



Salahaddin University- Erbil

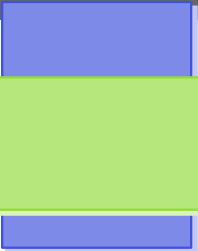
College of Engineering

Department of Architecture

Building types in Islamic Architecture

Prepared by:

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• Building types in Islamic Architecture

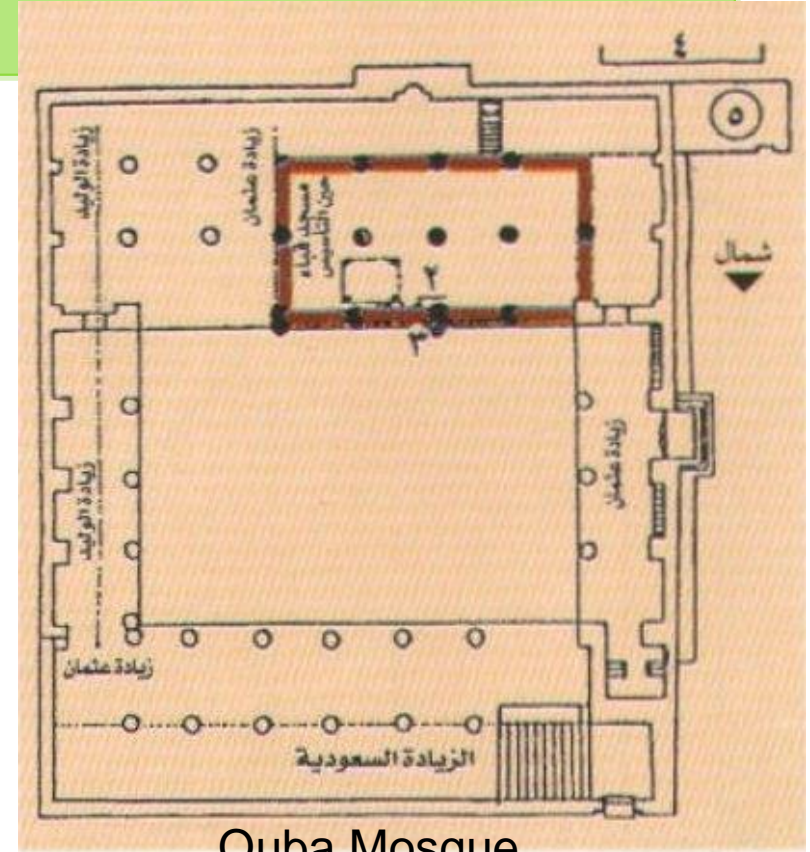
- Educational building (Maktab- Madrasa- Külliye)
- Mosque
- Palace (Qasr)
- House
- Bath

A Brief History of Education

- Education in the Middle East has an ancient history, which dates back to the ancient Mesopotamian civilizations, that include Sumerian, Assyrian, Babylonian and Neo-Babylonian Empires
- Over time, after the emergence of Islam in the seventh century, individuals endeavored to comprehend the words that exist inside the Quran.
- Base on this, the mosques as religious building became a place for learning

The First Building for Education

- After the spread of Islam during the seventh to the tenth century, the educational process gradually developed; the students were called *Kuttab* and they started to be educated in the mosques, tents, markets, and homes of their instructors. During the primary age of Islam an unsystematic framework of education was developed within the institutions, which proceeded until the Abbasid era at eleventh century after which the instructive frameworks turned out to be more organized and proficient.
- **Nevertheless, the mosque became an educational building within the urban fabric of the city; And Quba Mosque is the first educational building After advent of Islam.**

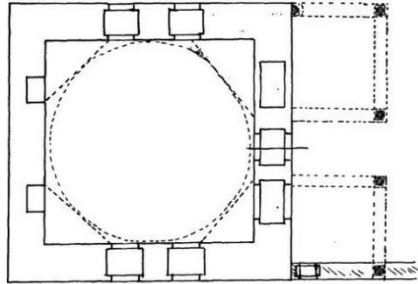


Quba Mosque

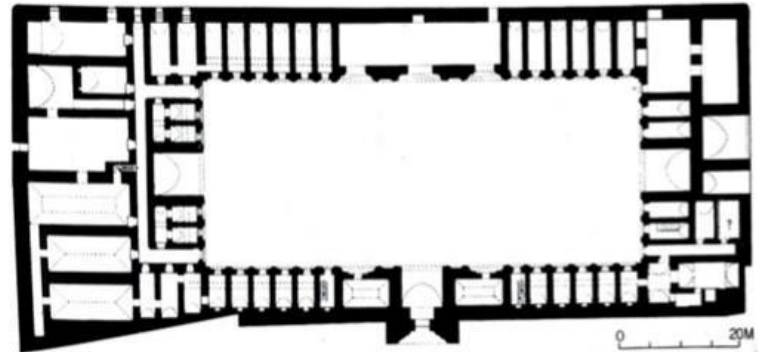
Educational building

During the golden age of the Islamic Empire from tenth to **thirteenth centuries** the philosophers and relevant authorities attempted to set up an establishment for education, those organizations can be classified into the following:

- **Maktab**
- **Madrasa**



floor plan of Yavuz Sultan Sibyan Mektebi (source: Uludag, 2014)



plan of Madrasa al-Mustansiriya (source: Al-janabi, 1983)

Maktab

- Maktab refers to a place in which children are taught education; at the beginning of the tenth century they built an additional room next to the mosque and called it Maktab.
- These new schools started out as a single room or were the home of the teacher which was joined to the local mosque . Additionally, Maktab in past considers similar to the present day elementary school
- During the time of the Ottoman empire at sixteenth-century *Sıbyan Mektebi* was established and had a very special place in Islamic and Turkish architecture.

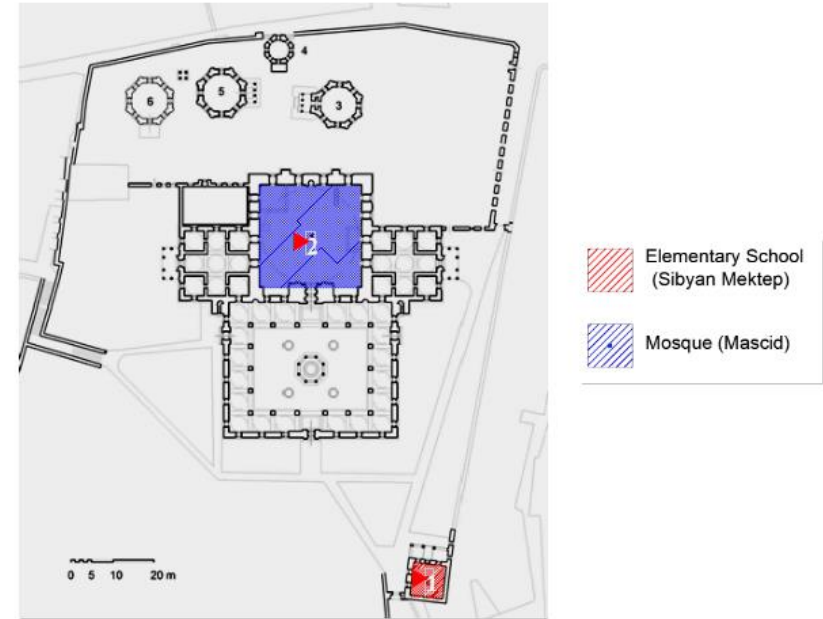
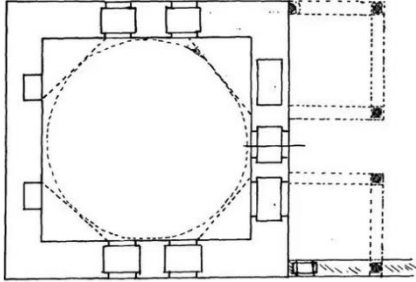


Figure 2.3: the floor plan of Yavuz Sultan Selim Kulliyesi (source: Archnet, n.d.)

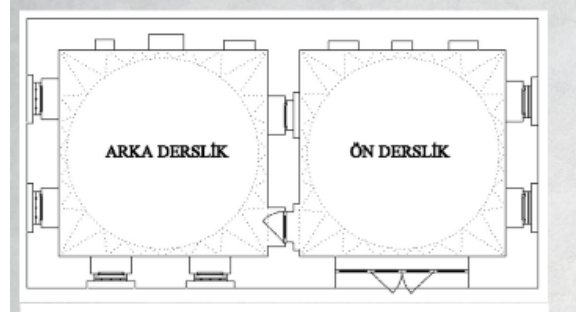
Plan of Maktab

The building of the Ottoman primary schools are units: either single or double. The single unit consisted of one room and the entrance of the building indicated by the cantilever or columns; but the second type comprised of two square rooms: one of the square places of these kinds of school buildings can be made open to the outside and these open spaces are used as summer classrooms and the other unit was for the winter. A lot of variety in the Sibyan Mektebi were not present, thereby most of the Sibyan Mektebi seen in Ottoman architecture is the square plan; a rectangular plan is rarely seen. The most important and common feature in the planning of these constructions is that the dimensions of the Sibyan Mektebi were almost the same ($8 \times 8 = 64 \text{ m}^2$)

The Building of Maktab



Yavuz Sultan Sibyan Mektebi (source: Uludag, 2014)



Sitti Hatun Mektebi (source: Seymenler , 2012)

Material of the Maktab

Material: cut stone and brick



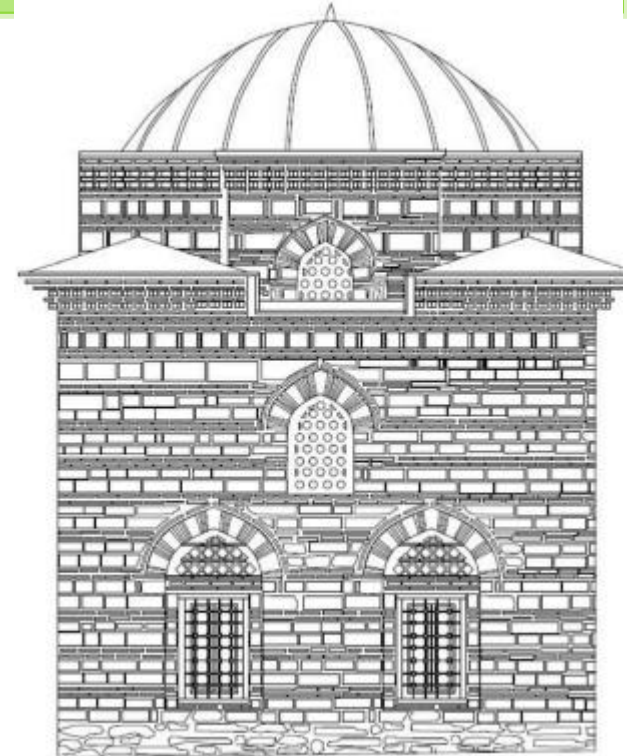
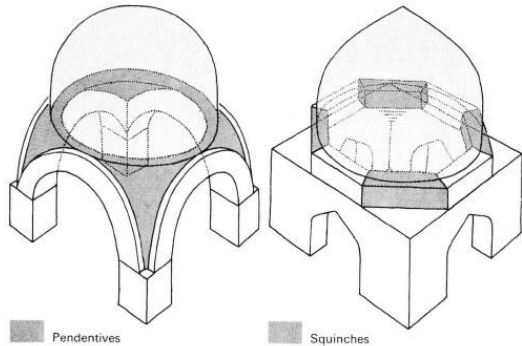
Sıbyan Mektebi in Amcazade Hussein Pasha Kulliyesi
(source: Istanbulium.net, 2011)



Bursa Sitti Hatun Sıbyan Mektebi Ön GörünüŖü

Roof System of the Maktab

Cover system: the Ottoman Primary School buildings were mostly covered by a dome because the plan is square. However, some examples used the domes and vaults together



Sitti Hatun Mektebi (source: Seymenler , 2012)

Location of the Maktab in the city

The placement: Since the primary schools built in an individual building near the *Mehella* or district Mosque or in the corners of the complex *Kulliye*, at least two sides receive light and air. It is desirable to illuminate the spaces better with these windows. The school district was built at the intersection of streets and can be regarded as the center of the neighborhood, especially in the corner. Therefore the *Sibyan Mektebi* within the complex of *Kulliye* was usually located far from the mosque which was placed in the center of the complex within the Ottoman architecture; although there is an obvious distance between them. The building of the *Mektepi* has been characterized by the same attributes and architectural specifications of the mosque, such as the form of the existing dome, the material of finishing

- Location of the Maktab in the complex of Külliye

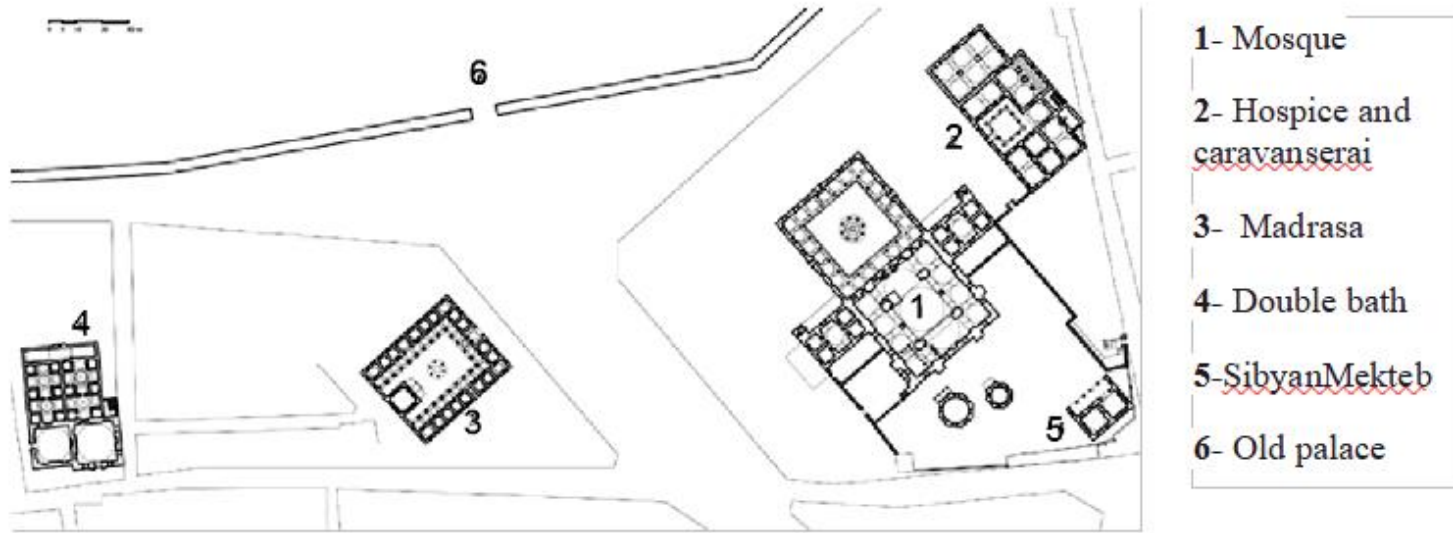


Figure 2.53: The plan of Bayezid Külliyesi (source: Yüksel, 1983)

- Location of the Maktab according to the local Mosque



Madrasa

Madrasa is the second type of learning institutions that appeared during the Islamic medieval period in the tenth century in Baghdad. This institution was similar to the colleges nowadays; they were meant for the continuity of learning for students above the age of 14 years and who graduated from the Maktab

However, this educational institution was initially constructed for religious study, but after the development of educational approach the secular lessons also emerged to its curricula like astronomy, philosophy, mathematics, chemistry, history, medicine, and literature

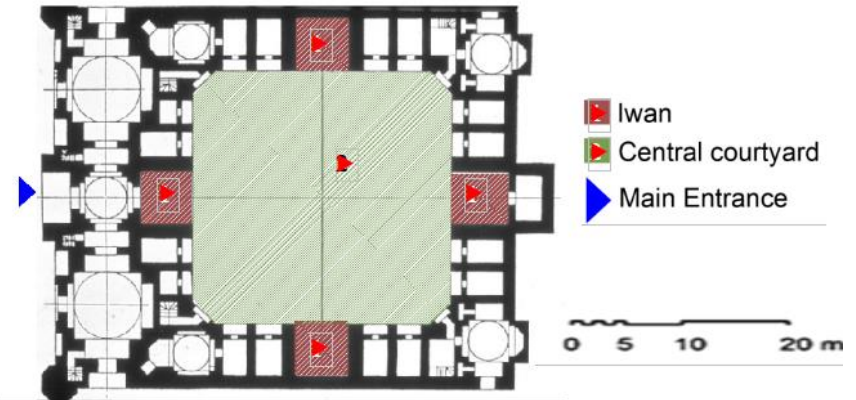


Figure 2.50: floor plan of Madrasa al-Ghiyathiyya Khargird (source: Blair & Bloom, 1984)



Figure 2.51: view from courtyard of Madrasa al-Ghiyathiyya Khargird (source: Blair & Bloom, 1984)

The Plan of Madrasa

According to the architectural aspects of *Madrasa*, the plan of the building is generally rectangular or square with a central courtyard surrounded by one or two *Iwans* (small rooms) and a *Musala* (pray area). The building usually has two floors. Madrasa usually has some similarities with the design of local buildings in the Middle East which can be seen in a set rooms that open onto a central courtyard. There are also some similarities between the *Madrasa* and some Iranian palaces such as *Ardashir* and *Firuzabad* palaces . Moreover, the building of *Madrasa* was often ornamented with *Quranic* texts.

Chinese ambassador Zhen Zheng introduced the design of Madrasa in 1414

In addition, there are some writings referring to the building of Madrasa, one of those writings was by the Chinese ambassador *Zhen Zheng* in 1414. He described the building of Madrasa: "In the capital, there is a large mud-brick building called a mä-de-r-se (madrasa). On all four sides, it has broad, spacious galleries. In the center of the courtyard stands a copper vessel, rather like a large cauldron

Madrasa Sultan Mohammad Seljuki

The Madrasa of Sultan Muhammad al-Seljuki is located in Esfahan, Iran. The building was constructed between 1104 to 1117 during the *Seljuk Empire* by *Sultan Muhammad*

The plan of Madrasa Sultan Muhammad Seljuki was defined as a *four Iwans* building surrounding a central courtyard. However, part of building was destroyed during the Mongolian attack on Esfahan in 1237

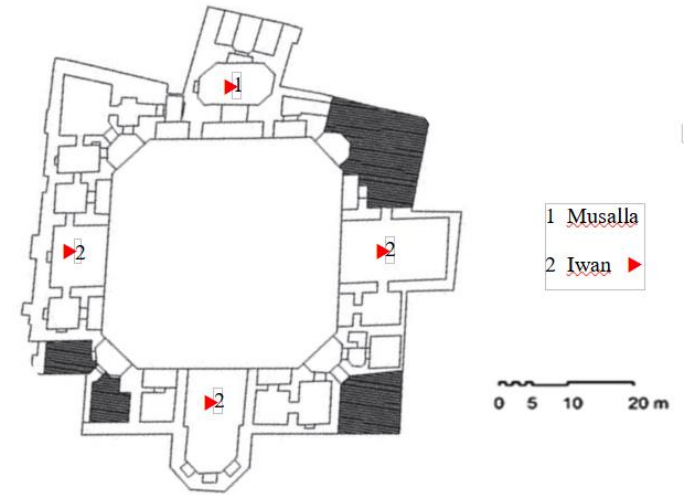


Figure 2.18: floor plan of Sultan Mohammad Seljuki Madrasa (source: Hooshyari, Pournaderi, and Nejad, 2014)



Iwan in Madrasa

Iwan is a roofed space that closed on three sides and on one side it opened to the courtyard . Four Iwans in Iranian architecture refer to the four basic elements of life; water, fire, earth, and air. Also, the four doorways indicate to the four directions of the world; South, North, West, and East. The courtyard gathered all four basic elements (Iwans) and all directions (doorways) for connecting with the sky. However, this theory of the four Iwans have a strong connection with the Zoroastrian religion and their fire temples *Atashkade* which existed in Iran and Iraq

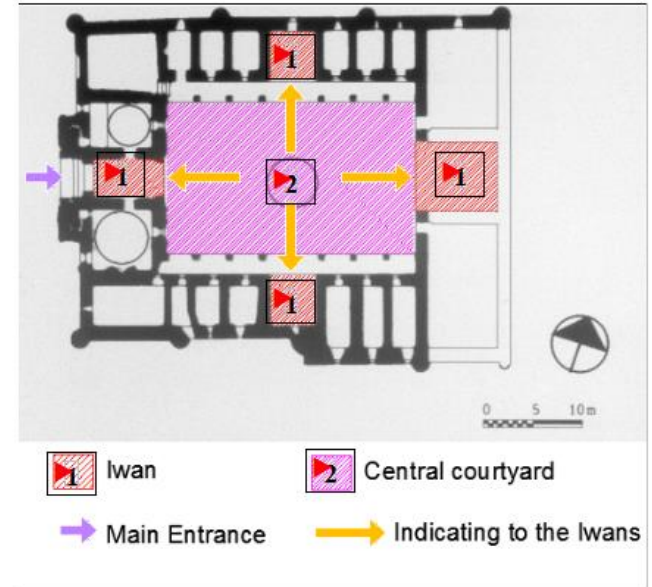


Figure 2.26: the ground floor plan of Madrasa Gok
(source: Turner, n.d.)

Iwan

the Iwan consisted of the barrel-vaulted ceiling (more than 9m above ground level). Moreover, the internal wall has been ornamented by brick and various geometrical units



The Iwan of Madrasa al-Sharabiya

Small Room in Madrasa

There are seven small rooms (inner dimension of 2.32 x 3.8m for each room) and each of the rooms is opened on north and south side of the court yard

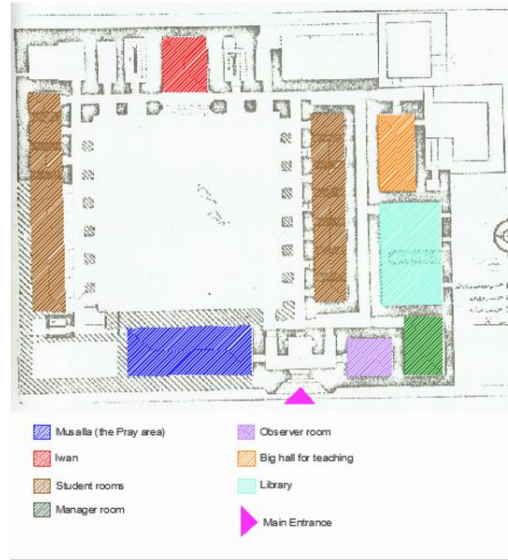


Figure 2.34: plan of Abbasid Palace (Madrasa al-Sharabiya)
(source: Al-Janabi, 1983)



• Külliye

The educational institution during the Ottoman Empire has been developed to a complex which was called Kulliyya that included (Mosque, Maktab, Madrasa, bath, kitchen, caravanserai, and shrine). However, this type of complexes was mostly built in Turkey: cities like Istanbul, Bursa, and Edirne .

The complex of Kulliyya contained two formal educational building such as Sibyan Maktab and Madrasa; however, the building of the elementary school which named Sibyan Maktab was represented as an individual building within the complex without attaching to the mosque or any educational building.

• The Design of Külliye

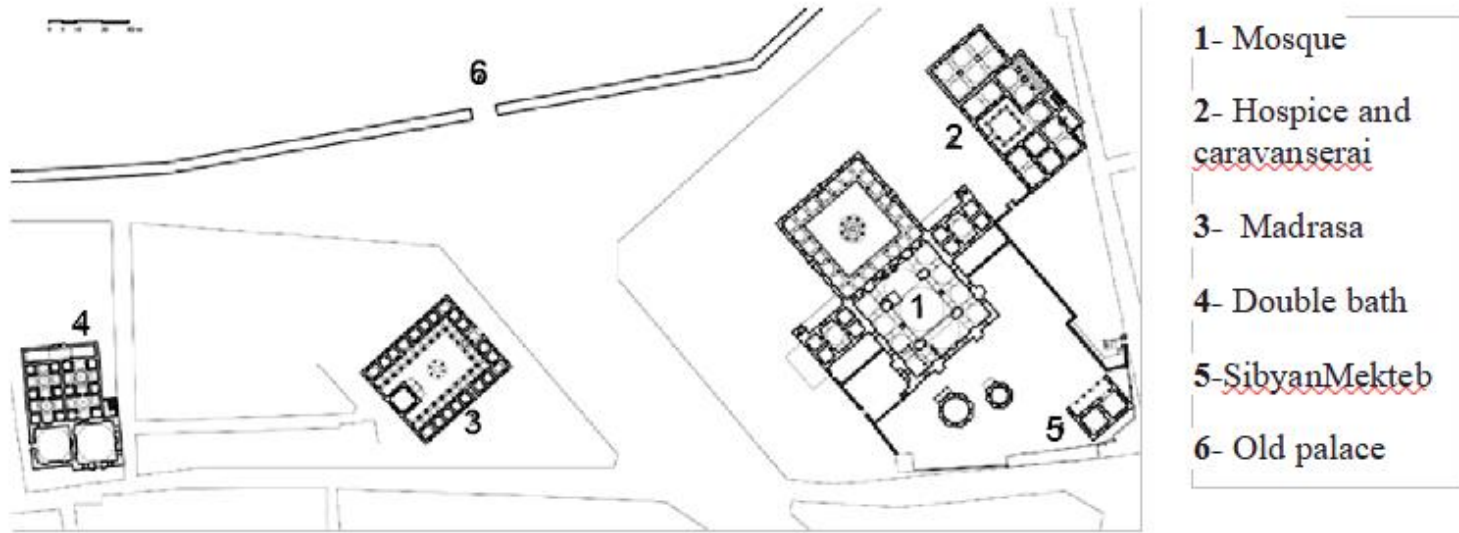


Figure 2.53: The plan of Bayezid Külliyesi (source: Yüksel, 1983)

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Thank You