

## LANDSCAPING IN SULAYMANIYAH CITY'S LUXURIOUS HOTELS BASED ON GUESTS' NEEDS AND ENVIRONMENTAL CONDITIONS

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### ABSTRACT

The research was conducted in three luxurious hotels in Sulaymaniyah City: Grand Millenium, Titanic, and High Crest. From July 15th, 2022 to July 10th, 2023, to study the reality of Landscaping in those Luxurious Hotels in terms of their areas, components, and recreational activities that they offer to their visitors.

The data for the study was obtained through four methods: personal observation, architectural design analysis, interviews with hotel management, and questionnaire distributed to hotel guests.

The research obtained several results and conclusions, the most important of which are: The most significant interest in the three hotels is in the entrance gardens and car parking, then the back gardens. The reason for this is due to the high prices of land in the city, only a small space was allocated for gardens and more importance was given to the hotel building. There was no interior, wall, and roof gardens in the three samples. Nonetheless, 99% of respondents confirmed their wish to stay in a hotel with gardens, and more than 90% of guests prefer the presence of water in the gardens in the form of fountains, waterfalls, and swimming pools. Furthermore, the city's environment is characterized by an extremely harsh climate, with variations between summer (47°C) and winter (-20°C) temperatures reaching 65-70°C, necessitating appropriate garden designs and plants that resist harsh weather.

Various recommendations were developed to improve the design of hotel gardens in the city of Sulaymaniyah based on the study's findings and conclusions, with many design proposals for external and internal gardens, as well as hotel walls and roofs.

**KEY WORDS:** Hotels landscaping, luxurious hotel gardens, hotel garden components, hotel recreational activities.

### INTRODUCTION

A hotel is a business that provides lodging, dining, and other guest amenities. Objects will become more appealing and eye-catching as a result of the design process. Hotel design is important in today's culture because it has a direct impact on profitability and success in the hospitality business. As a result, hotel design concepts and hotel demand are highly associated [1]. Some countries, such as Germany, the United Kingdom, France, and South Korea, prioritize design when building hotels because design will attract more customers, as design aids mental satisfaction among guests, particularly garden designs and exterior and interior landscapes [2].

Previous studies had found essential design aspects can boost a hotel to luxury status after studying a number of articles that covered relevant design features for luxury hotels. Hotel space, lobby, guestroom, artworks, landscape and

outside environment, and entertainment activities, plush or exotic materials, smart lighting that feels warm, inviting and restrooms are among them [3, 4, 5 and 6].

As a result, the design for any hotels is regarded as a novel idea that refers to a style of lodging designed to blend in with the surrounding environment and accentuate the natural beauty that surrounds it [7]. One of the component parts of a tourism destination offering is entertainment activities and possibilities. Another study discovered that the majority of customers (98.33%) thought landscaping and interior scaping improved the attractiveness of the hotel [8]. If appropriately designed, it is also one of the primary aspects affecting the attractiveness and contributing to visitor pleasure. According to the literature, travelers are more willing to spend money on amusement [9, and 10]. It also became clear to them that family leisure is critical to the tourism and hotel industries [11]. Kayina *et al* [8]

found that the majority of hotel guests in Dahi City were pleased with the presence of landscape features such as flowers (96.67%), water elements (93.33%), lights (91.67%), stones/rocks (75.00%), sculptures (63.33%), turf grass (60.00%), arches and pergolas (21.67%).

Additionally, hotels offer a variety of tourism-related services and leisure activities to their guests. These activities include walking, cycling, basketball, snowshoeing, tennis, golf, basketball, football, volleyball, handball, miles of hiking trails, segway tours, falconry, gym, swimming, massage, yoga, and spa. Some of these events take place outside in gardens and open spaces, while others take place inside the hotel. Jet skis, paddle boards, snorkeling equipment, squash, bowling, fitness, cardio, altitude training, table tennis, speed workout, badminton, water aerobics, beauty parlor, resort shops, and lobby shops are some of the beachside amenities. Spa shop, cabanas outside, and chi water pavilion are examples of signature treatment facilities. Also included in the kids' program are the toddler zone, entertainment zone, and adventure zone [12]. Facilities are vital for ensuring customer satisfaction with their hotel stay and influencing return visits and positive communication. In addition, customers who believe that a certain hotel meets their wants and desires are more likely to return again [13, and 14].

Currently, numerous ranks are used around the world for hotel rating; however, no international classification has been approved yet, despite several attempts to unify the classification system. New attempts and projects are being developed to produce a unified standard, but the diversity of the hospitality sector, as well as the great number of existing quality programs, make this strategy difficult to implement. Hotels in Europe are typically rated from 1 to 5 stars. One look at all of the different hotel classifications, one can find that landscaping is a key prerequisite for achieving a higher ranking [15].

In fact, hotel garden size varies greatly depending on the hotel's reputation, requirements, and environmental circumstances. In general resorts come in four varieties. The first is an external garden, the second is an internal garden, the third is located above buildings and is known as roof gardens, and the fourth is a garden wall, which can be located on either the interior or exterior walls of the hotel. Guests and visitors can relax, exercise, dine, and be entertained in the hotel's outside gardens. The structure's entrance and the ground in which it is placed provide

visitors and guests with their first impression of the quality of the hotel establishment. An appealing, tidy, and well-kept exterior is a reassuring indicator of internal adherence to high standards. Garden designs can influence whether a guest returns again [16, and 17].

Interior landscaping is the design and installation of plants, water features, rocks, and other natural elements to create an appealing, soothing inside environment. Designers use color, texture, shape, and light to create beautiful installations that complement the layout of a building. First and foremost, interior landscapes contribute to a building's overall aesthetics and provide a number of health advantages; green areas have been shown to lower stress and increase mood. Mold, chemicals, and carbon dioxide can damage the air within buildings, and water features might include pools, fountains, waterfalls, man-made streams, and fish ponds [17]. A green roof is a vegetated landscape built up from a series of layers that are installed on a roof surface as modular, that is, layer by layer on the roof, or as prepared layers in trays [18]. Green roofs are built for a variety of reasons, including as public places, architectural features, to add value to a property, or to provide specific environmental benefits, such as storm water absorption and retention and building insulation against heat gain or loss. Green roof vegetation is grown in a growing substrate that can range in depth from 50 mm to more than 1m, depending on the weight capacity of the building's roof and the design goals [19]. It can be a great idea to build something on top of the building rather than just surrounding it if you want to add some lovely landscaping to the scene. Rooftop gardens grow a variety of plants, including trees, bushes, lovely flowers, and grass on the roof to enhance the urban landscape [20].

The green wall is another type of hotel garden that is made up of plants growing in supported vertical systems that are usually attached to an internal or external wall. Green walls, like many green roofs, combine vegetation, growing media, irrigation, and drainage into a unified system. Living walls, bio-walls, and vertical gardens are other names for them [21]. Green walls are not only an appealing design feature, but they also contribute to building insulation by directly shading the wall surface. Plants do not take any space on the ground yet cover enormous surfaces of buildings, creating cooler microclimate and improving local air quality [22]. Green hotels in industrialized nations are now growing at a rate of

8%-20% per year, reaching the critical stage of development for large-scale promotion [23, and 24]. Furthermore, Berezan *et al* [25] found that visitors are more attracted to ecologically friendly hotels and are willing to pay a premium for these hotels in their study.

Many major hotels have been developed in Sulaymaniyah in recent years, but there has been little interest in gardening, whether indoor or outdoor gardens. As a result, it is vital to investigate this topic and comprehend the significance of gardens in these hotels as well as the level of interest in them. The guests' opinions on this topic should also be considered.

#### **Research Objective:**

**1-** Understanding the reality of parks in prominent hotels and clarifying the significance of green spaces, in terms of their areas, components, and recreational activities as well as their effects on guest turnout and aesthetics.

**2-** Study all parts of the gardens of the hotels and their surroundings and learn about their characteristics and problems to improve and beautify them to provide the most comfort for visitors while they are in the hotel.

**3-** Identifying the leisure needs of hotel guests through a questionnaire process to obtain their opinions and benefit from them in the redesign process.

**4-** The importance of the topic comes from the fact that it has not been studied in Iraq, in addition to the lack of studies on it

#### **CASE STUDY**

The study was carried out in three five-star hotels in Sulaymaniyah City, namely the Grand Millenium, Titanic, and High Crest (Fig.1). From July 15th, 2022 to July 10th, 2023, to research the Landscaping in such Luxurious Hotels in Sulaymaniyah City in accordance with the customers' needs and environmental conditions.

This is accomplished by researching various garden styles, designs, locations (areas), leisure

activities, natural and physical (made) components.

#### **A- Research samples and description:**

**1- Grand Millenium (Shary Jwan) Hotel:** This is one of Sulaymaniyah's largest five-star hotels. It is situated on a hill near the city center, in latitude N35°56'72 and longitude E45°40'80, and has an elevation of 852 m above sea level. It first opened in 2014. It covers an area of 70,000 square meters, including 37,000 square meters of green space. There are additionally 253 bedrooms, 9 meeting rooms, one conference hall, a banquet hall, two indoor swimming pools, and one outdoor swimming pool at the hotel. In addition to gyms, massage and beauty salons, there is an indoor and outdoor parking garage (Figs. 2, 3).

**2- Titanic Hotel:** One of the city's major hotels is located in the northeastern part of Sulaymaniyah, on the edge of Goizha Mount, in latitude N35°11'42 and longitude E46°1'26, at an elevation of 1015 m above sea level. It first opened in 2013. It has a total area of 2,000 square meters, total green area is 650 square meters, 78 sleeping rooms, 3 closed halls and one open for meetings, and 7 halls for various events and celebrations. In addition to an indoor swimming pool, massage services, and a gym, there is an indoor and outdoor garage for storing cars (Figs. 4, 5).

**3- High Crest Hotel:** One of the largest hotels on Bakrajo Road, beside Majidi Mall. It is located on the western outskirts of Sulaymaniyah, in latitude N35°34'42 and longitude E46°32'18, at an elevation of 780 meters above sea level. It first opened in 2012. It has a total area of 2,500 square meters, total green area is 500 square meters, 94 sleeping rooms, 3 closed halls and one open for meetings, and 7 halls for various events and celebrations. There is an outdoor garage for parking cars in addition to an indoor swimming pool, massage, and gym (Fig. 6, 7).

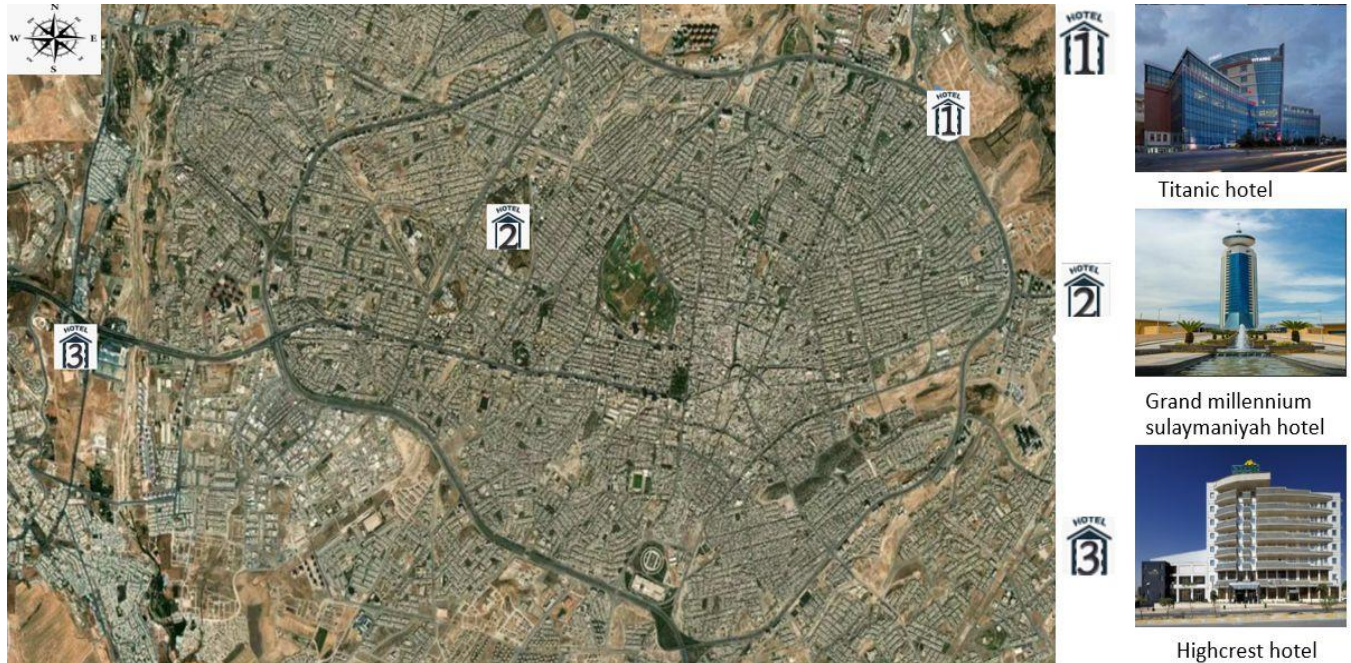


Fig. (1): The locations of the three hotels in Sulaymaniyah city

Source: <https://www.google.com/maps>

#### B- Data Collection and Information:

Personal observation, architectural design analysis, interviews with officials, and questionnaires distributed to hotel guests were used to obtain data on the research samples.

**1 - Observation (Personal note):** Several important pieces of information for the research were recorded through personal notes during multiple repeated trips to the research samples at various periods of the year. This data comprised the following references:

- 1- The value of the hotel's location.
- 2- The presence of a green belt and windbreaks surrounding the hotel area.
- 3- The presence of gardens at the hotel's entrance and around the hotel.
- 4- The presence of gardens in and around the hotel.
- 5- The extent to which plant diversity is valued in the hotel gardens.
- 6- Garden soil quality, fertility, and plant-growing appropriateness.

7- The presence of water, such as fountains or waterfalls.

8- The presence of indoor gardens or potted plants.

9- Garden walls are present.

10- Roof gardens are present.

11- The level of interest in the physical components, amenities, and entertainment of the hotel gardens.

12- The extent of services and upkeep in the hotel gardens.

13- Irrigation water availability.

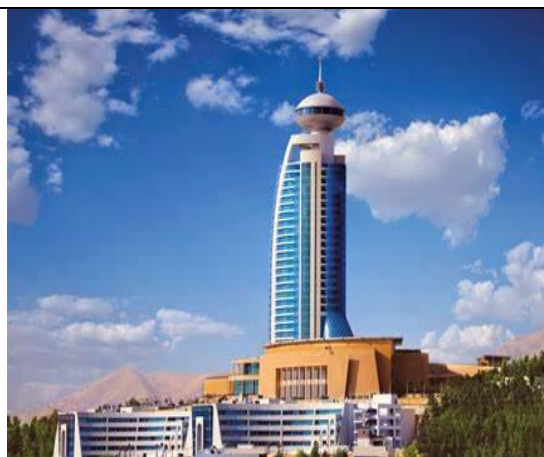
14- Swimming pool in the open air.

15- Entertainment, sports, and social events are offered in the hotel's open spaces and gardens.

16- The level of interest in the artistic components, sculptures, and statues in the hotel's gardens and areas.

17- Whether the hotel has an internal or outdoor garage.





**Fig. 2:** General view of the Grand Millenium Hotel



**Fig. 3:** A sky view of the Grand Millenium Hotel



**Fig. 4:** General view of the Titanic Hotel  
(photo by author)



**Fig. 5:** A sky view of the Titanic Hotel  
Source: <https://www.google.com/maps>



**Fig. 6:** General view of the High Crest Hotel  
(photo by author)



**Fig. 7:** A sky view of the High Crest Hotel  
Source: <https://www.google.com/maps>

**2- Analysis of Architecture Plans:** Architectural plans for each hotel site are required to construct and research the landscape. The hotel administration has architectural blueprints and plans for the hotel, its gardens, and other areas, but they have refused to share them because they are private projects and they do not prefer people to look at their designs.

**3- Personal interviews:** During the multiple visits to the research samples, official permission was obtained to conduct personal interviews with managers, engineers, and administrative staff to obtain the necessary information to conduct the research for all three hotels under study.

**4- Questionnaire:** It's a direct means of communication and an important tool in design studies since it ensures that the questions asked are answered. There are four basic approaches for sending questionnaires:

1-Postal: Because the core questions are given directly to the intended respondents, surveys are both straightforward and cost-effective.

2-Online: is a passive form of communication that the majority of any community may have access to.

3-Telephone: Interviews allow participants to ask questions quickly and in a controlled environment.

4-at-person: Typically, interviews involve visiting a carefully selected sample of the target population at their homes [26].

It was required to distribute 150 surveys (80 online and 70 face-to-face) to collect hotel guests' thoughts about the hotel gardens and to learn about their leisure demands while staying in luxury hotels in Sulaymaniyah. In the end, 120 individuals responded. Then began evaluating the questionnaire data and turning it into percentages.

### **C- Studying the environmental factors in Sulaymaniyah City:**

The environmental conditions are important in the planning of green space, tourist resorts, and hotels, and they differ from one zone to the next. As a result, the design processes and components

used for the site differ. The designer aims to produce an atmosphere fit for human habitation, which they accomplish by utilizing various climatic controls, design processors, and the selection of appropriate natural and physical elements [27]. Green space in urban environments is used to produce shade, lower air temperature, and improve air quality. The principal technique of greening an area is evapotranspiration, which cools the leaf and the air temperature surrounding it by consuming energy during the phase shift of water. Furthermore, by casting shadows, it can intercept solar radiation and reduce surface and air warming [28]. This information was gathered from the Weather Forecast Department in Sulaymaniyah and included temperature, humidity, precipitation, and wind data from 2000 to 2020. (Table 1).

During our investigation of the weather elements in Sulaymaniyah, discovered that the climate is hot and dry in the summer and cool and humid in the winter. The results in (Table 1) demonstrate that there is a significant variation in relative temperatures and humidity between summer and winter, indicating that we should select plants that can withstand high temperatures and low humidity in the summer and low temperatures and high humidity in the winter. When selecting resort plants, prefer deciduous trees and shrubs with high resistance. They should also be planted in two lines to operate as robust windbreaks, smoothing out the environmental conditions inside the tourist resort mitigating the effects of the region's harsh weather and providing thermal comfort in Iraq's green space during the summer, it is important to give shade at a rate of not less than 65% of the total area of the park by employing a huge tent tree which can provide evaporative cooling in conjunction with fountains or waterfalls. On the other hand, the land's good topography and semi-flat shape indicate its appropriateness for many designs and models (Table 2).

**Table (1):** Metrological Data of Sulaymaniyah City (2000-2020)

Years	Months	Avg. Temperature/ C°		Avg. Precipitation mm	Years	Months	Humidity%		Avg. Wind speed m/s
		Max.	Min.				Max.	Min.	
2000 to 2020	January	12.85	5.37	134.56	2010 to 2020	January	83.3	45.6	2.55
	February	14.30	6.32	111.73		February	83.1	40.1	2.65
	March	19.60	9.58	92.28		March	81.5	35.2	2.81
	April	24.80	13.95	63.51		April	76.3	28.9	2.55
	May	31.95	20.47	26.48		May	61	17.9	2.56
	June	39.55	27.05	0.71		June	41.5	9.5	2.62
	July	42.90	30.16	0.00		July	38.6	7.1	2.75
	August	43.05	29.68	0.55		August	40.1	7.2	2.65
	September	38.35	24.84	0.98		September	41.3	8.7	2.45
	October	30.60	19.21	31.15		October	54.7	18.2	2.52
	November	19.90	11.68	83.16		November	73.3	36.9	2.43
	December	14.50	7.37	101.30		December	81.4	45.2	2.64

**Source:** Data of The General Authority for Meteorology for The Sulaymaniyah –Iraq, 2021 [29].

## D- RESULTS AND DISCUSSION

**1- Personal observational results:** Table (2) summarizes the most relevant observational results obtained during several visits to the study samples (the three hotels).

**Table (2):** Personal observations result in three research samples

The Information	Grand Millenium	Titanic Hotel	High Crest Hotel
The importance of the hotel's location.	Very important	Very important	Very important
The presence of a green belt and windbreaks around the hotel area.	Partially present	Partially present	Partially present
The presence of gardens at the entrance of the hotel.	Available and good	Available	Available
Existence of back gardens and gardens around the hotel.	Available	Available	Available
Extent of interest in plant diversity in the hotel gardens.	Many types	Few types	Few types
Garden soil quality, fertility and suitability for growing plants.	Very good	Good	Good
The presence of the water element in the form of fountains or waterfalls.	Available	Not available	Not available
The presence of indoor gardens or indoor plants in pots.	Available and good	Available	Available
The presence of wall gardens, inside or outside of the hotels.	Not available	Not available	Not available
The presence of roof gardens.	Not available	Not available	Not available
The extent of interest in the hotel gardens' physical components, amenities, and entertainment.	Enough attention	Low attention	Low attention
Extent of services and maintenance in the hotel gardens.	Good	Good	Good
Availability of irrigation water	Available	Available	Available
Outdoor swimming pool	Available	Available	Not available
Types of entertainment, sports and social activities available within the hotel's open spaces and gardens.	Available	Not available	Not available
Extent of interest in the artistic elements, sculptures and statues in the gardens and spaces of the hotel.	Available	Not available	Not available
The presence of an internal or external garage in the hotel.	Both types are available	Both types are available	Exterior are available



According to the observations presented in Table 2, the three hotels chosen as research samples are luxury hotels located in strategic locations throughout the city, and the Grand Millenium Hotel has become an architectural and aesthetic symbol as well as the indicative sign that characterizes the city of Sulaymaniyah. The three hotels also have front gardens as an entryway to welcome visitors, as well as back gardens with places suited for recreational activities that are distinguished by service and upkeep, as well as rich plant diversity, particularly at the Grand Millenium Hotel. Due to the high land prices in Sulaymaniyah, only a modest area was allotted for hotel gardens in both the Titanic and High Crest types, except the Grand Hotel, which was allotted considerable space for gardens (37,000 m). Only large-sized potted plants were used in the entrances and corridors of hotels, and most recreational, physical, and social activities took

place inside the hotel halls during the summer and winter months due to the harsh weather during that time of year.

Due to the harsh weather conditions in the city, there are not good windbreaks from trees around the three hotels completely, and the use of water for cooling purposes in the form of fountains and the outdoor swimming pool is only found inside the Grand Millenium Gardens. There is no interest in creating roof gardens or wall gardens in any of the three samples. Likewise, there are no internal gardens in the hotels. Only attention was paid to planting different indoor plants inside various pots and decorating the halls and corridors of the three hotels.

The presence of entertainment and social activities and the use of aesthetic and artistic elements such as sculptures and sports equipment within the hotel gardens are non-existent in both the Titanic and High Crest hotels.



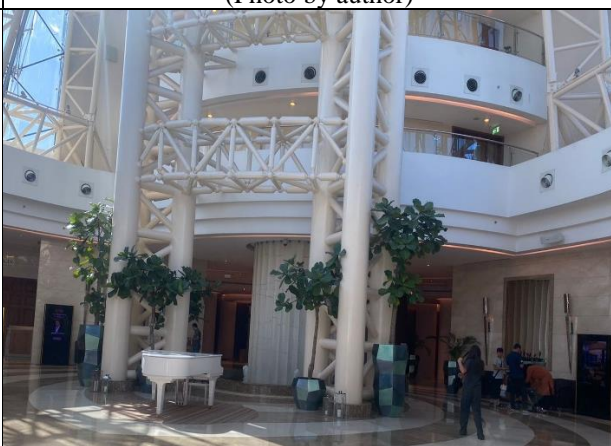
**Fig. 8:** Front Garden view of the Grand Millenium. (Photo by author)



**Fig. 9:** Front Garden view of the Titanic Hotel (Photo by author)



**Fig. 10:** Front garden view of the High Crest Hotel. (Photo by author)



**Fig. 11:** View of the interior hall of the Grand Millenium (Photo by author)





**Fig. 12:** View of the Interior hall of the Titanic Hotel (Photo by author)



**Fig. 13:** View of the interior hall of the High Crest Hotel (Photo by author)



**Fig.14:** Main Garden view of the Titanic Hotel (Photo by author)



**Fig. 15:** Main Garden view of the High Crest Hotel (Photo by author)

**2- Results of hotel guest questionnaire:** Table 3 shows a sample of responders from hotel visitors of all sexes (58% of males and 42% of females) and ages, the majority of whom are

between the ages of 20 and 50. Their ratio reached 75% of the respondents, with 45% of them staying as hotel guests for 3-5 days.

**Table (3):** Demo profile of respondents

Demographic variable		Respondents (%)
Gender	Male	58
	Female	42
Age (years)	Below 20	10
	20 - 30	30
	30 - 50	45
	50 - 70	15
Stay period (days)	Below 3 days	25
	3 - 5 days	45
	Above 7 days	30

**3- Recreational needs of hotel guests:** The observation of the participants reveals thoughts in Table 4 that hotel guests favor the presence of hotel gardens in the city of Sulaymaniyah. According to Kayina *et al* [8] in their study on the factors attracting guests to hotels, the presence of gardens in the hotel may lead to attracting guests

more, the percentage may reach more than 60% compared to hotels that do not contain a garden.

Table 4 further demonstrates that outdoor gardens (98%), inner gardens (85%), wall gardens (73%), and rooftop gardens (70%), are preferred by hotel guests in Sulaymaniyah (Chart 1). They also like the use of water in landscape designs in the form of fountains, waterfalls, and

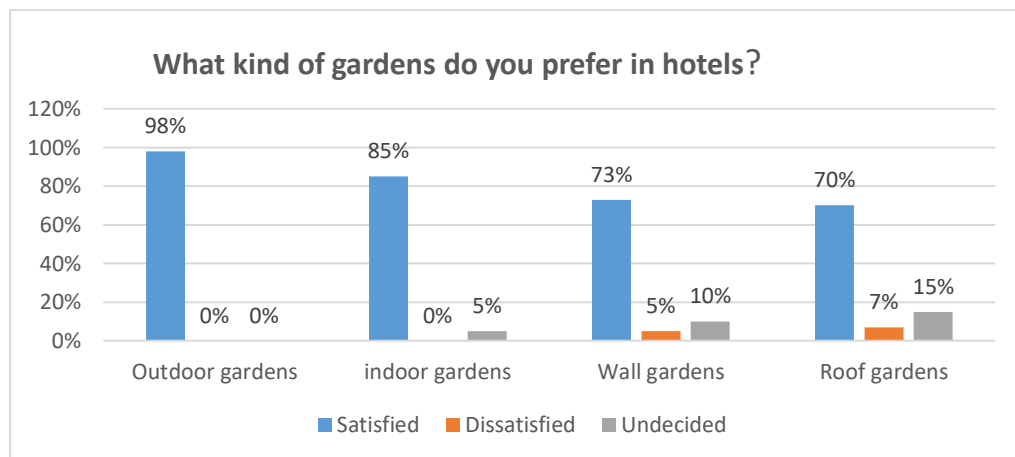
swimming pools by 90% (Chart 2), as corroborated by Oğuz *et al* [30]. in their study on the desires of resort tourists, in which 68% prefer to sit near water elements. Furthermore, 85% of hotel visitors prefer to sit in the gardens and enjoy the views of flowers and plants, while 70% prefer to use it for walking and roaming. While 65% choose to engage in fitness and physical activities in them. Furthermore, 75% of respondents prefer

the availability of dedicated locations for children's games, 67% prefer the presence of places inside the garden to organize birthday parties, (Chart 3) weddings, and other family celebrations, and 65% prefer eating food outside (in an outdoor restaurant).

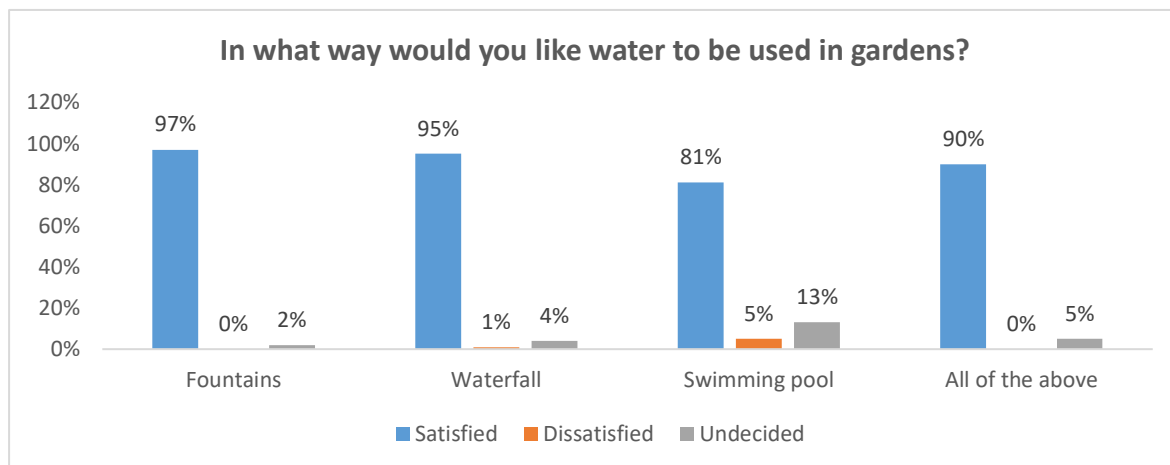
Furthermore, 75% of hotel visitors prefer to decorate corridors, halls, and hotel rooms with indoor plants grown in pots.

**Table (4):** Questionnaires' opinions on recreational needs during their stay in hotels in Sulaymaniyah City

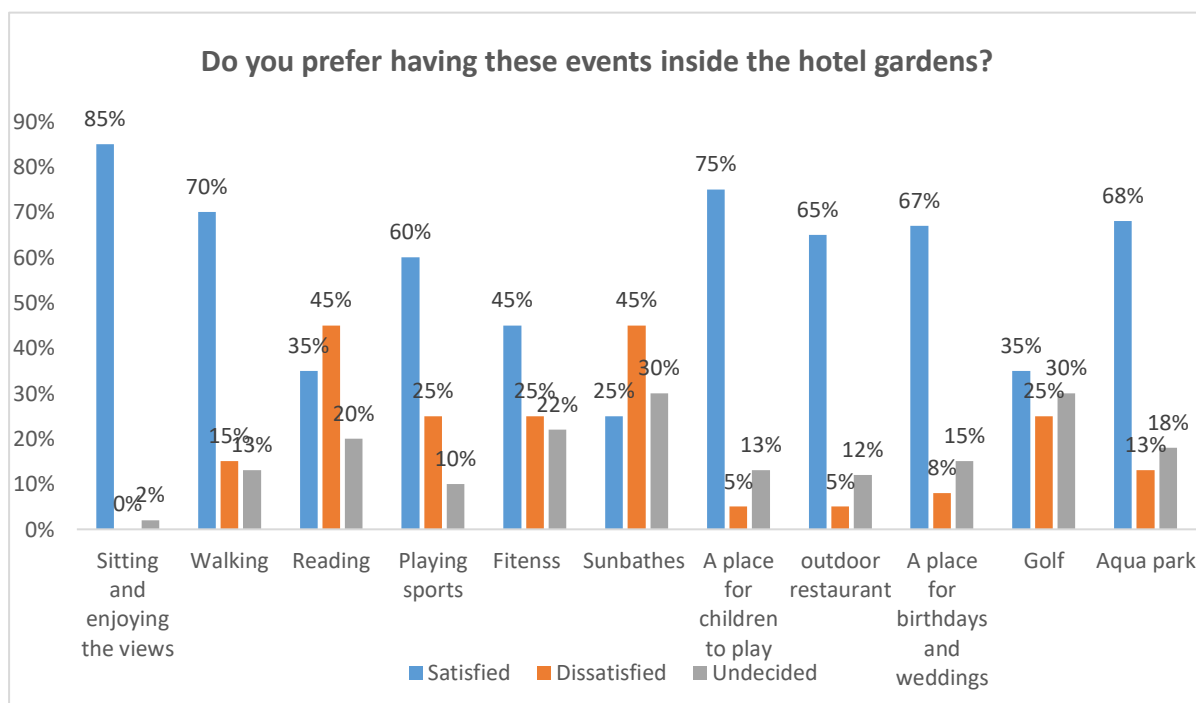
Description	Satisfied	Dissatisfied	Undecided
Do you prefer to stay in a hotel that has various gardens?	99 %	00 %	1 %
Would you rather stay at a hotel that has beautiful gardens again?	90 %	6 %	4 %
What kind of gardens do you prefer in hotels?	Outdoor gardens	98 %	00 %
	Indoor gardens	85 %	00 %
	Wall gardens	73 %	5 %
	Roof gardens	70 %	7 %
In what way would you like water to be used in gardens	Fountains	97 %	00 %
	Waterfall	95 %	1 %
	Swimming pool	81 %	5 %
How would you like to use hotel gardens?	Sitting and enjoying the views	85 %	00 %
	Walking	70 %	15 %
	Reading	35 %	45 %
	Playing sports	60 %	25 %
	Fitness	45 %	25 %
Do you prefer having these events inside the hotel gardens?	Sunbathes	25 %	45 %
	A place for children to play	75 %	5 %
	outdoor restaurant	65 %	5 %
	A place for birthdays and weddings	67 %	8 %
	Golf	35 %	25 %
	Aqua park	68 %	13 %
Do you prefer to place potted plants in the interior spaces, corridors and hotel rooms?	75 %	4 %	11 %



**Chart (1):** Explores the guests' preferences for different garden types.



**Chart 2:** Explores the guests' demand for different types of water uses.



**Chart 3:** Explains the guests' need for recreation activity in hotel gardens.

### E- Conclusion:

The following is based on observations made in three samples and a survey completed by Sulaymaniyah City hotel guests:

- 1- From an aesthetic and cultural standpoint, the investigated luxury hotels (Grand Millenium, Titanic, and High Crest) have a significant influence on the city - events or activities that they host have a significant weight on this side.
- 2- The main entry gardens and front gardens received more attention than the main back gardens.
- 3- Hotel gardens are modest and typical in style, with minimal interest in leisure activities.

Despite this, these gardens are distinguished by excellent service and upkeep.

- 4- Due to the high land cost in cities, there will be insufficient space for hotel gardens. Rather, emphasis is placed on the hotel structure.
- 5- The environment of the region is characterized by great drought and high temperatures in the summer, and high humidity and low temperatures in the winter. Temperature fluctuations between seasons might reach 65-70°C. As a result, it is vital to select plants that are appropriate for the region's climate and to construct windbreaks around the hotel gardens to protect them from harsh weather conditions.

Especially for gardens with a wide variety of plants. This aspect is overlooked in the hotel gardens in Sulaymaniyah.

- 6- In the lack of wall gardens and roof gardens, there are only pots in which indoor plants are placed, which are used to embellish the hotel's halls and corridors.
- 7- Fountains, waterfalls, and swimming pools are the most common types of water in gardens and hotels.
- 8- The existence of gardens in hotels is critical, as 99% of visitors enjoy them in all forms, including external and inside gardens, walls, and even rooftop gardens.
- 9- Hotel visitors choose to sit in the gardens and enjoy their views, as well as walk and stroll around them for physical and athletic workouts.
- 10- Providing enormous parking spaces in hotels that are not covered, leaving cars exposed to extreme weather conditions.

#### **F- Recommendations:**

The following recommendations based on the study's findings and conclusions:

- 1- Putting more emphasis on garden designs in hotels because they are an essential part of the hotel components and boost their aesthetics, attracts more guests.
- 2- It is required for gardens in hotels to be designed by a specialist in the field of landscape gardening or design, as well as managed by specialists in this sector.
- 3- Pay close attention to the recreational activities in the hotel gardens.
- 4- When building hotel gardens, it is best to research all environmental variables in the area and consider their adverse effects to cure them. Those designs must also accommodate guests' entertainment needs.
- 5- There is a greater interest in the design of internal gardens in hotels, gardens of internal walls and columns, and turning them green, as well as adding fountains and appropriate waterfalls in them, rather than merely placing potted plants.
- 6- Converting hotel concrete rooftops into roof gardens and using them for recreational activities such as sitting, sunbathing, swimming, a cafeteria, and an open restaurant.
- 7- It is necessary to convert the open parking lots into multi-story underground parking lots, convert their surface into gardens, and improve the hotel's green space.

#### **G- Proposed Designs (Suggested Designs):**

Several garden designs were proposed for each of the three hotels (Grand Millenium, Titanic, and High Crest), including designs for interior and exterior gardens, wall gardens (Fig. 19 and 21), and roof garden designs (Fig. 20).

Designs have also been developed for the open parking lots to transform them into multi-story underground parking lots, making use of their roofs into gardens (Figures 22 and 23), and improving the hotel's green space.

Depending on the site area and taking into account the desires and needs of hotel guests and environmental factors, the most important aspects to consider in the design process are the following:

1. Survey the site and determine the dimensions.
2. The location and its surroundings.
3. Determine the natural and physical components of the site.
4. Choose plants according to the purpose of use and appropriate to the site environment.
5. Determine the irrigation water needs of the garden.
6. Testing the site's soil, and preparing an appropriate growing medium according to the needs and types of plants grown on the site.

#### **H - Explaining the proposed garden designs for parking:**

**- Titanic Hotel:** The parking lot is located on the side of the hotel, rectangular. Its area is 1,650 square meters (75 \* 22 m) (Fig. 16). The site was designed to become an open place for wedding celebrations, special and family events, and birthdays (Fig. 23), so the park contains a large area of lawns for seating, several trees for shade, flower beds, a solid space for holding parties, a long corridor connecting parts of the garden to the hotel, and a parking area under the garden.

**- High Crest Hotel:** The parking is located on the north side of the hotel in a triangular shape. Its area is 1240 square meters (75 \* 17 m) (Fig. 17). The site was designed to become an open space for wedding celebrations, special and family events, and birthdays (Fig. 23), so the garden contains a large area of lawns for seating, several trees for shade, flower beds, a solid space for holding parties, a path connecting parts of the garden to the hotel, and a parking area under the garden.

**-Grand Millenium Hotel:** The parking lot is located on the eastern side of the hotel in the shape of a crescent, with an area of 2940 square meters (105 \* 28 m) (Fig. 18). The site was



designed to become an open space for wedding celebrations, special and family events, birthdays, and night sittings (Fig. 23). The garden contains a large area of lawns for seating, several trees for

shade, flower beds, fountains, a solid space for holding parties, and a path connecting parts of the garden to the hotel. And a parking area at the bottom of the park.

**Table (5):** List of plants suitable to use in Sulaymaniyah hotel gardens

Plant Groups	Plant Scientific Names
Trees	<i>Cupressus arizomica</i> , <i>Brachychiton populneus</i> , <i>Magnolia grandiflora</i> , <i>Albizia julibrissin</i> , <i>Melia azaderach</i> , <i>Ligustrum japonica</i> , <i>Morus alba</i> , <i>Acer flamingo</i> , <i>Quercus spp.</i> , <i>Pinus eldarica</i> , <i>Ulmus spp.</i> , <i>Cupressocyparis leylandi</i> , <i>Cupressus arizonica</i> , <i>Washingtonia filifera</i> , <i>Acer negundo</i> , <i>Jacaranda mimosifolia</i> , <i>Prunus ceracifera</i> , <i>Callistemon sp.</i>
Shrubs	<i>Hedera helix</i> , <i>Vinca major</i> , <i>Juniperus skyrocket</i> , <i>Pitosporum tobira</i> , <i>Elaeagnus sp.</i> , <i>Rosmarinus aficinalis</i> , <i>Spiraea x vanhouttei</i> , <i>Photinia fraseri</i> , <i>Nandina domestica</i> , <i>Jasminum fruticans</i> , <i>Euonimus fortune</i> , <i>Rosa irani</i>
Flowers	<i>Buddleja alternifolia</i> , <i>Lavandula angustifolia</i> , <i>Rhyncospermum jasmenoidis</i> , <i>Althea spp</i>



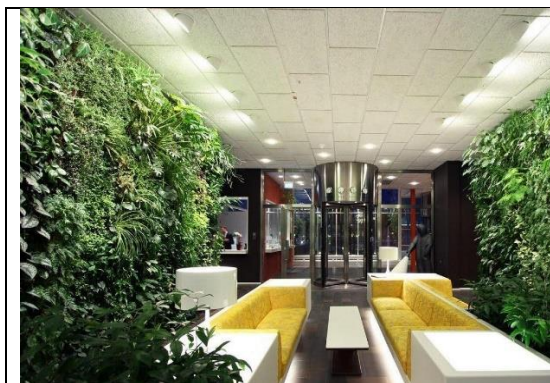
**Fig. 16:** Titanic Hotel Parking  
(Photo by author)



**Fig. 17:** High Crest Parking  
(Photo by author)



**Fig. 18:** Millenium Parking  
(Photo by author)



**Fig. 19:** A similar proposal for hotel interior wall gardens.

Source: <https://www.bing.com/images>



**Fig.20:** A similar proposal for rooftop gardens for hotels.

Source: <https://www.bing.com/images>



Fig.21: A similar proposal for hotel interior garden

Source: <https://www.bing.com/images>

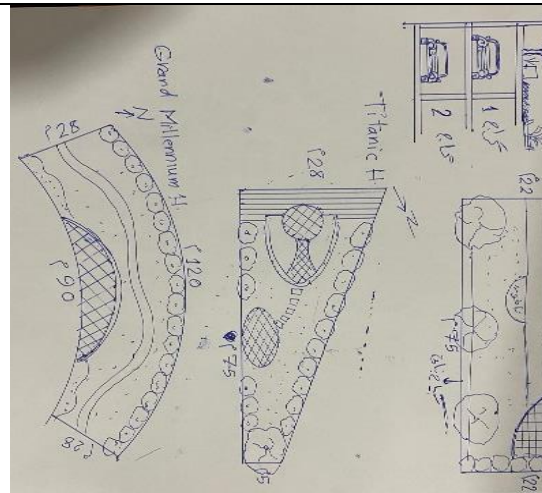


Fig. 22: The researcher's preliminary parking space designs drawing

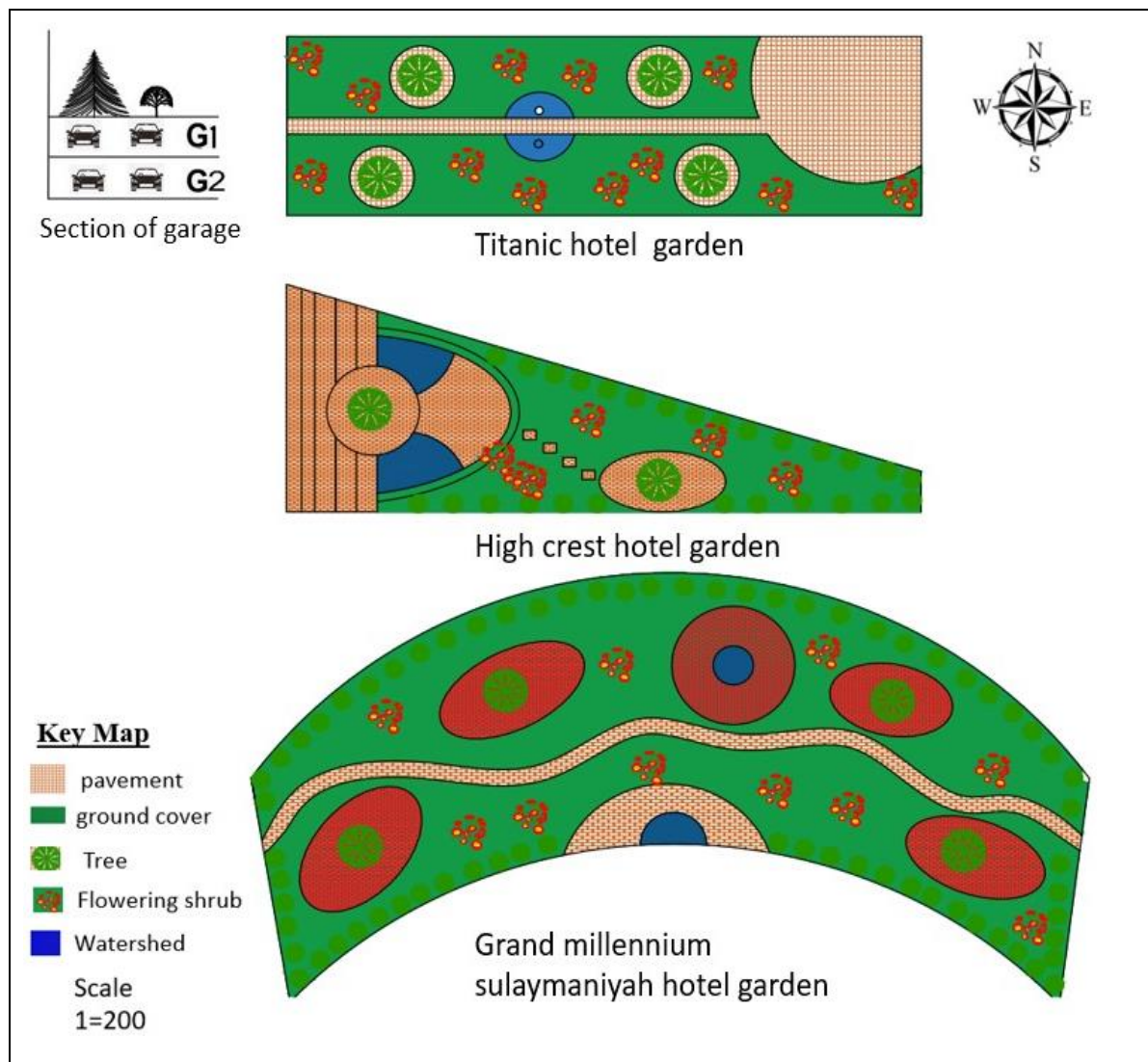


Fig. (23): Suggested designs for open parking to gardens - (Designed by Author)



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## Appendix 1 – Questionnaire

Tick the suitable answers or give the right phrases:

Q1/: Sex: ..... , Age: ..... , Stay period (days): .....

Q2/: Do you prefer to stay in a hotel that has various gardens? .....

Q3/: Would you rather stay at a hotel that has beautiful gardens again? .....

Q4/: Give your thoughts on recreational requirements during your stay in this hotel in the following table?

Description	Satisfied	Dissatisfied	Undecided
What kind of gardens do you prefer in hotels?	Outdoor gardens		
	Indoor gardens		
	Wall gardens		
	Roof gardens		
In what way would you like water to be used in gardens	Fountains		
	Waterfall		
	Swimming pool		
	Sitting and enjoying the views		
How would you like to use hotel gardens?	Walking		
	Reading		
	Playing sports		
	Fitness		
Do you prefer having these events inside the hotel gardens?	Sunbathes		
	A place for children to play		
	outdoor restaurant		
	A place for birthdays and weddings		
	Golf		
Do you prefer to place potted plants in the interior spaces, corridors and hotel rooms?	Aqua Park		

Q/5: Your opinion and advice about developing of hotel gardens, please write here?

دیمه نه سروشتیه کان له هۆتیله نایابه کانی شارى سلیمانی  
له سهر داخوازی میوانه کان وبارودوخه ژینگه ییبه کان

پوخته

ئهم تووژینه وهیه نه نجام دراوه له سێ هۆتیلی نایابی شارى سلیمانی : شارى جوان ( گراند میلینیوم ) ، تایتانیك وهایکریست ، له ماوهی نێوان 15 تهموزی 2022 بۆ 10 تهموزی 2023 دا بۆ لیکۆلینه وه له پراستی دیمه نه سروشتیه کان له هۆتیله نایابه نه دا له پرووی پرووهر و پیکهاته کانی و نهو چالاکیه گهشتیاریه نه که پیکهشه به میوانان دهکریت. داتا پیویسته کانی تووژینه وه که به چوار پێگه کۆکرانه وه : تپیینی کهسی ، شیکردنه وهی نهخشه و دیزاینه نه نذازیارییه کان ، گفتوگو کردن له گهڵ کارگیری هۆتیله کان وراپرسی میوانانی هۆتیله کان.

تووژینه وه که گهیشه چهند نه نجام ودهر نه نجامیک گرنگترینان : له ههر سێ هۆتیله که دا گرنگی زیاتر داوه به باخچهی چوونه ناوه وهی سه رهکی وگه راجی هۆتیله کان ، که متر گرنگی به باخچه کانی دراوه ، هۆکاری نه وهش ده گه رته وه بۆ گرانی نرخى زه ووی له ناو شاردا ، رووبه ریکی که م دیاریکراوه بۆ باخچه کان و زیاتر گرنگی به ته لاری هۆتیله کان دراوه ، له هه یج کام له و سێ هۆتیله دا باخچهی ناوه وه و دیوار و سه ربان بونیان نه بوو. له گه ل نه وه شدا که 99% به شداران دلنیایی ده دن له مانه وه له هۆتیلێکدا که باخچهی تیادابیت ، وه زیاتر له 90% میوانان هه ز به بوونی ناو ده که ن له باخچه کاند له سه ره شپوهی نافوره ووتا فگه و مه له وانگه دا، سه ره پای نه وهی که ژینگه ی شاره که کهش وهه وایه کی دژواره وجیاوازییه کی زۆر له پله کانی گه رمای هاوین (47 س ) و زستان ( 20- س ) دا هه یه که ده گاته 65 – 70 پله ی سه دی ، نه مه ش پیویستی به دیزاینی گونجاوی باخچه و نه و پرووه کانه هه یه که به رگه ی نه و که شه دژواره ی شار ده گرن.

له کۆتایی تووژینه وه که دا و پشت به ستن به نه نجام ودهر نه نجامه کانی گهیشه چهند خالکی پشینیار وئامۆزگاری بۆ باشکردن وپه ره پیدانی باخچه کان له هۆتیله کانی شارى سلیمانی دا، له گه ل چهند دیزاینیکی پشینیارکراو بۆ باخچه کانی ده ره وه و ناوه وهی هۆتیله کان و دیوار و سه ربانه کانیان ، زیاتر سه وزکردنی هۆتیله کان.

وهه کانی رینویینی کردن: باخچه کانی هۆتیل ، دیزاین وریکخستنی باخچه له هۆتیله کان ، هۆتیله نایابه کانی شارى سلیمانی ، شارى جوان ، تایتانیك و هایکریست هۆتیل.