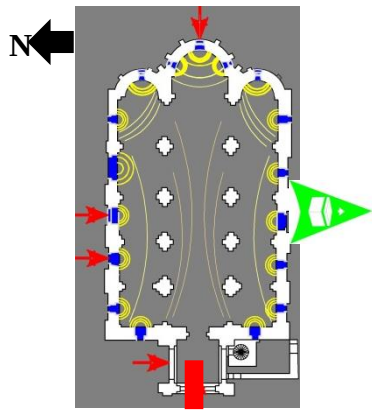
From Christianity to Islam		**Saint John the Baptist**	
Architectural Features			
Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		No Courtyard	
Prayer hall	Spatial organization Grid		
	Orientation Physical orientation People praying		
	Openings Door Additive doors Window Additive windows Light		

Table 3.26. Architectural Religious Elements of St John the Baptist (Al-Omari Mosque) in Beirut, Lebanon

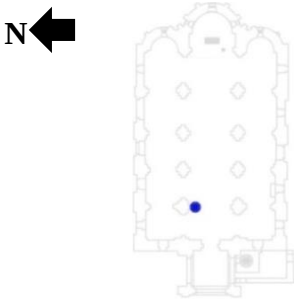
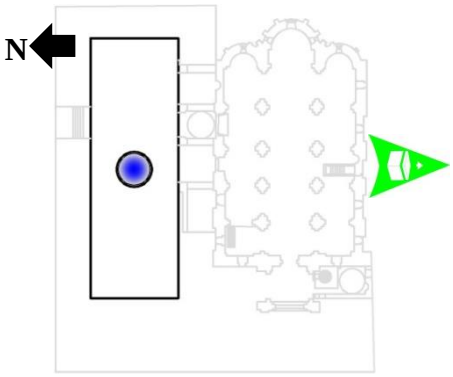
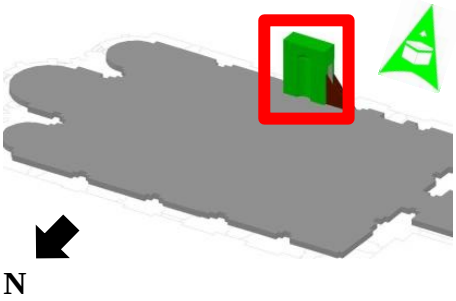
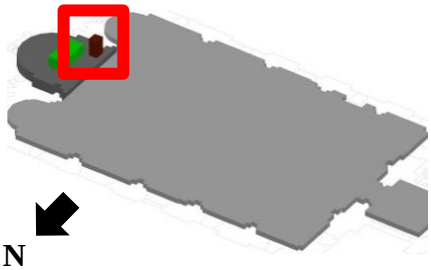
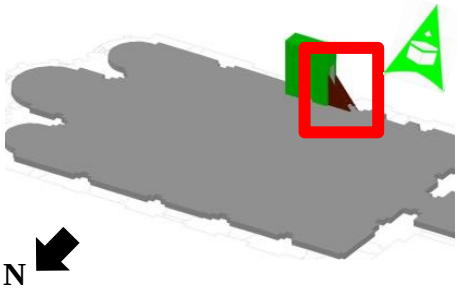
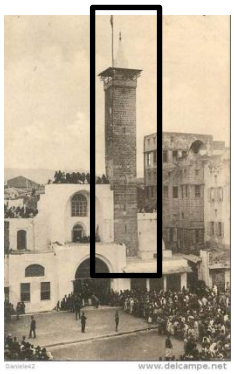
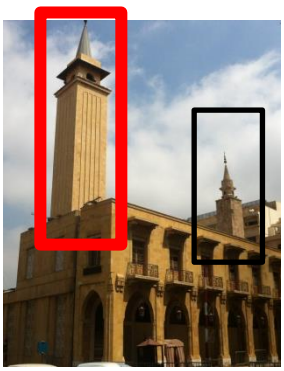
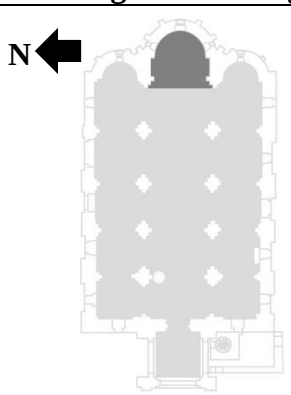
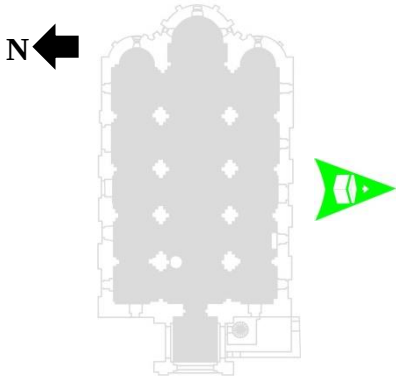
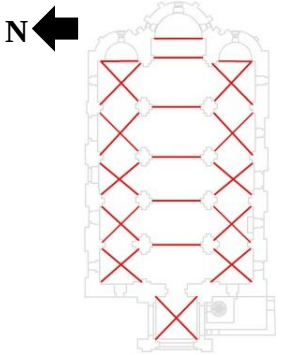
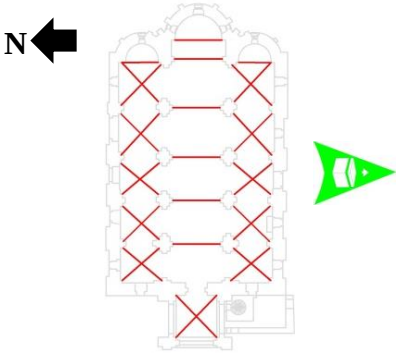
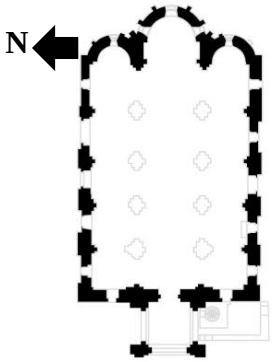
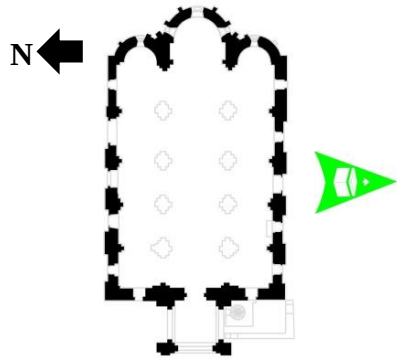
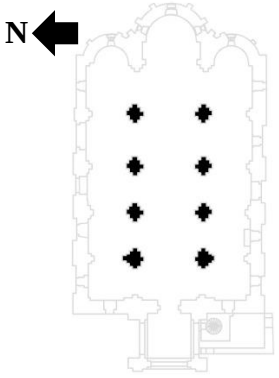
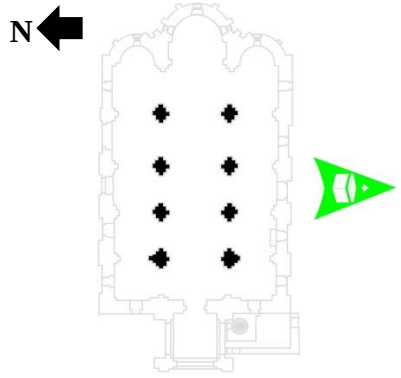
From Christianity to Islam	**Saint John the Baptist**
Architectural Features	
Architectural Religious Elements	
Part of the building	**Original Building** / **After conversion**
Fountain	 
Altar & Niche	 
Pulpit	 
Bell Tower & Minaret	  URL 34

Table 3.27. Structural Features of St John the Baptist (Al-Omari Mosque) in Beirut, Lebanon

From Christianity to Islam		**Saint John the Baptist**	
Structural Features			
Part of the building		**Original Building**	**After conversion**
Horizontal elements	Floor		
	Ceiling		
Vertical elements	Wall		
	Column		

3.8 Cathedral Church of John the Baptist (Great Omari Mosque) in Gaza, Palestine

It is situated in the old Gaza city of Palestine (Fig.3.7). This church is located in the Daraj Quarter, at the eastern end of Omar Mukhtar Street, southeast of Palestine Square in Downtown Gaza. In 1149, it was built by Crusaders as a cathedral church of John the Baptist. In 1187, it was partly destroyed in 1187 (Ibn-Salih et al., 1999). In the Mamluk period, it was converted in the 13th century, renamed as Great Mosque of Gaza and known as the Great Omari Mosque (Nasser, 2009). This mosque is the largest and oldest mosque in the Gaza's old city (McFarlane, 1896). It was severely damaged during the First World War; the mosque was restored in 1925 by the Supreme Muslim Council (Al-Qeeq, 2011). From collection historical information, Table (3.28) is shaped.

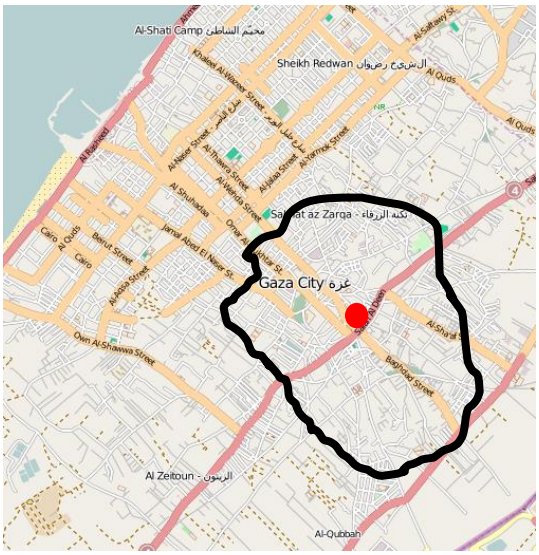


Figure 3.7. Location of John Church old Gaza City (URL 35).

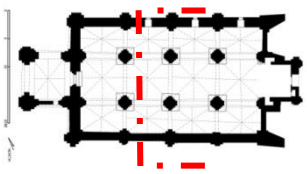
Table 3.28. General historical information of John Church in Gaza, Palestine

	General historical information	
1	**Original name**	Cathedral church of John the Baptist
2	**Country**	Palestine
3	**City**	Old Gaza city
4	**Construction period**	12th Century (1187)
5	**Name after conversion**	Great Omari (Great Mosque of Gaza)
6	**Conversion period**	13th Century
7	**Conversion order**	Mamluk (Sultan Ahmad bin Qalawun) and Ottoman Islamic affairs (awqaf).
8	**Reason of selection as a case study**	It is situated in Palestine and in old city. Also, it is a historical individual church.

3.8.1 Architectural and Structural Features of the Original Cathedral Church of John the Baptist

The church is built as a gothic style and has rectangular basilica plane type (Table 3.29). The church is comprised of porch and prayer hall. Porch consists of one nave covered by cross vaults and supported with two pairs of buttresses. Prayer hall consists of nave, two aisles and chancel. Each nave and aisle was divided into four bays. Chancel space is located in the southeast side.

Table 3.29. Main documents of John Church (Hypothesis image) & (Nasser, 2009): drawn by M.Albrifkany.

Main Documents	
	
Plan	Elevation

Prayer hall has a grid spatial organization (Table 3.30). Physical and functional orientations were directed toward southeast side. This type of hall has portal (one door) in the northwest side. Windows are opened from northwest, northeast;

southeast and southwest sides to allow natural light enter into this hall and focus on chancel space.

Existence of fountain is unknown (Table 3.31). Altar and pulpit are located in chancel space which situated in the southeast side of the hall. Bell tower is located in chancel space and in southeast side.

Floor has two levels; the floor of chancel is raised up one step, because the floor of nave and aisles are lower than chancel's level (Table 3.32). Cross and barrel vaults are used to cover the hall. Six pairs of buttresses (cruciform piers) supported the ceiling. Walls are parallel and surrounded the prayer hall from four sides.

3.8.2 Architectural and Structural Features of the Converted Great Omari Mosque

During Ottomans period, courtyard was added to the northeast side of the prayer hall. It consisted of two entrances; the first one was opened from east side and the second from south side of the courtyard. Mamluks expanded the size of the prayer area towards the southwest side. In addition, the area of entrance is extended toward northeast side.

The prayer hall has a grid spatial organization. Physical and functional orientations are directed toward southeast side. This type of hall has five doors; the first one is opened from northwest side; the second from southwest side; the third, fourth and fifth doors are opened from northeast side of the prayer hall. Windows are opened from southwest, southeast northeast and northwest sides.

Existence of fountain is unknown in the Mamluk period, and two niches and pulpit were located in the southeast side of expanding area of the hall. Minaret is a stand in bell tower's situation (Nasser, 2009).

The prayer hall has one floor level. Cross and barrel vaults are used to cover this hall. Twelve pair of buttresses supported the ceiling. Walls surrounded the mosque hall and are closed toward niche's wall (Qibla wall).

Table 3.30. Architectural Sacred Spaces of Cathedral John the Baptist (Great Omari Mosque) in Gaza

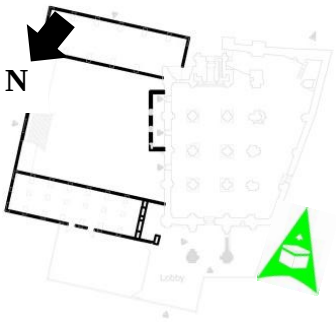
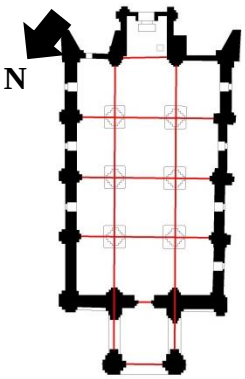
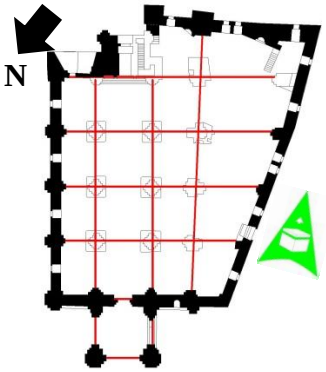
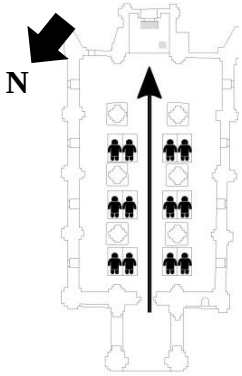
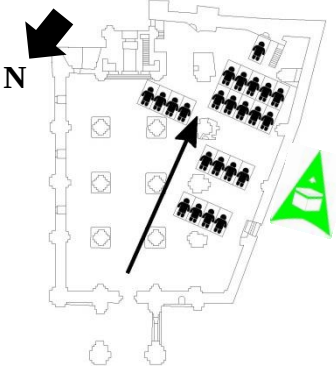
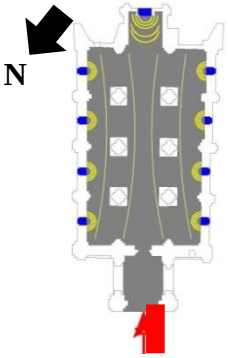
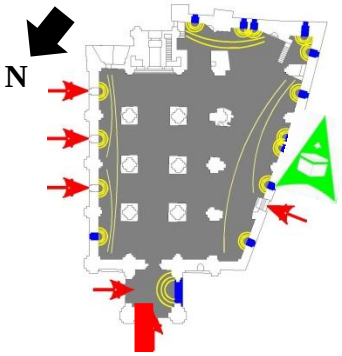
From Christianity to Islam		**Cathedral John the Baptist**	
Architectural Features			
Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		It is unknown	
Prayer hall	Spatial organization Grid		
	Orientation Physical orientation People praying		
	Openings Door Additive doors Window Additive windows Light		

Table 3.31. Architectural Religious Elements of Cathedral John the Baptist (Great Omari Mosque) in Gaza, Palestine

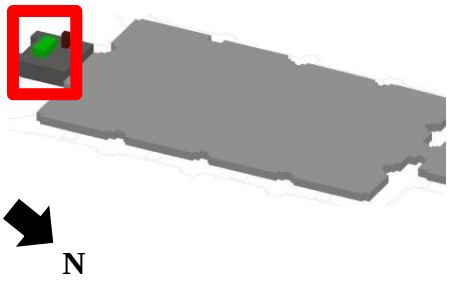
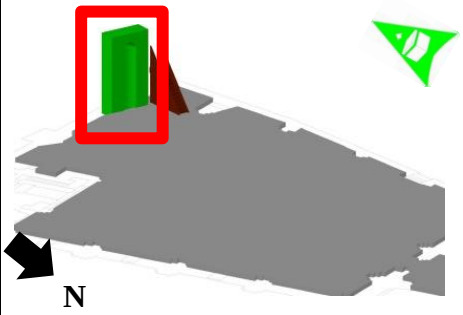
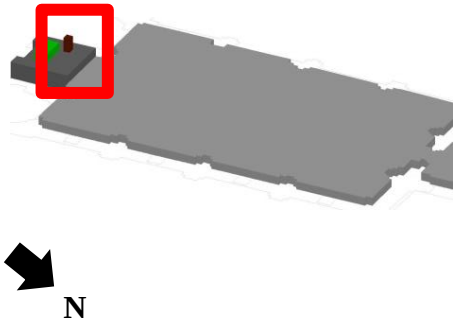
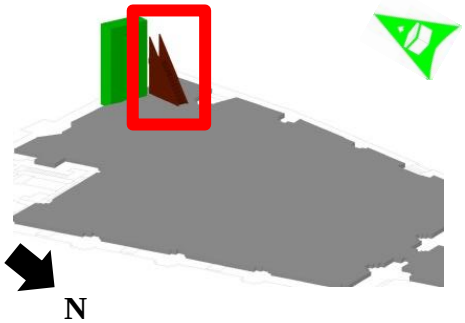
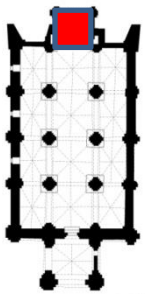
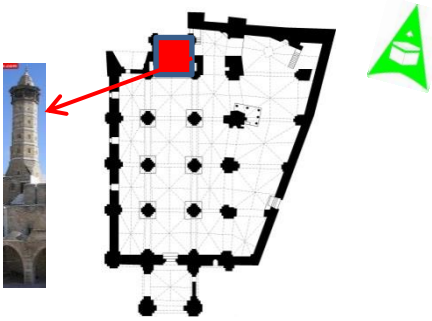
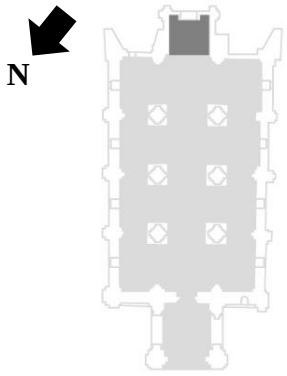
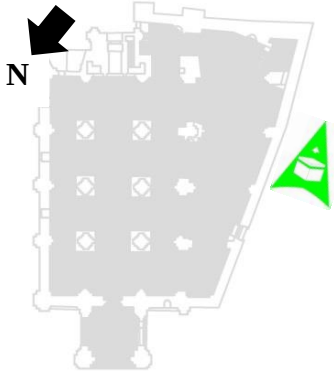
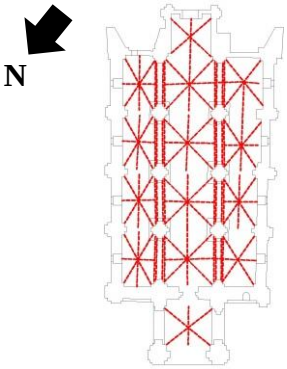
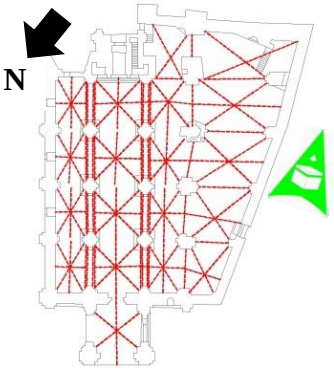
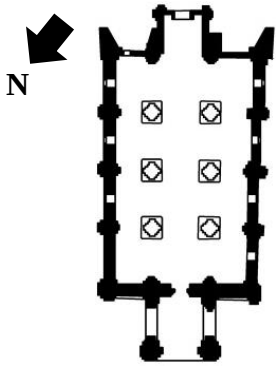
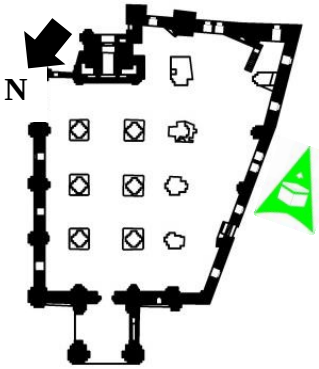
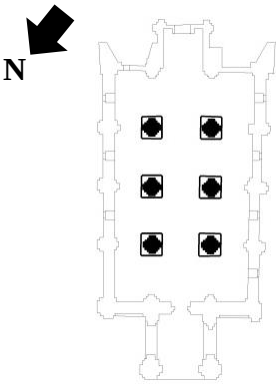
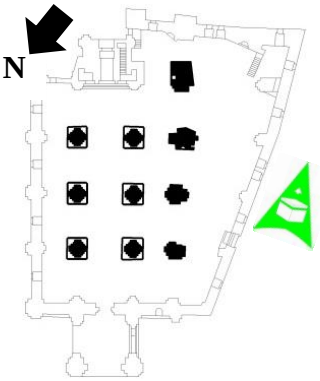
From Christianity to Islam		**Cathedral John the Baptist**
Architectural Features		
Architectural Religious Elements		
Part of the building	**Original Building**	**After conversion**
Fountain	It is unknown	It is unknown (ablution room)
Altar & Niche		
Pulpit		
Bell Tower & Minaret		

Table 3.32. Structural Features of Cathedral John the Baptist (Great Omari Mosque) in Gaza, Palestine

From Christianity to Islam			**Cathedral John the Baptist**
Structural Features			
Part of the building		**Original Building**	**After conversion**
Horizontal elements	Floor		
	Ceiling		
Vertical elements	Wall		
	Column		

3.9 St. Sophie Church (Selimiye Mosque) in Northern Cyprus

This church is situated in the Nicosia city, capital of Northern Cyprus specifically in the old Nicosia (Walled City) (Fig.3.8). St. Sophie Cathedral is located in Selimiye Quarter which is the center of this city and built between 1204 to 1325 AC. The name of the cathedral is derived from Aya Sophia meaning Holy Wisdom in Greek. The dedication of the cathedral to the Holy Wisdom is a reminder from the Byzantine cathedral which occupied the same place in 11th century (Jeffery, 1935).

In the 16th century, during Ottoman period, it was converted to Friday Mosque by the commander Lala Mustafa Pasha who order the official conversion of the church into a mosque. During the same period, it was the largest mosque in the whole island, and was used weekly by the Ottoman governor, administrators and elite for the Friday prayers (Bağışkan, 2013). The Friday prayers also attracted a large number of Muslims from Nicosia and other surrounding villages. On 13th August 1954, the Mufti of Cyprus officially renamed the mosque as Selimiye Mosque, in honor of the Ottoman Sultan Selim II, who headed the empire during the conquest of Cyprus (Keshishian, 1978).

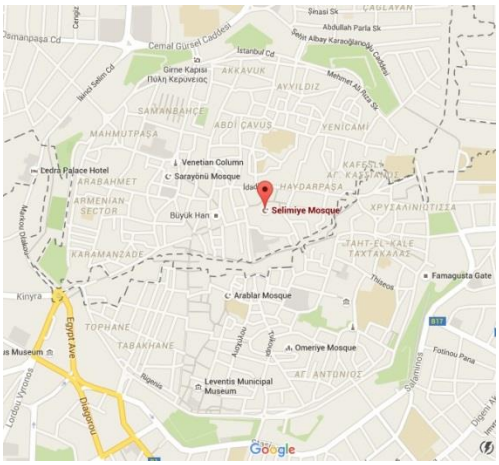


Figure 3.8. Location of St. Sophie church in old Nicosia City (URL 29)

As it was mentioned above, historical information was arranged in the Table (3.33) in order to understand the historical analysis of conversion.

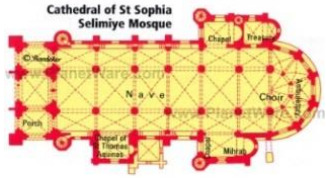
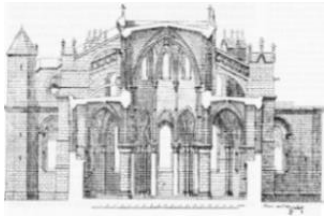
Table 3.33. General historical information of St. Sophie Church

	General historical information	
1	**Original name**	St. Sainte Sophie Church
2	**Country**	Northern Cyprus
3	**City**	Old Nicosia city center
4	**Construction period**	14th Century (1204 – 1325)
5	**Name after conversion**	Selimiye Mosque
6	**Conversion period**	16th Century (1571)
7	**Conversion order**	Commander Lala Mustafa Pasha ordered the Islamic affairs (Awqaf).
8	**Reason of selection as a case study**	It is situated in Northern Cyprus and in old city. Also, it is a historical individual church.

3.9.1 Architectural and Structural Features of the Original St. Sophie Church

The church was built as a rectangular Byzantine plan type where apse and three chapels (arms) are added (Keshishian, 1978). The church was built with porch and prayer hall (Table 3.34) (Fig 3.4).

Table 3.34. Main documents of St. Sainte Sophie Church (URL 36) (URL 37) (URL 38)

Main Documents		
		
Plan	Elevation	Section

Porch is an entrance and it is situated in the west side of the prayer hall (Table 3.35). It consists of nave and it is flanked by two aisles.

Prayer hall was built as a basilica form with 66m× 23m interior dimensions. This hall comprises of central nave, two aisles, chancel and three chapels. The central nave is 9.45 meters wide and the aisles are 5.52 meters. Each nave and aisles have six bays. Chancel is situated in the east of the church; raised on step and spread from the floor of nave and aisles. It was made of chevet and ambulatory. Where, chevet is in the center of chancel and contain an altar while ambulatory is located behind the chevet and is known with five segmented hemicycles. The chapel to the north was dedicated to St. Nicholas, the ones to the south, to Virgin Mary and St. Thomas Aquinas. Many Lusignan nobilities and kings were buried inside these chapels. Attached to each transept arm is an apsidal chapel with a semi-dome.

The prayer hall has a grid spatial organization type. In addition, it has two types of orientation which are functional and physical orientation. Physical and functional orientations were directed toward the east. There is a portal that has three doors located in the west side of prayer hall. Windows are opened for natural light to enter and the light focused on the chancel space (altar).

According to references, existence of courtyard, fountain and pulpit are unknowing and not mentioned (Table 3.36). Altar was located in the east of the church (chancel space). Twin bell towers were under construction, located in the west side and supported by porch's piers. The third bell tower was built in the north side of the church.

People were praying in nave and aisle where pews were situated in front of Altar. Floor was divided into two levels; the lower one is the floor of the nave and aisles

while the chancel was raised on one step (Table 3.37). As a ceiling structure, cross vaults were used to cover prayer hall.

There are four pairs of piers (pier is a type of column) in the porch. Also, there are six pairs of columns between nave and aisles in the prayer hall. Walls were parallel and indicated with chancel.

3.9.2 Architectural and Structural Features of Converted Selimiye Mosque

In the 16th century, the Ottomans have built courtyard which was located in the west of the porch. Courtyard included two entrances from south and north. It was opened with the original porch and including ablution fountain (Andrews, 1999). The aim of courtyard is gathering and assembling people for Friday prayer and especially in Islamic ceremony like Eid al-Adha and Fitr where it is considered as a greatest ceremony and many people came to pray which led to the performing of prayers in this space (Bağışkan, 2013). Ottomans took out all furniture (chairs and pews), choir, pulpit and altar (Gürkan, 1989).

The mosque has a grid organization type. Physical orientation was directed toward east. In another hand, the functional orientation (direction of prayers) was directed toward southeast according to Qibla (Kabaa's direction).

Two new doors were opened during Ottoman period. The first one was opened from the north side of the prayer hall while the second was opened from apse wall in the east. Windows are opened from north and south aisle sides.

In 1571, two minarets were raised from original bell towers. A pulpit (Mimbar) was added to the south wall of the hall. Niches (Mihrabs) were added in the south chapels of the prayer hall (Maric, 2009); (Alasya, 2012).

Floor of south chapels and half of prayer hall were raised up one step. Also, two floor's bays in the north side were raised up one step. Cross vaults were covered in the prayer hall. There were six pairs of columns in the prayer hall while the walls were parallel and related with chancel.

All architectural and structural features are listed in Table (4.3). This table is summarizing and gathering all information in order to illustrate the conversion process through comprising original building with converted building.

Table 3.35. Architectural Sacred Spaces of St. Sophia Church (Selimiye Mosque) in Nicosia, Northern Cyprus

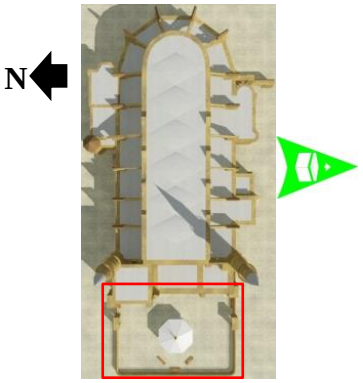
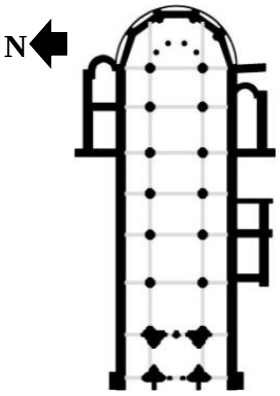
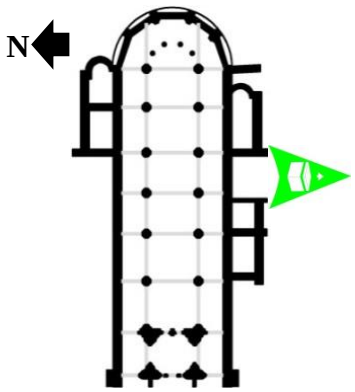
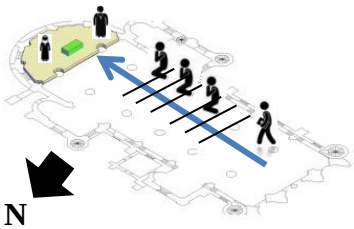
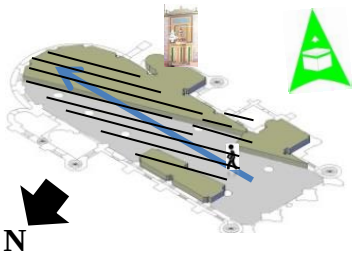
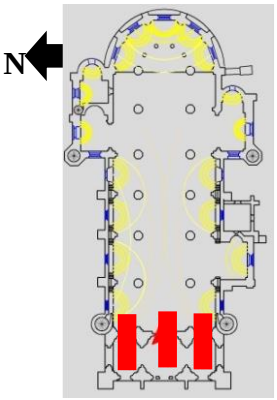
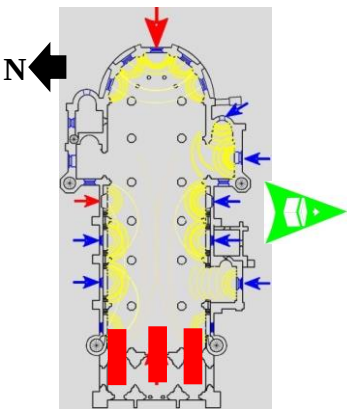
From Christianity to Islam		**St. Sophia Church**	
Architectural Features			
Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		It is unknown	 URL 38
Prayer hall	Spatial organization Grid		
	Orientation Physical orientation People praying		
	Openings Door Additive doors Window Additive windows Light		

Table 3.36. Architectural Religious Rlements of St. Sophia Church (Selimiye Mosque) in Nicosia, Northern Cyprus

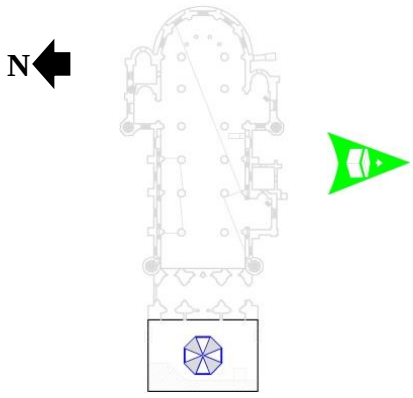
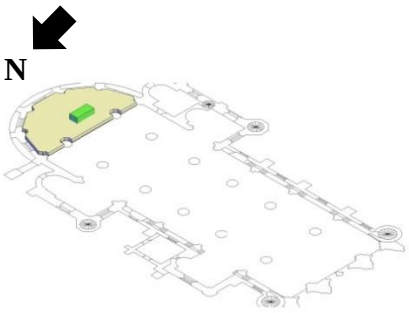
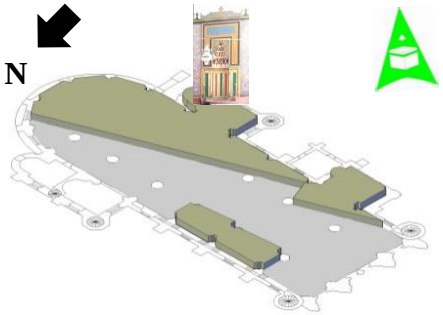
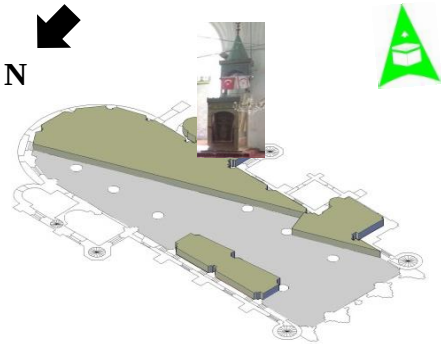
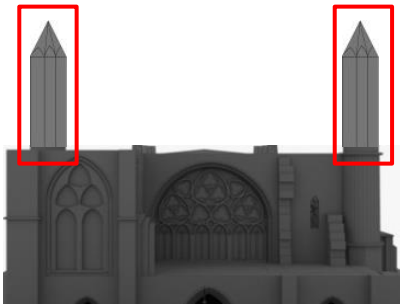
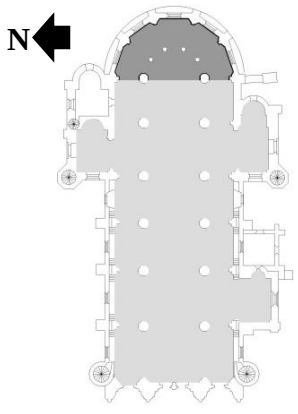
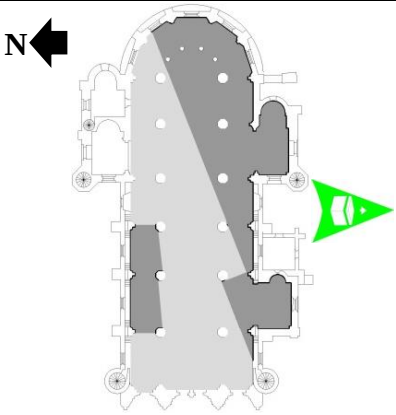
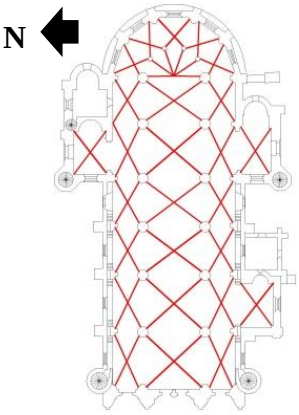
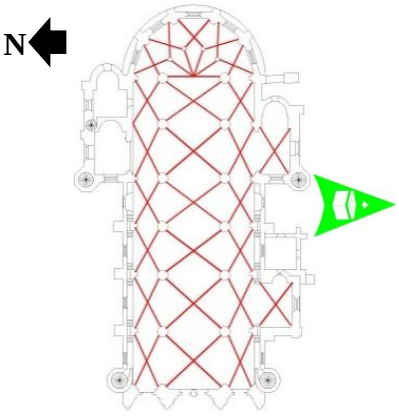
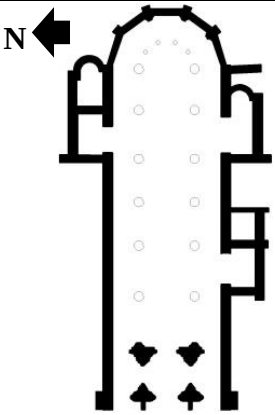
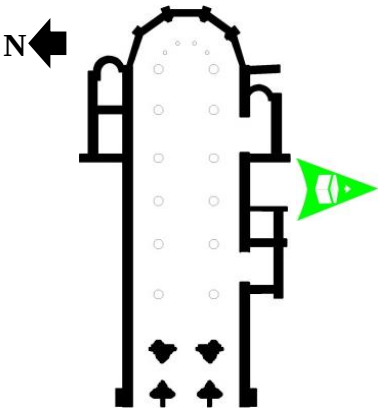
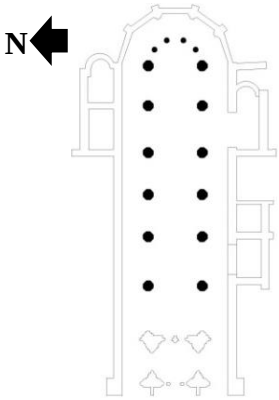
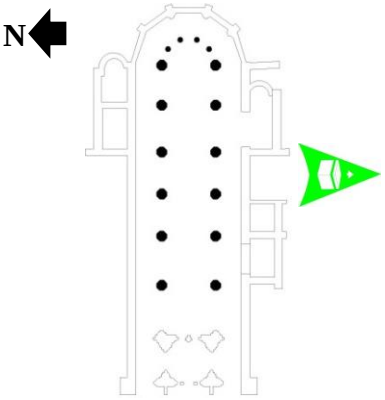
From Christianity to Islam		**St. Sophia Church**
Architectural Features		
Architectural Religious Elements		
Part of the building	**Original Building**	**After conversion**
Fountain	It is unknown	
Altar & Niche		
Pulpit	It is unknown	
Bell Tower & Minaret		 URL 38

Table 3.37. Structural Features of St. Sophia Church (Selimiye Mosque) in Nicosia, Northern Cyprus

From Christianity to Islam		**St. Sophia Church**	
Structural Features			
Part of the building		**Original Building**	**After conversion**
Horizontal elements	Floor		
	Ceiling		
Vertical elements	Wall		
	Column		

3.10 St. Nicholas church (Lala Mustafa Pasha Mosque) in Northern Cyprus

It is situated in the old Famagusta city of Northern Cyprus (Fig.3.9). This church was consecrated in 1328 and completed about 1400 or 1372 AD (Davey, 1994); (URL 39).

The cathedral was converted into a mosque after the Ottoman Empire captured Famagusta in 1571. It was known as Lala Mustafa Pasha Mosque who was the commander of Ottoman's conquest and later as the Aya sofya or Saint Sophia Mosque of Mağusa (Boas, 1999). This building is used as a Friday mosque.

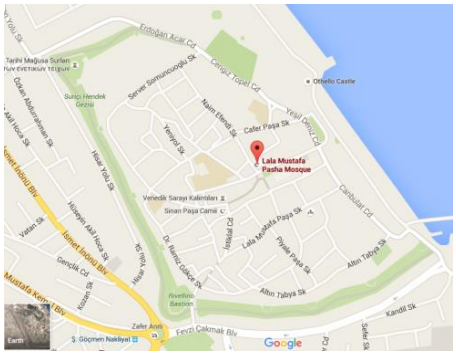


Figure 3.9. Location of St. Nicholas Church in old City (URL 29)

As it is mentioned above, historical information is arranged in the Table (3.38) in order to understanding the historical analysis of conversion.

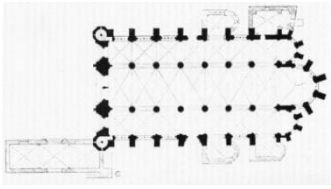
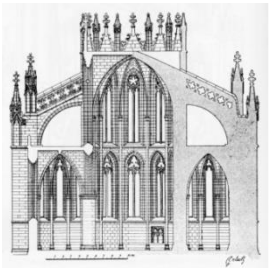
Table 3.38. General historical information of St Holy wisdom (St Nicholas)

	General historical information	
1	**Original name**	St. Holy Wisdom Church
2	**Country**	Northern Cyprus
3	**City**	Old Famagusta city
4	**Construction period**	14th Century(1328–1400 or 1372)
5	**Name after conversion**	Lala Mustafa Pasha Mosque
6	**Conversion period**	16th Century (1571)
7	**Conversion order**	Commander Lala Mustafa Pasha ordered the Islamic affairs (awqaf).
8	**Reason of selection as a case study**	It is situated in Northern Cyprus and in old city. Also, it is a historical individual church.

3.10.1 Architectural and Structure Features of the Original St. Nicholas Church

The building was built as a Gothic style with rectangular basilica form and three semicircular apses (Coldstream, 2002). The church contained a plaza and a Prayer hall (Table 3.39). The plaza was situated in the southwest side and it was surrounded by Venetian loggia room and an ancient Ficussycomorus tree. This plaza has been pedestrianized (Dubin & Morris, 2002).

Table 3.39. Main documents of Holy Wisdom Cathedral (URL 40) (URL 41) (URL 42).

Main Documents		
		
Plan	Elevation	Section

Prayer hall was built to be 55m long and 23m wide (Table 3.40). This hall consisted of nave, two side aisles and chancel. Each nave and aisles was divided in to seven bays. Chancel was located in the northeast side and contained three parallel apses

(triple apse). Two chapels were added on the south side and one on the north side of the prayer hall (Robertson I. , 1981).

The prayer hall has a grid spatial organization form and space. Also, it has two types of orientation. Physical orientation is directed toward northeast and functional orientation is oriented toward southeast.

The prayer hall has three doors opened from southwest and one in the northwest side. Also, windows were opened to allow light to enter and to also focus on chancel space (Dubin, 2005).

According to references, existence of fountain and pulpit are unknown and were not mentioned (Table 3.41). Altar was located in the northeast of the prayer hall. Also, twin bell towers were flanked at the main doors and tagged to southwest of the prayer hall.

People pray in nave and aisles; where pews were situated in front of the chancel. Floor was divided into two levels; Chancel's floor was raised up one step (Table 3.42). The floor of nave and aisles was lower than chancel's level. Cross vaults were used to cover prayer hall. Furthermore, there are six pairs of columns which divided this type of hall into nave and two aisles; walls were parallel and ended with chancel.

The style of this church resembled closely the great cathedral of Rheims in Paris in France especially twin towers over the aisles. Both churches were built as gothic style. Nicolas church has been dubbed the Reims of Cyprus (Folda, 2005).

3.10.2 Architectural and Structural Features of the Converted Lala Mustafa Pasha Mosque

Ottomans used plaza for gathering and assembling people for Friday prayer and especially in Islamic ceremonies which are Eid al-Adha and Fitr. In addition, courtyard was added in the northwest side of the prayer hall.

The prayer hall has a grid spatial organization. Physical orientation was directed toward northeast while functional orientation was directed toward southeast. Moreover, three windows were opened in the southeast side and one in the northwest side of the prayer hall.

Fountain was built beside the northwest of the courtyard. In another hand, chairs, pews and altar were been taken out from the prayer hall. Niche and pulpit were added to the southeast side. Pulpit was situated in the left side of niche. One minaret was added to the west side of the prayer hall (Michael et al.,2009). Muslims closed all chapel's wall and separated in-between them prayer hall and chapels.

Floor of chancel (central apse) and southeast aisle were raised up one step. Ceiling was covered with cross vaults. Furthermore, there are six pairs of columns that divided the hall into nave and two aisles, walls were parallel and ended with three semicircular apses.

Table 3.40. Architectural Sacred Spaces of Saint Nicholas's Church (Lala Mustafa Pasha Mosque) in Famagusta, Northern Cyprus

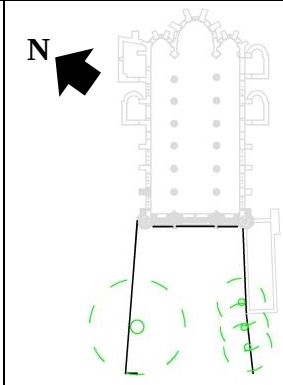
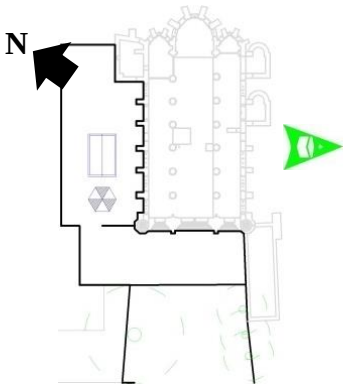
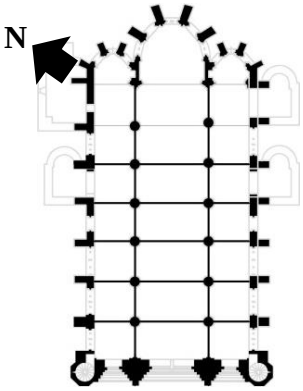
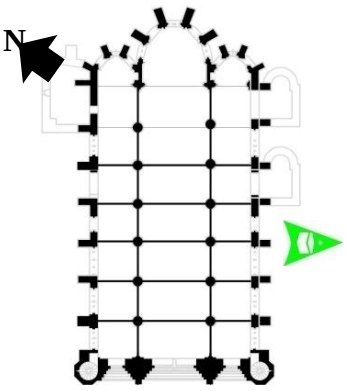
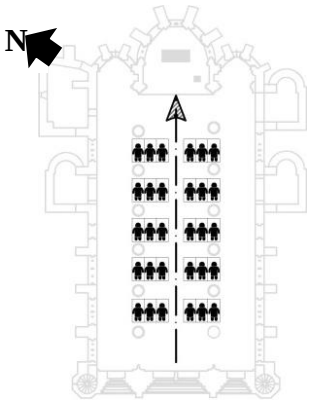
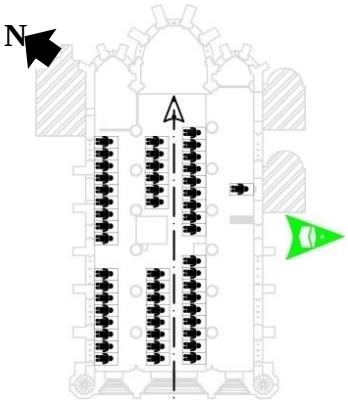
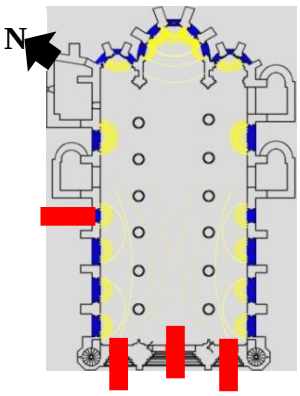
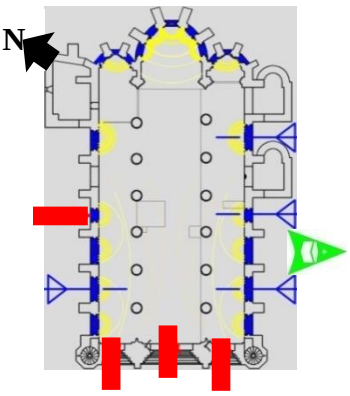
From Christianity to Islam		**St. Nicholas**	
Architectural Features			
Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard			
Prayer hall	Spatial organization Grid		
	Orientation Physical orientation = People praying		
	Openings Door Additive doors Window Additive windows Light		

Table 3.41. Architectural Religious Elements of Saint Nicholas's Church (Lala Mustafa Pasha Mosque) in Famagusta, Northern Cyprus

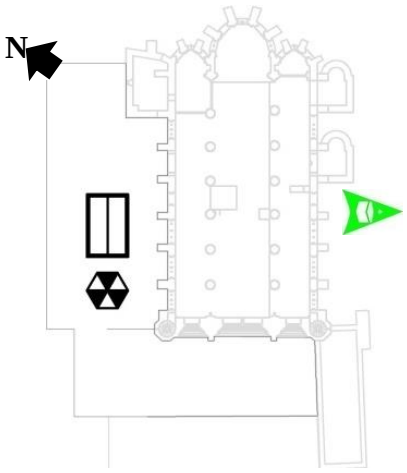
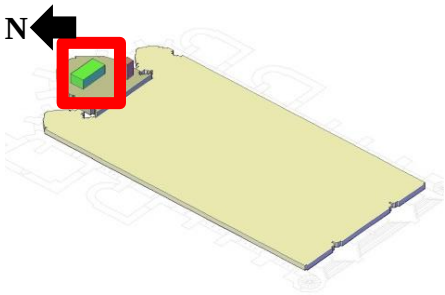
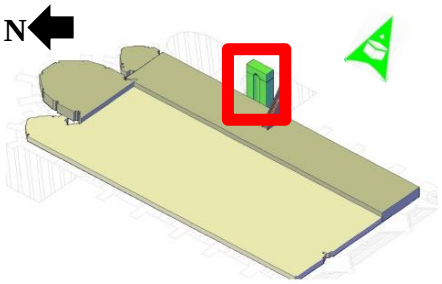
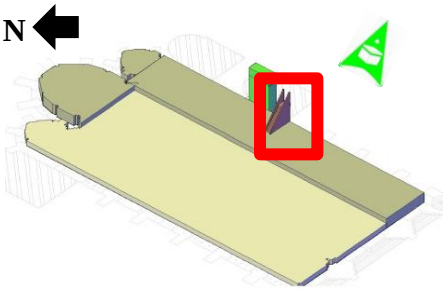
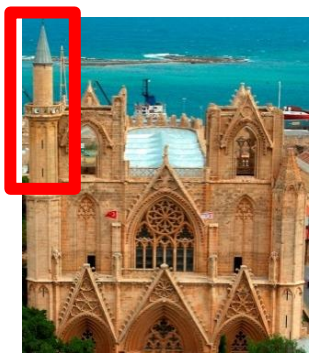
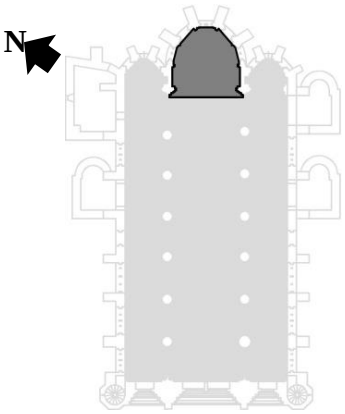
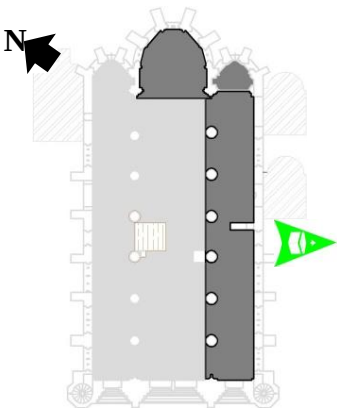
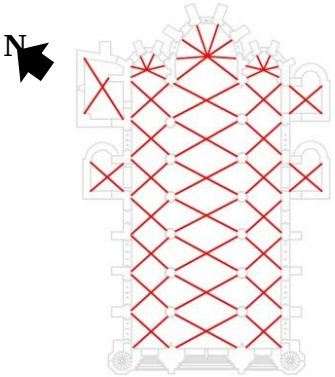
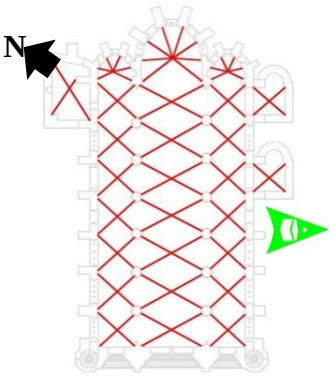
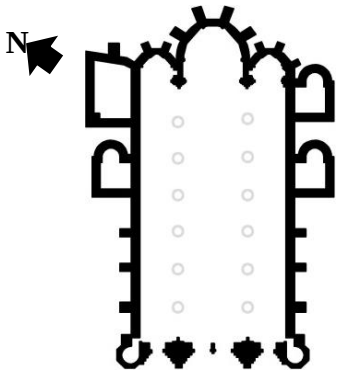
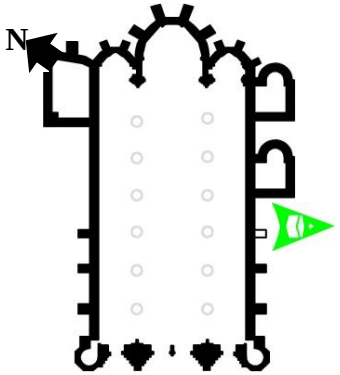
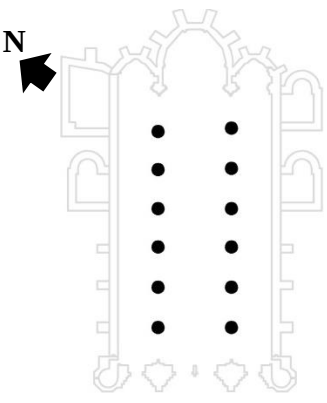
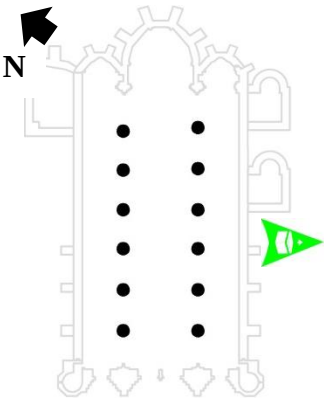
From Christianity to Islam	**St. Nicholas**
Architectural Features	
Architectural Religious Elements	
Part of the building	**Original Building**	**After conversion**
Fountain	It is unknown	
Altar & Niche		
Pulpit	It is unknown	
Bell Tower & Minaret	 URL 43	 URL 44

Table 3.42. Structural features of Saint Nicholas's Church (Lala Mustafa Pasha Mosque) in Famagusta, Northern Cyprus

From Christianity to Islam		**St. Nicholas**	
Structural Features			
Part of the building		**Original Building**	**After conversion**
Horizontal elements	Floor		
	Ceiling		
Vertical elements	Wall		
	Column		

3.11 St Philippe Church (Ketchaoua Mosque) in Algerias, Algeria

During the French rule and in 1844, Bishop Dupuchas in Algiers has decided to destroy ketchaoua mosque and build St Philippe church in the same site. Architect Amable Ravoisié suggested a proposal for building the church through scientific exploration of Algeria. This project conducted by the diocesan architects in Algeria (Nedjari, 2012).

In 1845, the ketchaoua mosque was demolished in order to build Cathedral of St Philippe in the site and it was completed in 1860. Later, in 1962 this church was converted into a Ketchaoua Mosque (McDougall, 2006); (Press, 2009).

In spite of these transitions over two different religious faiths which lasted about four centuries, the mosque has retained its original grandeur and is one of the major attractions of Algiers (Unesco, 2010). From collection historical information, Table (3.43) is shaped.

Table 3.43. General historical information of St. Philippe Church in Algerias, Algeria

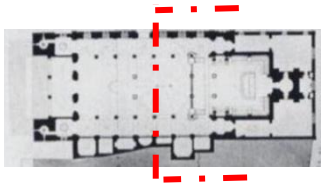
	General Historical Information	
1	**Original name**	St Philippe Church
2	**Country**	Algeria
3	**City**	Old Algeria city
4	**Construction period**	19th Century (1844)
5	**Name after conversion**	Ketchaoua Mosque
6	**Conversion period**	20th century (1962)
7	**Conversion order**	Islamic affairs
8	**Reason of selection as a case study**	It is situated in Algeria and in old city. Also, it is a historical individual mosque.

3.11.1 Architectural and Structural Features of the Original St Philippe Church

The style of church is mixed Roman-Byzantine and new Moorish architecture style (Nedjari, 2012). The cathedral became as a Latin cross form with rectangular shape (Table 3.44).

Prayer hall is composed of narthex, central nave, side aisles and chancel. Narthex is located in the east side and has three doors. Nave is the area where people performed their prayers. There are two aisles that are flanked by the nave; first aisle from north and the second from south side. Chancel is situated in the west side where it is consisted of chevet and ambulatory. Chevet is located in the center of chancel while ambulatory is surrounded by the chevet from the north, west and south sides.

Table 3.44. Main documents of St Philippe Church (URL 33); (URL 45); (URL 33).

Main Documents		
		
Plan	Elevation	Section

The prayer hall has a grid spatial organization (Table 3.45). Functional and physical orientations are directed toward west side. There are three doors that are opened from east side. Windows are opened from west, north, east and south sides.

Fountain is located in the southeast side of nave (Table 3.46). Altar is situated in the west side of the hall (chancel). Pulpit is located in the north side (nave) of the prayer

hall. Original bell tower stood in the southeast side. Twin towers are added in the east side of the hall and flanked the narthex.

Floor was divided into two levels; Chancel is raised up one step while floor of central nave, aisles and ambulatory are low more than chancel's level (Table 3.47). Domes and barrel vaults were used to cover the prayer hall. Buttresses and columns supported the ceiling.

3.11.2 Architectural and Structural Features of the Converted Ketchaoua Mosque

Prayer hall has a grid spatial organization. Physical orientation is directed toward west and functional orientation is oriented to the east. There are three doors opened from east side. Windows are opened from west, north, east and south sides.

Fountain ambulation was located in the west side (ambulatory spaces). Niche and pulpit were added to the east side of the prayer hall. Bell towers became minarets.

Floor was divided into two levels; the chancel space was raised up one step while the other parts were lower than chancel's level. Domes and barrel vaults are used to cover prayer hall. Buttresses and columns supported the ceiling. Qibla wall was built in the east side and behind the narthex.

Table 3.45. Architectural Sacred Spaces of St. Philippe Church (Ketchaoua Mosque) in Algerias, Algeria

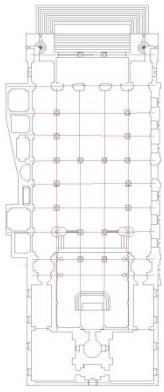
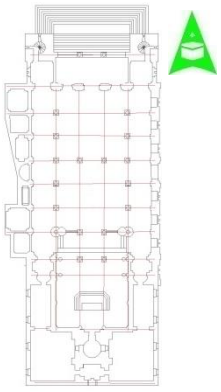
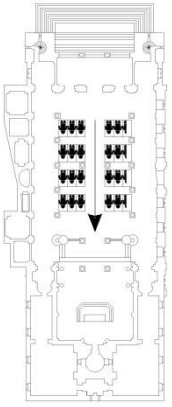
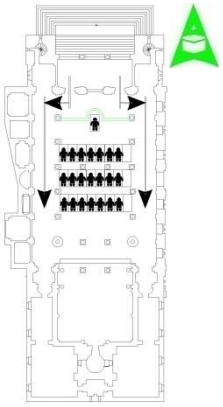
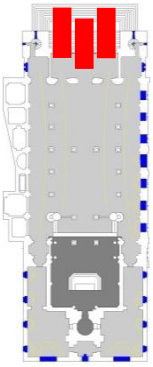
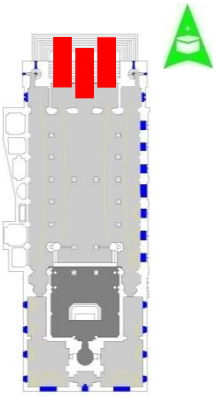
From Christianity to Islam		**St. Philippe Cathedral**	
Architectural Features			
Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		No Courtyard	No Courtyard
Prayer hall	Spatial organization Grid	N 	N 
	Orientation Physical orientation People praying	N 	N 
	Openings Door Additive doors Window Additive windows Light	N 	N 

Table 3.46. Architectural Religious Elements of St. Philippe Church(Ketchaoua Mosque) in Algerias, Algeria

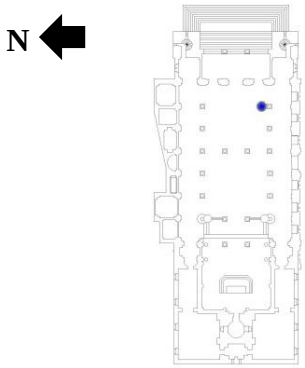
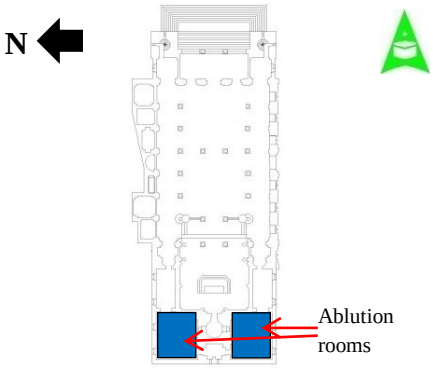
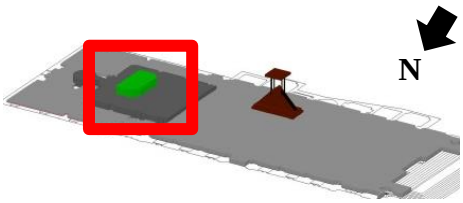
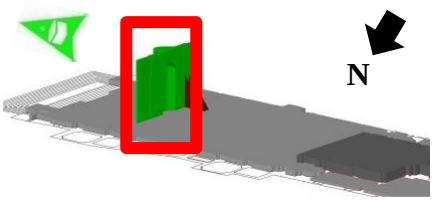
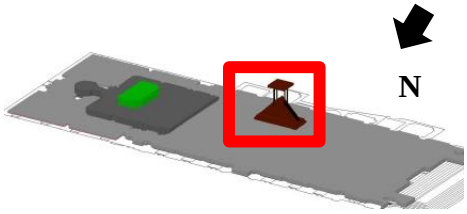
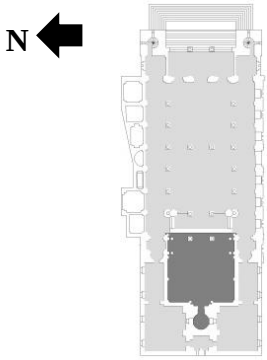
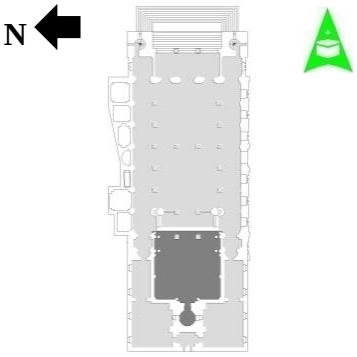
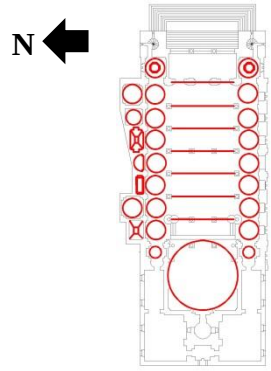
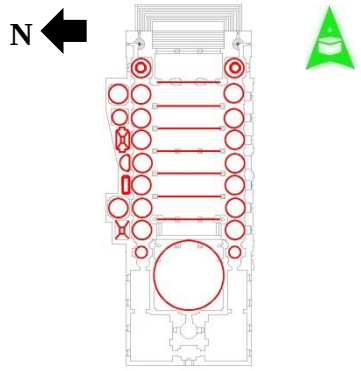
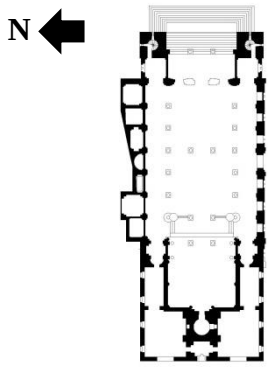
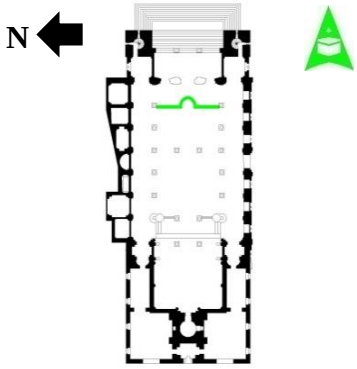
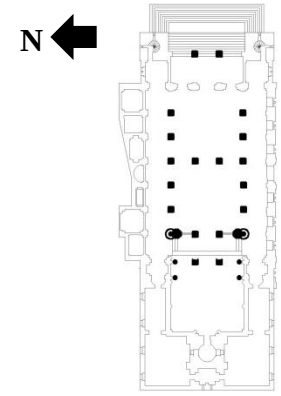
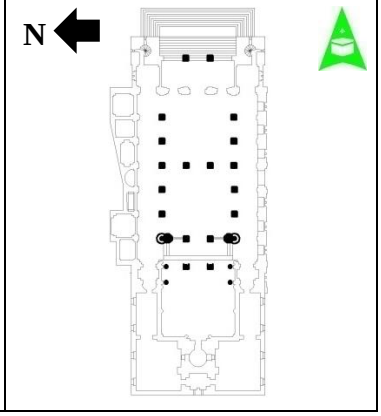
From Christianity to Islam	**St. Philippe Cathedral**
Architectural Features	
Architectural Religious Elements	
Part of the building	**Original Building** / **After conversion**
Fountain	 / 
Altar & Niche	 / 
Pulpit	 / 
Bell Tower & Minaret	 URL 46 /  URL 47

Table 3.47. Structural Features of St. Philippe Church (Ketchaoua Mosque) in Algerias, Algeria

From Christianity to Islam		**St. Philippe Cathedral**	
Structural Features			
Part of the building		**Original Building**	**After conversion**
Horizontal elements	Floor		
	Ceiling		
Vertical elements	Wall		
	Column		

3.12 Synthesis

Analysis study has been used according to the literature review of previous chapters. The case studies are more useful to illustrate the conversion process and analysis.

The analysis was conducted according to the theoretical part of this thesis. For each case study the same tables of architectural and structural features have been used to highlight the findings. It is an easy way to make comparison between original and converted buildings to find out which architectural and structural features were converted (Table 4.1).

Table 3.48. Analysis of Architectural and Structural Features

Analysis			
Architectural Features			
Architectural sacred spaces			
		Original building	After Conversion
Courtyard			
Prayer hall	Spatial organization		
	Orientation		
	Openings		
Architectural religious elements			
Fountain			
Altar/niche			
Pulpit			
Bell tower/Minaret			
Structural Features			
Floor			
Ceiling			
Wall			
Column			

Table 3.49. Interpretation of Table 3.5. Architectural Sacred Spaces of Cordoba Mosque (Cathedral of Our Lady of the Assumption) in Cordoba, Spain

From Islam to Christianity			**Cordoba Mosque**
Analysis of Architectural religious elements			
Part of the building		**Original Building**	**After conversion**
Courtyard		It was located in the northeast side and in front of hypostyle prayer hall	It was kept the same as in original building.
Prayer hall	Spatial organization	It had a grid spatial organization	Christian prayer hall was added in the center of hypostyle hall. Grid form and space within grid organization
	Orientation	Physical orientation of prayer hall was indicated/ ended with Qibla's wall (southwest side). Functional orientation was directed towards southwest.	Physical orientation was directed towards southeast side. Functional orientation was directed towards southeast.
	Openings	Two doors were opened from northeast side and three from southeast sides. Windows were opened to allow natural light in equally except southwest side.	Three doors in the west side and two in the east side were kept. The sixth door was opened from north side and the seventh is located from south side. Original windows were kept. Windows were opened from four sides.

Table 3.50. Interpretation of Table 3.6. Architectural Religious Elements of Cordoba Mosque (Cathedral of Our Lady of the Assumption) in Cordoba, Spain

From Islam to Christianity		**Cordoba Mosque**
Analysis of Architectural religious elements		
Part of the building	**Original Building**	**After conversion**
Fountain	In the center of courtyard	It was kept the same as in original building.
Niche/Altar	Altar was located in the southwest side.	Niche was added in the southeast side.
Pulpit	It was situated in the southwest side	Pulpit was added in the southeast side (left side of niche)
Bell tower/ Minaret	One minaret was located on the northeast side of hypostyle prayer hall.	Bell's room was added to the original minaret.

Table 3.51. Interpretation of Table 3.7. Structural Features of Cordoba Mosque (Cathedral of Our Lady of the Assumption) in Cordoba, Spain

From Islam to Christianity		**Cordoba Mosque**
Analysis of Architectural religious elements		
Part of the building	**Original Building**	**After conversion**
Floor	One level	Chancel space was raised on one step high.
Ceiling	Triangle timber trusses	Triangle timber trusses were kept. They are used to cover the Christian prayer hall
Wall	Parallel walls were indicated with niche wall (Qibla)	It was kept the same as in original building. Except one wall was added to the northeast side. Walls were used to flank the new hall.
Column	Hypostyle arcade columns supported the ceiling	It was kept the same as in original building.

Table 3.52. Interpretation of Table 3.10. Architectural Sacred Spaces of Seville Mosque (Seville Cathedral) in Seville, Spain

From Islam to Christianity			**Seville Mosque**
Analysis of Architectural sacred spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		It was located in the north side and in front of prayer hall	It was kept the same as in original building.
Prayer hall	Spatial organization	It had a grid spatial organization	Christian prayer hall was added in the center of original hypostyle hall. Grid form and space within grid organization
	Orientation	Physical orientation of prayer hall was directed towards Qibla's wall (south side). Functional orientation was directed towards south.	Physical orientation was directed towards east side. Functional orientation was directed towards east.
	Openings	Three doors were opened from east and west sides; the north side of hypostyle prayer hall was opened with courtyard. Windows were opened to allow natural light in equally from east and west sides.	Three doors in the west side and two in the east side were kept. The sixth door was opened from north side and the seventh is located from south side. Original windows were kept. Windows were opened from south and north sides.

Table 3.53. Interpretation of Table 3.11. Architectural Religious Elements of Seville Mosque (Seville Cathedral) in Seville, Spain

From Islam to Christianity		**Seville Mosque**
Analysis of Architectural (religious elements		
Part of the building	**Original Building**	**After conversion**
Fountain	In the center of courtyard	It was kept the same as in original building.
Niche/Altar	Altar was located in the south side.	Niche was added in the east side.
Pulpit	It was situated in the south side	Pulpit was added in the east side (left side of niche)
Bell tower/ Minaret	One minaret was located on the north side of hypostyle prayer hall.	Bell's room was added to the original minaret.

Table 3.54. Interpretation of Table 3.12. Structural Features of Seville Mosque (Seville Cathedral) in Seville, Spain

From Islam to Christianity		**Seville Mosque**
Analysis of structural features		
Part of the building	**Original Building**	**After conversion**
Floor	One level	Chancel space was raised on one step high.
Ceiling	Triangle timber trusses	It is changed. Cross vaults are used to cover the prayer hall.
Wall	Parallel walls were indicated with niche wall (Qibla)	Original structural walls were kept. Walls were added to surround three chapels in the south side and east side.
Column	Hypostyle columns supported the ceiling	Hypostyle pillars were used. Some columns are demolished.

Table 3.55. -Interpretation of Table 3.15. Architectural Sacred Spaces of Ketchaoua Mosque (Cathedral of St. Philippe) in Algerias, Algeria

From Islam to Christianity			**Ketchaoua Mosque**
Analysis of Architectural sacred spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		No courtyard	No courtyard
Prayer hall	Spatial organization	It had a grid and centralized spatial organization	It was kept the same as in original building.
	Orientation	Physical orientation of prayer hall was directed towards niche (east side). Functional orientation was directed towards east.	It was kept the same as in original building. It was kept the same as in original building.
	Openings	It contained two doors; the first one was from east side and the second from south side. Windows were opened to allow natural light in and organized to allow it in equally.	Original doors were kept. Two doors were added to the south. Windows were kept the same as in original building.

Table 3.56. Interpretation of Table 3.16. Architectural Religious Elements of Ketchaoua Mosque (Cathedral of St. Philippe) in Algerias, Algeria

From Islam to Christianity		**Ketchaoua Mosque**
Analysis of Architectural religious elements		
Part of the building	**Original Building**	**After conversion**
Fountain	It was located in the east side of prayer hall.	It was kept the same as in original building.
Niche/Altar	Niche was located in the east side.	Altar was added in the east side.
Pulpit	It was situated in the center of prayer hall.	Pulpit was added in the center of prayer hall
Bell tower/ Minaret	Minaret was situated on the west side and separated from prayer hall	Bell tower was added instead of balcony room in the west side

Table 3.57. Interpretation of Table 3.17. Structural Features of Ketchaoua Mosque (Cathedral of St. Philippe) in Algerias, Algeria

From Islam to Christianity		**Ketchaoua Mosque**
Analysis of structural features		
Part of the building	**Original Building**	**After conversion**
Floor	It had one level of floor	Chancel space was raised on one step high.
Ceiling	Central dome with domes were used	It was kept the same as in original building.
Wall	Parallel walls were indicated with niche wall	It was kept the same as in original building.
Column	Sixteen columns supported the ceiling	It was kept the same as in original building.

Table 3.58. Interpretation of Table 3.20. Architectural Sacred Spaces of St John Church (Great Omari Mosque) in Sidon

From Christianity to Islam			**St. John Church**
Part of the building		**Original Building**	**After conversion**
Courtyard		No courtyard	Rectangular courtyard was added in the north side of prayer hall.
Prayer hall	Spatial organization	It had a linear spatial organization (form and space).	Original keeping
	Orientation	Physical orientation of prayer hall was directed towards chancel (east). Functional orientation was directed towards east.	Physical orientation was kept the same as in original building. Functional orientation was converted and directed towards south.
	Openings	It contained two doors opened from north side. Windows were opened to allow the natural light in. This type of light was distributed in prayer hall and focus on chancel space (east side).	Original doors were kept. Three doors were added to the north side opposite to niche and pulpit Original windows were kept. Six windows were opened in the south side, three in the west side and two in the east side of prayer hall.

Table 3.59. Interpretation of Table 3.21. Architectural Religious Elements of St John Church (Great Omari Mosque) in Sidon

From Christianity to Islam		**St. John Church**
Analysis of Architectural Religious Elements		
Part of the building	**Original Building**	**After conversion**
Fountain	It is unknown.	A fountain was added in the center of the courtyard.
Niche/Altar	Altar was located in the chancel space.	Niche was added to the south side.
Pulpit	It is unknown.	Pulpit was added at the left side of niche (south side of prayer hall).
Bell tower/ Minaret	No bell tower	New minaret was added in the north side of prayer hall.

Table 3.60. Interpretation of Table 3.22. Structural Features of St John Church (Great Omari Mosque) in Sidon

From Christianity to Islam		**St. John Church**
Analysis of Structural Features		
Part of the building	**Original Building**	**After conversion**
Floor	Chancel space was raised on one step (stair) while nave and aisles were lower than chancel level.	Floor of prayer hall has one level.
Ceiling	Cross vaults were used	Was kept the same as in original building
Wall	Parallel walls were indicated with chancel wall	Was kept the same as in original building
Column	Five pairs of buttresses supported the ceiling	Was kept the same as in original building

Table 3.61. Interpretation of Table 3.25. Architectural Sacred Spaces of St John the Baptist (Al-Omari Mosque) in Beirut, Lebanon

From Christianity to Islam			**St. John the Baptist**
Analysis of Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		No courtyard	Rectangular courtyard was added in the north side of the prayer hall.
Prayer hall	Spatial organization	It had a grid spatial organization (form and space).	Was kept the same as in original building
	Orientation	Physical orientation of prayer hall was directed towards apse wall (east side). Functional orientation was directed towards east.	Physical orientation was not changed. Functional orientation was converted and directed towards south.
	Openings	It contained one door (portal) opened from west side. Windows were opened to enter natural light. This type of light was distributed on prayer hall and focused on chancel space (east side).	Original door was kept. The second door was added in the east side and opposite the original door. The third and fourth doors were located in the north side of prayer hall. windows were kept the same as in original building

Table 3.62. Interpretation of Table 3.26. Architectural Religious Elements of St John the Baptist (Al-Omari Mosque) in Beirut, Lebanon

From Christianity to Islam		**St. John the Baptist**
Analysis of Architectural Religious Elements		
Part of the building	**Original Building**	**After conversion**
Fountain	It is unknown.	A fountain was added in the center of the courtyard.
Niche/Altar	Altar was located in the chancel space.	Niche was added on the south side.
Pulpit	It is unknown.	Pulpit was added at the left side of niche (south side of hall).
Bell tower/ Minaret	Bell tower was situated in the west side of prayer hall, contained bell's rooms and shaft (body) of tower.	Minaret's balcony was added to the west tower. New minaret was added in the northwest side of courtyard.

Table 3.63. Interpretation of Table 3.27. Structural Features of St John the Baptist (Al-Omari Mosque) in Beirut, Lebanon

From Christianity to Islam		**St. John the Baptist**
Analysis of Structural Features		
Part of the building	**Original Building**	**After conversion**
Floor	Chancel space was raised on one step. While, nave and aisles were lower than chancel level.	Floor of prayer hall has one level.
Ceiling	Cross vaults were used	Was kept the same as in original building
Wall	Parallel walls were indicated with Apse walls	Was kept the same as in original building
Column	Six pairs of Columns separated nave and aisles	Was kept the same as in original building

Table 3.64. Interpretation of Table 3.30. Architectural Sacred Spaces of Cathedral John the Baptist (Great Omari Mosque) in Gaza

From Christianity to Islam			**Cathedral John the Baptist**
Analysis of Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		No courtyard	Rectangular courtyard was added in the east side of prayer hall.
Prayer hall	Spatial organization	It had a linear spatial organization (form and space).	It was expanded from the west side. It has a grid spatial organization.
	Orientation	Physical orientation of prayer hall was indicated/ ended with chancel. Functional orientation was directed towards southeast.	Physical orientation was changed and directed towards Qibla wall (south). Functional orientation was converted and directed towards south.
	Openings	It contained one door opened from northwest side. Windows were opened to allow natural light in. This type of light was distributed in prayer hall and focused on chancel space (east side).	Original door was kept. Three doors were added to the northeast side and one door from west side Original widows were kept except in southwest side. Six windows were opened in the west side and four from the southeast of prayer hall.

Table 3.65. Interpretation of Table 3.31. Architectural Religious Elements of Cathedral John the Baptist (Great Omari Mosque) in Gaza, Palestine

From Christianity to Islam		**Cathedral John the Baptist**
Analysis of Architectural Religious Elements		
Part of the building	**Original Building**	**After conversion**
Fountain	It is unknown.	No fountain
Niche/Altar	Altar was located in the chancel space.	Niche was added in the south side.
Pulpit	It is unknown.	Pulpit was added at the left side of niche (south side of prayer hall).
Bell tower/ Minaret	Bell tower located on chancel and in the southeast of prayer hall	Minaret's balcony was added instead of the bell's room

Table 3.66. Interpretation of Table 3.32. Structural Features of Cathedral John the Baptist (Great Omari Mosque) in Gaza, Palestine

From Christianity to Islam		**Cathedral John the Baptist**
Analysis of Structural Features		
Part of the building	**Original Building**	**After conversion**
Floor	Chancel space was raised on one step (stair) while nave and aisles were lower than chancel level.	Floor of hall has one level.
Ceiling	Cross vaults were used	Original was kept and cross vaults were added to the west side of prayer hall
Wall	Parallel walls were indicated with chancel wall	Original was kept and walls were added to the northwest west and southeast sides of prayer hall.
Column	Five pairs of buttresses supported the ceiling	Original was kept and six pairs were added to the west side of prayer hall.

Table 3.67. Interpretation of Table 3.35. Architectural Sacred Spaces of St. Sophia Church (Selimiye Mosque) in Nicosia, Northern Cyprus

From Christianity to Islam			**St. Sophia Church**
Analysis of Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		It is unknown	Rectangular courtyard was added in front of prayer hall.
Prayer hall	Spatial organization	It had a grid spatial organization (form and space).	Same as original
	Orientation	Physical orientation of prayer hall was directed toward apse wall (east side). Functional orientation was directed toward east.	Physical orientation was not changed. Functional orientation was converted and directed toward southeast.
	Openings	The prayer hall contained three doors opened from west side. The middle door was big and flanked by two doors. Windows were opened to allow the natural light in. This type of light was distributed in prayer hall and focused on chancel space (east side).	The fourth door was opened from east side and axial to the first door from the east side. The fifth door was opened from north side and axial to pulpit. Two windows were opened in Virgin Mary chapel from east and south sides. One window was opened in Thomas Aquinas chapel from south side. Moreover, two windows were opened in south side and three in the north side of prayer hall. Thus, the Qibla wall (north side) has been opened with five windows.

Table 3.68. Interpretation of Table 3.36. Architectural Religious Elements of St. Sophia Church (Selimiye Mosque) in Nicosia, Northern Cyprus

From Christianity to Islam		**St. Sophia Church**
Analysis of Architectural Religious Elements		
Part of the building	**Original Building**	**After conversion**
Fountain	Baptismal vessel (holy water) is unknown.	A fountain was added in the center of the courtyard.
Niche/Altar	Altar was located in the chancel space.	Niche is situated in the north chapel (virgin Mary) according to the Qibla's orientation.
Pulpit	Existence of pulpit is unknown.	It was added at the left side of niche.
Bell tower/ Minaret	Bell towers were situated in the west side. It contained bell's rooms and shaft (body) of tower.	Bell's room were eliminated and minaret's balconies were added.

Table 3.69. Interpretation of Table 3.37. Structural Features of St. Sophia Church (Selimiye Mosque) in Nicosia, Northern Cyprus

From Christianity to Islam		**St. Sophia Church**
Analysis of Structural Features		
Part of the building	**Original Building**	**After conversion**
Floor	Chancel space was raised on one step (stair) while nave and aisles were lower than chancel's level.	Floors of north chapels and half of prayer hall were raised on one step high.
Ceiling	Cross vaults were used	Was kept the same as in original building
Wall	Parallel walls were indicated with Apse wall	Was kept the same as in original building
Column	Six pairs of Columns separated nave and aisles	Was kept the same as in original building

Table 3.70. Interpretation of Table 3.40. Architectural Sacred Spaces of Saint Nicholas's Church (Lala Mustafa Pasha Mosque) in Famagusta, Northern Cyprus

From Christianity to Islam			**St. Nicholas**
Analysis of Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		There was a plaza	Rectangular courtyard was added in the northwest of prayer hall.
Prayer hall	Spatial organization	It had a grid spatial organization (form and space).	Was kept the same as in the original building.
	Orientation	Physical orientation of prayer hall was indicated/ ended with apse wall. Functional orientation was directed towards east.	Physical orientation ws kept the same as in the original building. Functional orientation was converted and directed towards southeast.
	Openings	The prayer hall contained three doors opened from southwest side. The middle door was bigger than sided doors. In addition, the fourth door was opened from northwest of prayer hall. Windows were opened to allow the natural light in. This type of light was distributed in prayer hall and focus on chancel space (northeast).	Original keeping Three windows were added in the southeast of prayer hall (Qibla's wall) and one window was added in the northwest of prayer hall.

Table 3.71. Interpretation of Table 3.41. Architectural Religious Elements of Saint Nicholas's Church (Lala Mustafa Pasha Mosque) in Famagusta, Northern Cyprus

From Christianity to Islam		**St. Nicholas**
Analysis of Architectural Religious Elements		
Part of the building	**Original Building**	**After conversion**
Fountain	It is unknown.	A fountain was added in the southwest of the courtyard.
Niche/Altar	Altar was located in the chancel space.	Niche was added on the southeast side.
Pulpit	It is unknown.	It was added to the left side of niche (southeast side).
Bell tower/ Minaret	Bell towers were situated in the southwest side of prayer hall, contained bell's rooms and shaft (body) of tower.	Minaret's balcony was added to the southwest tower. South bell tower was not changed

Table 3.72. Interpretation of Table 3.42. Structural features of Saint Nicholas's Church (Lala Mustafa Pasha Mosque) in Famagusta, Northern Cyprus

From Christianity to Islam		**St. Nicholas**
Analysis of Structural Features		
Part of the building	**Original Building**	**After conversion**
Floor	Chancel space was raised on one step (stair) while nave and aisles were lower than chancel level.	Floors of the chancel and south aisle of prayer hall were raised on one step high.
Ceiling	Cross vaults were used	Was kept the same as in original building
Wall	Parallel walls were indicated with Apse walls	Was kept the same as in original building
Column	Six pairs of Columns separated nave and aisles	Was kept the same as in original building

Table 3.73. Interpretation of Table 3.45. Architectural Sacred Spaces of St. Philippe Church (Ketchaoua Mosque) in Algerias, Algeria

From Christianity to Islam			**St. Philippe Church**
Analysis of Architectural Sacred Spaces			
Part of the building		**Original Building**	**After conversion**
Courtyard		No courtyard	No courtyard
Prayer hall	Spatial organization	It had a grid spatial organization	It was kept the same as in original building
	Orientation	Physical orientation of prayer hall was indicated/ ended with Chancel space (west side). Functional orientation was directed towards west (apse wall).	It was kept the same as in original building Functional orientation was directed towards east (Qibla).
	Openings	It contained three doors in the east side; the middle door was bigger than aisle doors. Windows were opened to allow natural light in. This type of light was distributed in prayer hall and focused on chancel space (west)	It was kept the same as in original building

Table 3.74. Interpretation of Table 3.46. Architectural Religious Elements of St. Philippe Church (Ketchaoua Mosque) in Algerias, Algeria

From Christianity to Islam		**St. Philippe Church**
Analysis of Architectural Religious Elements		
Part of the building	**Original Building**	**After conversion**
Fountain	No fountain	No fountain
Niche/Altar	Altar was located in the west side.	Niche was added in the east side.
Pulpit	It was situated in the north side	Pulpit was added in the east side (left side of niche)
Bell tower/ Minaret	One minaret was located on the west side and separated from prayer hall. Two minarets were flanked the entrance from the east side	It was kept the same as in original building

Table 3.75. Interpretation of Table 3.47. Structural Features of St. Philippe Church (Ketchaoua Mosque) in Algerias, Algeria

From Christianity to Islam		**St. Philippe Church**
Analysis of Structural Features		
Part of the building	**Original Building**	**After conversion**
Floor	Chancel space was raised on one step high.	It was kept the same as in original building.
Ceiling	Central dome with domes were used	It was kept the same as in original building.
Wall	Parallel walls were indicated with niche wall	It was kept the same as in original building. Except Qibla's wall was added to the east side in the prayer hall.
Column	Sixteen columns supported the ceiling	It was kept the same as in original building.

Chapter 4

FINDINGS AND CONCLUSION

Christianity and Islam are closely related to each other and linked together as Abrahamic religions. These religions have existed since their emergence. Churches and mosques are the symbols of their existence in Mediterranean regions. A sample of individual churches and mosques was used in this study, and the focus was mainly on basilica churches and Friday mosques while chapels were not studied in this thesis.

A large number of buildings have been converted to serve different functions from 11^{th} to 20^{th} centuries. This has happened because of political factors and various everyday needs of the people. These changes mainly affected religious buildings, when different Roman, Greek and Jewish temples (synagogues) were converted to churches and mosques. That is to say that churches were converted to mosques and mosques to churches.

In this study, converted churches and mosques in old cities were selected as cases. Old cities carry an architectural and historical value in people's minds and are considered to be historic and original core in architecture. The buildings in old cities have retained their original character. Old cities have been homes to most key sites of religious importance, especially churches and mosques.

Mosques and churches have common components. In this thesis the elements of these buildings are classified into architectural and structural features. Architectural features are categorized as architectural sacred spaces (courtyard, prayer hall) and architectural religious elements (fountain, altar/niche, pulpit, bell tower/minaret). Structural features comprise floor, ceiling, walls and columns. The similarity in architectural features is due to the common Christian and Islamic beliefs. The act of performing prayer and gathering people are common and these are reflected in architectural features and conversion process.

Case studies have been explained through general historical information, architectural and structural features of original and converted buildings. These cases were divided into two directions: From Christianity to Islam and Islam to Christianity.

From Christianity to Islam: according to general historical information, the conversion of Churches to Mosques has happened by Islamic affairs in all cases (6 case studies). Two Churches in Lebanon (St John Church, St John the Baptist) and one in Palestine (Cathedral John the Baptist) were converted in 13th century to Great Omari (Al-Omari) Mosques.

From Islam to Christianity: according to general historical information, the conversion of Mosques to Churches has been happened by Christian affairs in all cases (3 case studies). Two Mosques in Spain (Cordoba Mosque, Seville Mosque) are converted to Churches by an architect engineer Hernan Ruiz who works in Christian affairs.

In Algeria, One case study underwent conversion twice between Islamic and Christian era. Ketchaoua Mosque was converted to St. Philippe Church in 19th century. This Church was demolished by Christian followers and they built new Church in the site. The new St. Philippe Church was converted to Ketchaoua Mosque in 20th century.

The main goal of this chapter is to provide brief summary of the major research findings (Table 4.1; 4.2).

Table 4.1. Findings of all Converted Churches (Architectural and Structural Features)

From Islam to Christianity		3 case studies
Architectural Features		
Architectural sacred spaces		
Courtyard		It was not changed. Ketchaoua Mosque (St Phillip Church) in Algeria did not have a courtyard.
Prayer hall	Spatial organization	It was changed and space within space was created (grid organization within grid organization) except in Ketchaoua Mosque (St Phillip Church).
	Orientation	Physical and functional orientations were changed and directed towards east, except Ketchaoua Mosque (St Phillip Church), which was not changed and is oriented toward west.
	Openings	New doors and windows were installed in all cases. New doors were built from three sides of prayer hall. Except Ketchaoua Mosque's (St Phillip Church's) prayer hall, doors were installed from three sides except apse's wall. Main door was opened axial to altar and pulpit. In all cases, more windows were installed in apse's wall more than other sides of prayer hall.
Architectural religious elements		
Fountain	In all cases, it was not changed. Fountain is situated in courtyard except Ketchaoua Mosque (St Phillip Church), where fountain is located inside the prayer hall.	
Altar	Location of altar was added and oriented towards east except Ketchaoua Mosque (St Phillip Church), where it is directed towards west	
Pulpit	Pulpit was added and oriented towards east Ketchaoua Mosque (St Phillip Church), where it is directed towards west.	
Bell tower	In three cases Minaret tower was converted to bell tower through adding bell's room instead of balcony.	
Structural Features		
Floor	Floor was divided into two levels. Chancel was raised on one step, while nave and aisles were lower than chancel's level.	
Ceiling	In Codoba Mosque, it was remained except the construction of central prayer hall inside original hypostyle hall. In Seville Mosque, it was changed. Ketchaoua Mosque (St Phillip Church) was not changed.	
Wall	In Codoba Mosque, it was remained unchanged except constructing central prayer hall inside original hypostyle hall. In Seville Mosque, it was remained except constructing central prayer hall inside original hypostyle hall. Ketchaoua Mosque (St Phillip Church) was not changed.	
Column	In Codoba Mosque, no change was made except the construction of a central prayer hall inside the original hypostyle hall. In Seville Mosque, some columns were demolished and others were left intact. Ketchaoua Mosque (St Phillip Church) did not undergo any change.	

Table 4.2. Findings of all Converted Mosques (Architectural and Structural Features)

From Christianity to Islam		6 case studies
Architectural Features		
Architectural sacred spaces		
Courtyard		It was added in all the cases except St. Philippe Church (Ketchaoua Mosque) in Algeria.
Prayer hall	Spatial organization	All cases have grid organizations and underwent no change except Cathedral John the Baptist (Great Omari Mosque) in Gaza (Palestine), where the grid organization was extended to south side according to Qibla orientation.
	Orientation	Functional orientation is changed and directed toward Kabaa in all cases. Physical orientation was not changed except in Cathedral John the Baptist (Great Omari Mosque) in Gaza (Palestine).
	Openings	New doors and windows were installed in all cases except in St. Philippe Church (Ketchaoua Mosque) in Algeria. In five cases, new doors were built from three sides of each hall except in Qibla's wall. Main door was installed axial to niche and pulpit. More windows have been installed in Qibla's wall more than other sides of prayer hall.
Architectural religious elements		
Fountain	It was added and situated in the courtyard except in St. Philippe Church (Ketchaoua Mosque) in Algeria.	
Niche	Niche was added according to the Qibla wall (orientation of Kabaa).	
Pulpit	Pulpit was added according to the orientation of Kabaa.	
Minaret	In five cases, bell tower was converted to minaret through adding balcony instead of bell's room. Except St John Church (Great Omari Mosque) in Sidon (Lebanon) where Minaret was added to the building.	
Structural Features		
Floor	Mosque's floor was done with one level except two cases which are St. Sophia Church (Selimiye Mosque) and Saint Nicholas (Lala Mustafa Pasha) in Northern Cyprus where the floor was divided into two levels.	
Ceiling	In all cases, it was not changed. Only in Cathedral John the Baptist (Great Omari Mosque) in Gaza (Palestine) where the prayer hall was extended to south side and covered with cross vaults.	
Wall	In all the cases, it was not changed. Only in Cathedral John the Baptist (Great Omari Mosque) in Gaza (Palestine); prayer hall was extended to south side and surrounded with walls from three sides.	
Column	In all the cases, it was not changed. Only in Cathedral John the Baptist (Great Omari Mosque) in Gaza (Palestine); prayer hall was extended to south side and supported with columns.	

Architectural features were converted and added more than structural features. This is because architectural features in Mosques and Churches are based on religious needs. Thus, the function of the building was converted according to new needs of religion. While structural features can serve both Mosques and Churches.

Architectural religious elements were mostly added and converted more than architectural religious spaces. This is because these are essential elements for performing a prayer, so they undergo changes according to the religion.

In the selected case studies courtyards were added for people's gatherings and performing prayers in Islamic and Christian ceremonies. Physical orientation defines the functional orientation in prayer hall in all selected churches and in one mosque in Gaza (Palestine). It is the first time and new use that physical orientation has defined the functional orientation in mosque.

Doors were situated axial to niche, altar and pulpit to lead people's eyes to these architectural religious elements and define the orientation of prayer (functional orientation). More windows were installed in apse's wall and Qibla's wall more than other sides of hall. Where, more light enters from Apse's and Qibla's walls more than the other walls of the hall. The reason is that the natural light plays a role to define the orientation of prayers. It leads to increasing natural light's level in prayer hall.

For church, defining the orientation of prayer and entering natural light from apse's wall characterize historical churches. While in mosque, it is the first time and new

appearance to use natural light to define the orientation of prayer and opening windows in Qibla's wall.

There are essential elements for performing prayers. These elements are named as architectural religious elements, which were added in mosques and churches. This is because fountain is used for sprinkling water/washing and it is a religious rite. Altar and niche are used for the same function which is to represent the orientation of prayers. Pulpit is used for congregation prayers. The conversion of minaret and bell tower is limited to bell's room and balcony, as both are built for the same function, which is to call people for prayer. Moreover, they have common components. Minaret consists of base, body (shaft), balcony and head, while the bell tower is made of base, body (shaft), bell's room and head.

Structural features have been remained and stood longer than its architectural features. Ceiling, walls and columns were kept the same, because the reuse of the existing ceiling, walls and columns were the matter of economics. Therefore, the conversion was cheaper and less complicated than building a mosque or a church from the scratch. Dividing the floor of prayer hall into two levels is a functional need and a strategy in historical churches, which led people' eyes to the important part that is a chancel space (altar). On the other hand, this alteration appears in two mosques in Northern Cyprus. This is for the first time and it is also a new feature in mosques. The aim of shifting the floor into two levels is to help to define the niche's space in the mosque.

After the analysis of converted religious buildings, it can be said that religious needs are common in each case study. Conversion constraints and needs of buildings

depend mostly on the religion. All these conversions are based on and responded to the functional needs (religious) which have been reflected in this process. Orientation of prayer (functional orientation) led to the installation of new windows in Qibla and Apse walls. Also, it led to construction of new doors axial to Qibla and Apse walls to define the orientation. Niche, altar and pulpit are situated according to functional orientation. Moreover, Chancel and niche space were raised on one step to define the orientation of prayer.

The future studies on this subject are expected to focus more on details for the converted historical Mediterranean churches and mosques through a holistic approach, which includes the ornamentation, frescos and wall paintings in these case studies.

REFERENCES

Abulafia, D. (2011). *The great sea: A human history of the Mediterranean*. Oxford University Press.

Alasya, H. F. (2012). *Kıbrıs, İslam ansiklopedisi* (25 ed.). Türk Diyanet Vakfı, pp. 383-4.

Ali, W. (1999). *The Arab contribution to Islamic art: from the seventh to the fifteenth centuries* (illustrated ed.). American University in Cairo Press, P.96.

Al-Qeeq, F. (2011). *A comprehensive approach to incorporate architectural heritage of Gaza old city into contemporary urban fabric*. Gaza: Center for Architectural Heritage, Islamic University of Gaza, Department of Architecture.

Al-Ta'ee, F. (2000). *The style in Islamic architecture*. Mosul, Iraq: University of Mosul, p. 57.

Altınyıldız, N. (1989). *Restoration of the great Omari mosque.* Cairo, Egypt: The Aga Khan Award for Architecture. Aga Khan Award.

Altınyıldız, N. (1989). *The Aga Khan award for Architecture, Restoration of the Great Omari Mosque.* Sidon, Lebanon. Istanbul.

Andrews, J. M. (1999). Santa Sophia in Nicosia: The sculpture of the western portals and its reception. *Comitatus: A Journal of Medieval and Renaissance Studies, 30*. UCLA, pp. 63–90.

Antonakaki, T. (2007). Lighting and spatial structure in religious architecture: a comparative study of a Byzantine church and an early Ottoman mosque in the city of Thessaloniki. *6th International Space Syntax Symposium, 057*, 2-4. İstanbul: The Bartlett School of Graduate Studies, UCL.

Appadurai, A. (1986). *The social life of things: Commodities in Religious buildings*. Cambridge: Cambridge University Press.

Ardalan, N. (1979, February). The visual language of symbolic form: A preliminary study of mosque architecture. Paper presented in the international seminar: *Architecture as symbol and self-identify,* 18-36. Fez. Morocco

Asteris, P. G. (Ed.). (2015). *Handbook of research on seismic assessment and rehabilitation of historic structures*. Advances in civil and industrial engineering (ACIE) book series. IGI Global.

Baer, E. (1989). Ayyubid metalwork with Christian images. (*Vols. Muqarnas, Supplements series, studies in Islamic art and architecture*). Brill, Vol. 4, pp. 683- 685.

Bağışkan, T. (2013). *Ayasofya (Selimiye) meydanı ve mahallesi*, Yeni Düzen.

Berque, J. (1978). *Toward new models for the future Islamic city*, P. 24.

Berque, A. (1930). *Art antique et art musulman en Algérie, dans: cahiers du centenaire de l'Algérie* (Vol. livret VI). du comité national métropolitain du centenaire de l'Algérie. [Ancient art and Islamic art in Algeria]

Bin Saleh, M. b.-H. (1999). *The architectural design of mosques. Architecture and planning*. King Saud University, University of Michigan, P. 54.

Blondel, J.-F. (2006). Bell tower. *In O. K. Arbor, The Encyclopedia of Diderot & d'Alembert Collaborative* (Vol. Web. Vol. 3, 1753). Michigan Publishing, University of Michigan Library, P. 545.

Boas, A. J. (1999). *Crusader archaeology: The material culture of the Latin East*. Routledge, UK, p. 49.

Braswell, G. W. (2000). *What you need to know about Islam & muslims* (Illustrated ed.). B&H Publishing Group, pp. 42-44.

Burckhardt, T. (2009). *Art of Islam: Language and meaning*. Reference, information and interdisciplinary subjects series. World Wisdom, Inc, P. 132.

Burns, R. (2007). *Damascus: A history, cities of the ancient world* (1 edition ed.). Routledge, P. 88.

Cambridgedictionary. – Prayer hall (2015). *In Cambridge dictionary*. Retrieved from: http://dictionary.cambridge.org

Cantacuzino, S. (1975). *New uses for old buildings*. London: The Architectural Press Ltd, P. 8-9.

Cantone, C. (2012). *Making and remaking mosques in Senegal*. Islam in Africa. Brill, pp. 338 - 339.

Carter, T., Dunston, L., Thomas, A. (2008). *Syria & Lebanon*, 367. Retrieved from: www.Lonelyplanet.com

Chahine, R. (1997). *Liban: images du patrimoine*. University of Michigan. [Lebanon: Heritage Images], vol. 2, p.89.

Ching, D. K. F. (2007). *Architecture: form, space and order* (Third Edition ed.). John Wiley & Sons. (P, 50, 103, 124, 202, 223, 233).

Cini, F. G. (1964). *Encyclopedia of world art: Landscape in art to Micronesian cultures* (Vol. Encyclopedia of world art). McGraw-Hill, University of Michigan. vol. 9, p. 179-180.

Coldstream, N. (2002). *Medieval architecture*. Oxford University Press, p. 13.

Collins, W. C. (2003, 2012, 2016), Church, Basilica, Mosque, courtyard. *In Collins English dictionary*. Retrieved from www.collinsdictionary.com

Davey, E. (1994). *Northern Cyprus: A traveller's guide*. I. B. Tauris, p. 97.

Davies, J. (1982). *Temples, churches and mosques: A guide to the appreciation of religious architecture*. Blackwell, Oxford.

Diez, E. (1936). *Mihrāb, Encyclopaedia of Islam 3*. Leiden: Brill, pp. 559–565.

Dodds, J. D. (1992). *Al-Andalus: The art of Islamic Spain* (illustrated ed.). Metropolitan Museum of Art, p.17.

Doyle, P. (2012). *Lebanon* (1 ed.). Lebanon, p. 241.

Dubin, M., Morris, D. (2002). *Cyprus, rough guide. Travel guides* (illustrated ed.). Rough Guides, p. 372.

Dubin, M. (2005). *The rough guide to Cyprus* (5th ed.), p. 389.

Durkheim, E. (1915). *The elementary forms of the religious life*. London: George Allen & Unwin, P.44.

Evans, H.C., Ratliff, B. (2012). *Byzantium and Islam: Age of transition, 7th-9th Century* (illustrated ed.). (H. C. Brandie Ratliff, Ed.) New York, N.Y: Metropolitan Museum of Art, P. 253.

Facaros, D., Pauls, M. (2007). *Granada, Seville, Córdoba*. Cadogan guides (illustrated ed.). New Holland Publishers, p. 151, 170.

Farago, C. J. (1999). *An overview of Leonardo's career and projects Until C.1500* (illustrated ed., Vol. A Garland series). Taylor & Francis, Vol 2, P. 450.

Fehérvári, G. (1993). *Mihrab*. *Encyclopaedia of Islam* (7 ed.). Leiden: Brill, pp. 7–15.

Flood, F. B. (2001). *The great mosque of Damascus: Studies on the makings of an Ummayyad visual culture* (illustrated ed., Vol. of Islamic history and civilization). Brill, 33, pp. 206 – 214.

Folda, J. (2005). *Crusader art in the holy land, from the third Crusade to the fall of Acre* (illustrated, reprint ed., Vols. Volume of Crusader art in the holy land, from the third Crusade to the fall of Acre, 1187-1291). Cambridge University Press, p.180.

Freedictionary. *Prayer hall, Bell tower* (2015). Retrieved from www.thefreedictionary.com

Gavriel, E., Michalis, N. M., Kappler, M. (2009). *Ottoman Cyprus: A collection of studies on history and culture* (illustrated ed., Vol. Near and Middle East monographs). (E. G. Michalis, N. Michael, Ed.). Otto Harrassowitz Verlag, vol 4, p. 121.

George, W., Barclay, J. (2011). *Many mansions*. iUniverse, p.294.

Gerli, E. M, Armistead, S. G. (2003). *Medieval Iberia* (illustrated ed., Vol. Issue 7). Taylor & Francis, p. 586.

Ghazanfar, D. S. (1999). *Spain's Islamic legacy: a glimpse from a Muslim's travelogue*.
Retrieved from http://www.muslimheritage.com/uploads/Main_Spain1.pdf

Goodson, C., Lester, A. E., Symes, C. (2010). *Cities, texts, and social networks, 400-1500: Experiences and perceptions of medieval urban space* (illustrated ed.). Ashgate Publishing, Ltd, P.114.

Gowans, A. (2014). *Religious architecture*. Retrieved from www.britannica.com

Grabar, O. (Ed.). (1987). *Muqarnas: An annual on Islamic art and architecture, historical studies of the Islamic world* (illustrated ed., Vol. Muqarnas Series). Brill.

Graber, O. ., Hill, D (1964). *Islamic architecture and its decoration*. The University of Chicago, pp, 65-70, 84-85.

Greebstein, H., Hotz, K. G., Kaltner, J. (2006). *What do our neighbors believe?: Questions and answers on Judaism, Christianity, and Islam*. Westminster John Knox press. P.88.

Grube, E. (1978a). *Architecture of the Islamic world*. New York: William Morrow and company Inc, p. 10-13.

Grube, E. (1978b). What is Islamic Architecture? In G. Michell, *Architecture of the Islamic world: Its history and social meaning*. London: Thames & Hudson, pp. 10-14.

Gürkan, H. M. (1989). *Dünkü ve bugünkü Lefkoşa* (3rd ed.). Galeri Kültür. Haider, G. (1988), pp. 117,118.

Haider, G. (1988). Islam, cosmology and architecture. Proceeding of international seminar: *Theories and principles of design in the architecture of Islamic societies*, 80. Harvard University.

Haidt, J. G. (2010). Beyond beliefs: Religions bind individuals into moral communities. *Personality and social psychology review, 140*, 14.

Harper, D. (2010). *Courtyard*. Retrieved from www.etymonline.com

Hashmi, T. M. (2015, June, 19). *Mosque and Jami Mosque*. Retrieved from Al-mawrid foundation for Islamic research and education: http://www.almawrid.org/index.php/questions/view/mosque-and-jaami-mosque

Henri, K. (2003). *Feuillets d'El Djazair* (Vol. Tome I et II). Alger: Ed du Tell. [Al Djazair Book]

Hillenbrand, R. (1985). The mosque in the medieval Islamic world. In S. Cantacuzino, *Architecture in continuity*. New York: Aperture, P, 32-55.

Hillenbrand, R. (2009). *Masdjid, I. In the central Islamic lands*. Leiden: Brill

Houtsma, M. T. (Ed.). (1993). *E.J. Brill's first encyclopaedia of Islam*, 1913-1936 (reprint ed.). Brill, Vol.5, pp.21, 318-330.

Jamil, R. (1948). *Beirut and the Republic of Lebanon*. Librairie universelle, p. 174.

Jeffery, G. (1935). *A description of the historic monuments of Cyprus: Studies in the archaeology and architecture of the island*. Nicosia, p. 6.

Jenkins, P. (2011). *The next Christendom: The coming of global Christianity*. USA: Oxford University Press.

Kahera, A., Abdulmalik, L., Anz, C. (2009). *Design criteria for mosques and Islamic centres*. Routledge.

Kahera, A. I. (2010). *Deconstructing the American Mosque: Space, gender, and aesthetics*. University of Texas Press, P.57.

Kamiya, T. (2006). *Architecture of Islam, its charm and elucidation*. Retrieved from http://www.ne.jp/asahi/arc/ind/1_primer/types/typ_eng.htm

Kavin, K. (2010). *The everything travel guide to Italy: A complete guide to Venice, Florence, Rome, and Capri - and all the breathtaking places in between*. Everything Books, P. 45.

Keshishian, K. K. (1978). *Nicosia: Capital of Cyprus then and now* (2nd ed.). Nicosia: The Moufflon Book and Art Centre, pp. 8-173.

Khalili, N. D. (2008). *Visions of splendour in Islamic art and culture* (illustrated ed.). Worth Press Limited, p. 161.

Khan, A, K., Pepis, A., Syeed, S, M. (2008). *What you will see inside a mosque* (illustrated ed.). In C. S. Aaron Pepis, (Ed.). Sky Light Paths Publishing, P. 3.

Kleinbauer, W. E. (1971). *Modern perspectives in western art history: An anthology of twentieth-century writings on the visual arts* (illustrated, reprinted, reissued, Vol. 25 of Mediaeval academy of America Cambridge, Mass: Mediaeval academy reprints for teaching). (W. E. Kleinbauer, Ed.) University of Toronto Press, P. 314.

Koumas, A., Chehrazade, N. (2003). *Descriptions d'Albert Devoulx, responsable des Domaines* (du patrimoine ed.). Paris. [Descriptions of Albert Devoulx].

Kramer, H. (2015, April, 14). *Filed under: Muslim, religious artifact*. Retrieved from http://thecompletepilgrim.com/masjid-al-omari/

Krier, R. (1988). *Architectural composition*. London: Academy Aditions, pp. 74, 96-97.

Kuban, D. (1974). *The Mosque and its early development, iconography of religions: Islam*. Leiden, Netherlands: E.J. Brill, pp. 1-3.

Lampros, S. (1970). *Byzantine & Moslem empires*. Lorenz Educational Press, P. 7.

Lock, P. (2006). *Routledge companion to the Crusades*. Routledge, pp. 144–145.

Lucien, G. (1985). *Le legs des Ottomans dans le domaine artistique en Afrique du Nord, dans.* Revue de l'Occident Musulman et de la Mediterranee, (p.39). [The legacy Of The Ottomans In The Arts In North Africa]

Lucot, M. B. (1972). *Seville*, Guías Everest (4 ed.). Everest, pp. 183-184.

Mandaville, P. J., Peter, P. (2010). *Globalization and culture* (Vol. 2). London: Sage Publications.

Maric, V. (2009). *Cyprus, Country Guide Series*. Lonely Planet, p. 182.

Matar, J. (2007). *Fortress, Khan and the Great Mosque.* Retrieved from http://www.discoverlebanon.com/en/panoramic_views/south/saida/fortress_khan_omari_mosque.php

Matthew. (2009). *In Bible*. Retrieved from http://www.bible.ca/ntx-church-not-named.htm.

Merriam dictionary. – *Mediterranean, religion, conversion, Altar, Pulpit, Minaret* (2015). Retrieved from Merriam dictionary: www.merriam-webster.com

McDougall, J. (2006). *History and the culture of nationalism in Algeria*. Cambridge University Press, pp. 217–220.

McFarlane, J. (1896). *Archaeological researches in Palestine 1873-1874* (Vol. 2) (p.392). London: Palestine Exploration Fund.

McGavran, D. A. (1990). *Understanding church growth* (illustrated, revised, annotated ed.). (C. P. Wagner, Ed.) Wm. B. Eerdmans Publishing, P.9.

McNamara, D. R. (2009). *Catholic Church architecture and the spirit of the liturgy*. Liturgy Training Publications, pp. 4-8.

Meri, J. W. (2006). *Medieval Islamic civilization: L-Z, index* (illustrated ed., Vols. Medieval Islamic civilization: An encyclopedia, J. W. Meri, Routledge encyclopedias of the Middle Ages). Taylor & Francis, vol.2, p. 519.

Miess. P.V. (1998). *Elements of architecture from form to place*. New York, NY 1001, 29 west 35th street, p. 3, 101, 107, 108, 126, 129.

Milad, Z. (2006). Study in religion and life, the meaning of mosque (Masjid) and Jami with the relation between them. *Okaz Journal, 1894, August*, 23. http://www.okaz.com.sa/okaz/osf/20060824/Con2006082441743.htm

Miller, D. (2005). *Materiality*. Durham. Duke University Press.

Moorcroft, C. (2004). *Religious education* (illustrated ed.). Folens Limited, Primary Accessing Series, P. 18.

Moore, S. E. (1996). *Church words: Origins and meanings*. Forward Movement Publications, P. 136.

Nurul-Islam, A. B. (2006). *Travel tales*: *Insights of a UN inspector*. Outskirts Press, p. 70.

Nash, E. (2005). *Seville, Cordoba, and Granada: A cultural history*, *cityscapes* (paperback) (illustrated ed.). USA: Oxford University Press, p. 191.

Nasr, S. H. (1987). *Islamic Arts and spirituality*. Golgonooza press, Bas printer, P. 187.

Nasser, M. W. (2009, August, 27). *Palestinians pray in the Great Omari Mosque in Gaza*. Retrieved from Ma'an News Agency: www.maannews.com/Content.aspx?id=221849

Nedjari, S. (2012, June, 25). *Conversion des lieux de culte a alger du XVIIIeme au XXeme siecle: cas de la mosquee/cathedrale ketchaoua*. Université Paris i Pantheon-Sorbonne, u.f.r. geographie, histoire, sciences de la societe. [Conversion worship buildings in Algeria between 18th and 20th centuries]. http://www.institut-numerique.org/ii-chapitre-ii-mosquee-ketchaoua-cathedrale-saint-philippe-50d48f6c3e58e

Netton, I. R. (2013). *Encyclopaedia of Islam*. Routledge, p. 428.

Norberg- Schulz, C. (1985). The architecture of unity. *International seminar, April 21-25,* 9. Granada, Spain. http://archnet.org/system/publications/contents/3624/original/DPC0222.pdf?1384775791

Ousterhout, R. G. (2005). *A Byzantine settlement in Cappadocia* (illustrated ed., Is. 42 of Dumbarton Oaks studies). Dumbarton Oaks, P. 156.

Patrich, J. (2001). *The Sabaite heritage in the Orthodox Church from the fifth century to the present* (Vol. Orientalia Lovaniensia analecta). Peeters publishers, Vol 98, P.20.

Paúl, T. L. (1995). *Córdoba*, Guías Artísticas. Tf, p. 33.

Peyravi, A. (2010). *An evaluation of re-functioning opportunities of historical churches in walled-city Famagusta.* Gazimağusa, T.R of North Cyprus: Eastern Mediterranean University, (pp.15-19).

Pierson, P. E. (2009). *The dynamics of Christian mission: History through a missiological perspective*. WCIU Press, P. 103.

Pite, A.R. (1878). Church architecture: its proper relation to simple Christian worship. *Autumn conference of the Church association,* 1-7. Derby, Athenaeum Room: Church Association Tract 071.

Polycratis, G.S. (1992). *The influence of the ancient Mediterranean civilization on the development of human cultures*. Annals of the MBC, v. 5.

Powell, K. (1999). *L'architecture transformée – réhabilitation, rénovation, réutilisation*. Paris: Seuil. P.9 [architectural transformations- rehabilitation, renovation, reuse].

Press, A. N. (2009, December, 13). *Ketchaoua Mosque under urgent works in coming days*. Algeria News and Press Reviews.

Press, G. S. (1991, 2012). *The Anglican service book: A traditional language adaptation of the 1979 book of common prayer, together with the psalter or psalms of David and additional devotions*. Shepherd Press.

Raja, R. (2012). *Urban development and regional identity in the eastern Roman provinces, 50 BC – AD 250: Aphrodisias, Ephesos, Athens, Gerasa*. Museum Tusculanum Press, P. 199.

Ramsay, W. M. (2012). *The thousand and one churches* (illustrated, reprint ed.). Cambridge: Cambridge University Press, P. 348.

Regan, G. (2001). *First crusader: Byzantium's holy wars* (illustrated ed.). The University of Michigan and Sutton.

Regester, J. A. (2015). *Symbolism of the church building*. *The worship of the church*. Bible library.

Richard, S. (2003). *Near eastern archaeology*: *A reader*. Eisenbrauns, P. 481.

Riga, P. J. (1963). *Origins and meaning of the Christian altar, the American ecclesiastical review*. Washington, D.C: The Catholic University of America Press, pp. 100-122.

Ring, T. R. M. (1995). *International Dictionary of Historic Places: Southern Europe*. Taylor & Francis, vol 3, pp.335 – 338.

Roaimah, O. H. B. (2015). Islamic perspectives relating to business, arts, culture and communication. *Proceedings of the 1st ICIBACC 2014*. Springer, P. 179.

Robertson, I. (1981). *Cyprus, blue guide*. (I. Robertson, Ed.). The University of Michigan, Benn, p. 178.

Ruggles, D. F. (2011). *Islamic gardens and landscapes: Penn studies in landscape architecture*. University of Pennsylvania Press, p. 94.

Ruiz, A. (2007). *Vibrant Andalusia: The spice of life in southern Spain* (illustrated ed.). Algora Publishing, P. 47,119.

Ryan, R. P. (2012, 2014). *The Catholic collection: 734 Catholic essays and novels on authentic Catholic teaching. A visit to a Catholic Church*. Catholic Way Publishing, pp, 1-7.

Salamanca, C. E. (1974). *The Cathedral of Seville and the monastery of St. Isidoro del Campo* (illustrated ed.). Art. Gráf. Astygi, p. 18, [Cathedral of Seville].

Salih, M. A., Quqani, A. a.-H.-M., Saud, J. a.-M. (1999). Volume 2 of Proceedings of the Symposium on Mosque Architecture: *The historic and urban developments of mosque architecture*. 2. Riyadh, Kingdom of Saudi Arabia: College of Architecture and Planning, King Saud University.

Šārôn, M. (1986). *Studies in Islamic history and civilization: In honour of professor David Ayalon* (illustrated ed.). (M. Šārôn, Ed.), Brill, pp. 361- 364.

Saud, J. a.-M. (2007). *The urban design of mosques* (Vol. 3). Michigan: College of Architecture and Planning, King Saud University, P. 62.

Semple, R. (1809). *A second journey in Spain, in the spring of 1809 ... with plates, containing 24 figures illustrative of the costume and manners of the inhabitants of several of the Spanish provinces.* C. & R. Baldwin, the University of California, p. 119.

Silverman, H. (2010). *Contested cultural heritage: Religion, nationalism, erasure, and exclusion in a global world* (illustrated ed.). Springer Science & Business Media, pp.52-53.

Stegers, R. (2008). *Sacred buildings: A design manual* (illustrated ed.). Springer Science & Business Media, P. 66.

Talipan, C. B. (2012). *Church the reason for all*. Biblical Studies, p. 184.

Tanac, Z. M. (2012). *Adaptive re-use of monuments: restoring religious buildings with different uses*. Izmir, Turkey: Dokuz Eylül University, Faculty of Architecture.

Ul-Majeed, I. S. (2007, 2009). *Defense journal*, 10-11(12), 30.

Unesco. (2009). *World heritage sites: A complete guide to 878 UNESCO world heritage sites*. A firefly book (illustrated ed.). Firefly Books, p. 266.

Unesco. (2010). *Kasbah of Algiers, Algiers Kasbah*: *1992 evaluation*. Unesco.

Unwin, S. (1997). *Analyzing architecture*. USA: Routledge, pp. 19, 21, 138-141.

Wagner, W. (2004). *How Islam plans to change the world*. Kregel Publications, p. 99.

Watenpaugh, H. Z. (2004). *The image of an Ottoman city: Imperial architecture and urban experience in Aleppo in the 16th and 17th centuries* (illustrated ed., Vol. Ottoman Empire and its heritage). Brill, Armenian Research Center collection, Vol.33, pp.60 – 71.

Weisbin, K. (2014). *Art of the Islamic world, introduction to mosque architecture. Khan Academy*, Inc. Retrieved from: www.khanacademy.org

Wilkinson, H. R. (2015). *Adaptive reuse of offices, residential conversions in Sydney*. 22th Annual European Real Estate Society (ERES), 22, 2. Istanbul, Turkey. http://eres.scix.net/data/works/att/eres2015_138.content.pdf

URL 1. (n.d.). Retrieved from kids.britannica.com

URL 2. (n.d.). Retrieved from www.adherents.com

URL 3. (n.d.). Retrieved from www.historyworld.net

URL 4. (n.d.). Retrieved from www.worldatlas.com

URL 5. (n.d.). Retrieved from www.studyblue.com

URL 6. (n.d.). Retrieved from www.pinterest.com

URL 7. (n.d.). Retrieved from https://www.researchgate.net/figure/270452991_fig2_Figure-2-a-the-diagram-of-the-St-Cross-church-1-the-door-branch-2-the-front-branch

URL 8. (n.d.). Retrieved from http://www.spacesyntaxistanbul.itu.edu.tr/papers%5Clongpapers%5C057%20-%20Antonakaki.pdf

URL 9. (n.d.). Retrieved from https://mostlyoff.wordpress.com

URL 10. (n.d.). Retrieved from https://www.youtube.com/watch?feature=player_embedded&v=7JrtcvNUK6Y#!

URL 11. (n.d.). Retrieved from http://www.britannica.com/technology/basilica-architecture

URL 12. (n.d.). Retrieved from https://www.pinterest.com/pin/13792342585213259

URL 13. (n.d.). Retrieved from http://www.newhollandwood.com/PhotoGallery/tabid/147/papg-864/4/Default.aspx

URL 14. (n.d.). Retrieved from http://islamic-arts.org/wp-content/uploads/2012/06/illustration.jpg

URL 15. (n.d.). Retrieved from http://www.ne.jp/asahi/arc/ind/2_meisaku/15_qairawan/plan_qen.jpg

URL 16. (n.d.). Retrieved from https://www.khanacademy.org/humanities/art-islam/islamic-art-early/a/the-great-mosque-of-kairouan

URL 17. (n.d.). Retrieved from http://islamic-archcorner.blogspot.com.tr

URL 18. (n.d.). Retrieved from http://stevewatson.info/travel/Turkey/Week_1/images/clip_image015.jpg

URL 19. (n.d.). Retrieved from http://maxspider.deviantart.com

URL 20. (n.d.). Retrieved from http://www.infocordoba.com/spain/andalusia/cordoba/sightseeing/cordoba_historic_centre_walk.htm

URL 21. (n.d.). Retrieved from http://islamic-arts.org/2012/mosque-of-cordova/

URL 22. (n.d.). Retrieved from https://www.youtube.com/watch?v=RA66QOQ3W4g

URL 23. (n.d.). Retrieved from https://www.pinterest.com/pin/470978073503535901/

URL 24. (n.d.). Retrieved from https://www.rosswarner.com

URL 25. (n.d.). Retrieved from https://www.youtube.com/watch?v=LHebxZ0fwPc

URL 26. (n.d.). Retrieved from http://islamic-arts.org/2012/the-giralda/

UL 27. (n.d.). Retrieved from https://www.youtube.com/watch?v=LHebxZ0fwPc

URL 28. (n.d.). Retrieved from https://earth.google.com

URL 29. (n.d.). Retrieved from http://www.memoireonline.com/01/13/6701/m_Conversion-des-lieux-de-culte--Alger-du-XVIIIeme-au-XXeme-siecle-Cas-de-la-mosquee-cathedra15.html

URL 30. (2015). grand-omari-mosque-saida. Retrieved from Lebanon Ministry of Tourism: (n.d.). Retrieved from http://www.living-lebanon.com/mosques-saida.html

URL 31. (n.d.). Great Al-Omari mosque. Retrieved from official tourism website of Lebanon: www.mot.gov.lb

URL 32. (n.d.). Retrieved from http://theses.univlyon2.fr/documents/getpart.php?id=lyon2.2004.salamon_j&part=270688

URL 33. (n.d.). Retrieved from https://www.facebook.com/BeirutMosques/

URL 34. (n.d.). Retrieved from http://www.beirutme.com/?p=13084

URL 35. (n.d.). Retrieved from https://en.wikipedia.org/wiki/Great_Mosque_of_Gaza#/media/File:Location_map_Gaza.png

URL 36. (n.d.). Retrieved from http://www.planetware.com/tourist-attractions-/nicosia-cy-nic-nic.htm

URL 37. (n.d.). Retrieved from http://www.turbosquid.com/3d-models/3d-selimiye-mosque/779975

URL 38. (n.d.). Retrieved from http://archmap.org/archmap_2/Site/Collection?building_id=1431#

URL 39. (n.d.). (2013, 10.06). Lala Mustafa Pasha Mosque (St Nicholas Cathedral), Famagusta, Cyprus. Retrieved from http://Cypnet.co.uk

URL 40. (n.d.). Retrieved from http://famagustawalledcity.net/ground-plan6

URL 41. (n.d.). Retrieved from https://forum.paradoxplaza.com/forum/index.php?threads/il-senato-della-republica-venetiana-collaborative-aar.173861/page-3

URL 42. (n.d.). Retrieved from http://www.famagusta.org.cy/default.asp?id=407

URL 43. (n.d.). Retrieved from www.cypnet.co.uk/ncyprus/history/lusignan/4pierre2.htm

URL 44. (n.d.). Retrieved from www.pbase.com

URL 45. (n.d.). Retrieved from

https://sqmegapolis.wikia.com/wiki/File:Ketchaoua_Mosque.png

URL 46. (n.d.). Retrieved from www.bigstock.com

URL 47. (n.d.). Retrieved from www.flickr.com