The concept of Independent Houses between (Twin House & Town House)

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Abstract:

Townhouses and twin houses are types of detached family homes. It usually has three or more floors. A townhouse and twin houses are family types of urban houses with a strong connection to the public spaces. The townhouse and twin house are types of independent residential units with a small area compared to standalone villas. In addition, they are properties adjacent to the neighboring properties of the same category in one row, each with its entrance. Independent houses are a type of residential real estate which has been developed to meet the requirements of larger societal groups. Regarding urban planning, in recent years, this type of independent residential house has revitalized the traditional concept of multi-storey apartment buildings. The research focuses on the different types of homes, the difference between townhouses and twin houses, the differences between them, and the common characteristics between them, which will help a person determine the type which suits him while identifying the factors and affect the intention to buy a home by customers. Finally, the research concludes with the design characteristics of modern twin houses and townhouses as types of independent house designs.

1. Introduction

Living and feeling comfortable is the essence of choosing the home of our lives. People differ in their needs and requirements. Besides, they are different in choosing things and choices which make them feel calm and enjoy them, depending on their personalities. For this reason, it is necessary to pay attention when choosing and deciding on this home. [1] However, customers still have concerns about home purchases for many reasons. [2] Economic constraints, social and demographic changes, and environmental challenges have led to an increased interest in designing townhouses and twin houses as essential building elements in the design and construction of affordable and sustainable communities. In addition, significant changes in the demographic composition of the community contributed to the need for greater diversification in housing types. [3]

The research studies the design of single-family homes, a multi-family building, an adaptable structure, a temporary living experience, or a home of any model or scale such as twin houses, townhouses, and stand-alone villas. Designers may suggest how the resident interacts with the proposed living space by comparing twin houses and townhouses, considering the inherent benefits, drawbacks, and unique characteristics of each type of townhouse. [4] Townhouses and twin houses can be considered as a sustainable solution to some of the negative environmental impacts of urban sprawl.

Townhouses and twin houses are a similar option to single-family dwellings due to their private entrances and direct access to the backyard, while at the same time offering advantages as a result of increased density. [3] Townhouses and twin houses are urban high-rise houses with balconies and more living rooms. It usually has three or more floors. The height greatly exceeds the width of the house.

They are a type of urban family home with a strong connection to the public. Townhouses and Twin Houses are known as contemporary homes, offering city life and combining a place to live and work. The division of the house also affects the order of disposition within the independent house. It is a single urban form of residence with a single entrance from a public space and its own external space. According to the type of development, the research classifies townhouses and twin houses among the terraced homes. [5]

1. The term "**Townhouse**" is used to refer to homes which have small and "adjacent" gardens in a planned row. [6]
2. The "**Twin house**" is a different type of villa, in addition, it is shared by two residents, each of them has its entrance, as well as a garden on three sides and has a private gate, [7] in addition each of them has a neighbor only one. [6]

2. Challenges and problems

Contemporary environmental and economic factors make the construction of narrow front-end homes attractive. With affordability being a top concern for many homebuyers, choosing to purchase an independent home can provide the cost savings which they are looking for. With the dense planning pattern, the construction of independent houses

such as townhouses and twin houses results in a lower cost of services, and land and affordability are achieved. However, limitations on community planning do occur, specifically the challenges of movement pathways and the opening of space. The research presents strategies for maximizing efficiency and functionality in communities which use townhouses as their main design feature. Independent houses, such as townhouses, twin houses, and standalone villas, are suitable for environmentally friendly designs.

3. Objectives

The research aims to provide a comparison between townhouses, twin houses, and standalone villas, in addition, it aims to:

- Study the concepts of a twin house, a townhouse, and an independent villa, which is an independent unit, in addition, having a private garden, a private gate, and a fence surrounding it. The independent villa usually consists of two or three floors, as well as is inhabited by one family.
- Study the concepts and characteristics of living in an apartment compound or a separate property from townhouses, twin houses, and stand-alone villas are available.

4. A Framework for Research and Hypotheses

The research shows the interconnectedness and common characteristics of townhouses and townhouses. Townhouses are medium-sized and homogeneous housing units separated by a double wall. This system is followed in many countries in the United States of America, Australia, Europe, and Asia. In addition, it works to solve the problem of overcrowding in an effective and civilized manner.

Therefore, the research finds many places prefer to establish buildings, apartments, and villas in the same system as the townhouse, with all its advantages and sophistication, so which many people who want to excel and move to a high level should be required. Townhouses are one of the types of real estate which are distinguished by their residential space if compared to the villa.

While the villa is characterized by a relatively large size, it is two adjacent properties of the same category, with many similarities. This type of housing is one of the finest types of housing units which makes the residents feel distinguished and unconventional, as it is a group of houses similar in their interior and exterior designs, shared by a sidewall. The most important feature of these units in which they have a garden as well as a small space compared to the standalone villas.

5. Research Methods

Townhouses are a popular type of apartment housing which can be found all over the world and are often designed to meet the needs of small families. The twin house unit is distinguished from the types of villas in terms of its degree of independence, where the difference between the townhouse and the twin house is which the townhouse is connected from two sides to the neighboring units, as well as its area is often smaller. In addition, if we compare the twin house with the standalone villa, the latter differs, as they are completely independent and, in addition, are not linked on any of their four sides to any other housing unit. Therefore, these types of independent houses are very distinctive for families or friends who want to live close to each other while maintaining privacy.

6. Dwelling Evolution

In the typical phase of the first human settlements, more compound dwellings were developed. It consisted of different rooms grouped around a free inner space of different sizes, which was not covered, in addition, had different functions, representing the main area in the outer living room protected from outside interference. These are courtyard houses, in all their possible variations compared to the classical plan. This type of building would find its greatest expression during the classical Greek and Roman periods (Domus).

Later, many unified urban Domus groups, or groupings of similar as well as repetitive building types, were brought in and surrounded by roads, usually with right-angle intersections. They became whole apartment compounds, where the common distinguishing element was the confines of the inner garden.

In the following centuries, these types of housing in cities evolved to become more compact and agglomerated. In the modern concept, L, T, and U-shaped linear configurations have become coordinated configurations, which can be combined to create compounds of patio houses with rooms of different sizes and configurations. In this way, multiple solutions can be reached as a response to the needs of the urban community. [7]

7. The residential Compound

A residential compound is a group of real estate which is closed with a fence, as well as having security and guard gates, in addition to having all the services which we need as residents and recreational places. The type of services provided in the residential compounds varies depending on the price of real estate in the compound and the company executing the residential project. The services also differ due to the different types of real estate within the residential compound, which consist of apartments only and villa compounds only. In addition, there are compounds of mixed types of apartments as well as villas (the types of apartments and villas are different). [8]

The services of each compound may vary according to its size, design, and the diversity of units inside. [9] Integrated or mixed-use developments include many compounds, such as residential, commercial, recreational, etc. Some of the developments also include shopping malls, offices, parks, and more. [10] Residential compounds hold either commercial or residential ownership, depending on whether the developer can apply for residential ownership of the residential compounds.
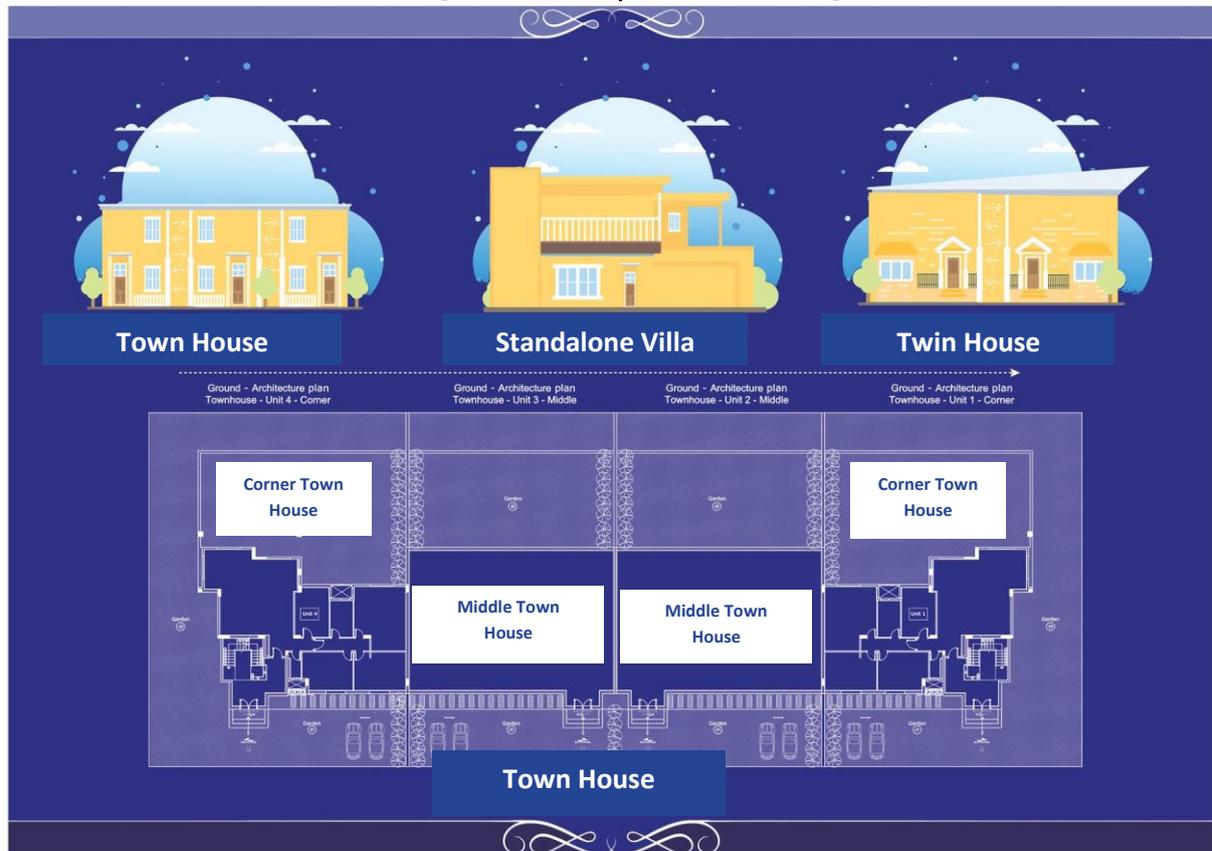

Figure 1. The difference between Townhouse, Twin house, and Standalone Villa.

8. Independent Houses

Independent houses are often two or three floors, attached to a garden or swimming pool, car parking, and service rooms. They are often located on the outskirts of the city, away from the city center, or near the seacoast. Their prices vary according to the space, the number of rooms and the view. There are independent villas, including twin villas, which are two adjoining villas with a garden. [11]

These types of buildings help provide the largest number of housing units with a global organization and reduce slums, in addition to the fact which the beneficiaries will have many options for buildings of the highest quality, as well as at very reasonable prices. [12] Gated community apartments are a group of homes which provide a high level of security for their residents. Outsiders, other than members of these families, are not permitted to enter these apartments. [13]

8.1 Types of Residential Units in the Compound (Villas)

1. The Independent Villa

Rowhouses are several houses in a row connected by common sidewalls. Utilities such as water, electricity, parking, and gardening are not required to be shared with neighbors. [13]

2. The Twin Villa

People who want to have a luxury lifestyle will find villa apartments special for them. It includes amenities like a swimming pool, a garden, etc. [13]

9. The Difference between a Townhouse, Twin house, and Standalone villa

The research focuses on the types of these units in detail so which the person can know their suitability to his needs, requirements, and budget [14] from the different types of homes, the difference between a townhouse and a twin house, which will help a person determine the type which suits him. The research will study the concepts and characteristics of living in an independent houses or a separate property from townhouses, twin houses, and stand-alone villas. [1]

1. Townhouse	2. Twin-house	3. Standalone Villa

Figure 2. Diagram of independent houses types.

Table 1. The comparison between Town House, Twin House, and Standalone Villa.		
1. Town House	**2. Twin House**	**3. Standalone Villa**
A. Features		
<u>**There are two types of townhouses:**</u> 1. <u>**The corner is similar to a twin house in several characteristics. It has three facades, two corners, and it has a neighbor on one side.**</u> 2. <u>**The middle one has a neighbor on each side. It has no forearms. It has only two fronts.**</u>	• The whole building is divided into two houses only (two families). • The house has only two corners (not four). • The house has only three fronts, not four. • It has some privacy with a private entrance and a garden from three directions. It has only one neighbor.	• The whole building is for one family (one building, one house). • There are no neighbors in the same building. • The building's corners are all independent (all corners). • It is not easy to find a wide variety of residential units in any compound. [15]
B. Concepts		
• The townhouse is a row of houses similar in design which share side walls (they have only one common wall with each neighbor). [18] • This concept is used to refer to adjacent houses in urban development or planned row. [17] • The townhouse, shared by two residents, and each of them has its entrance and garden on three sides, and it has a private gate. [8]	• It is a semi-contiguous villa, meaning which it is divided into two parts, each of which has its entrance, has a private gate, and has only one neighbor. [8] • Twin house (two houses sharing only one common wall), with each house having a separate owner. [6, 16] • Twin house is a villa which is almost connected, shared by two residents. [17]	• The villa is a separate building without any neighbors sharing the land on which it is built. [8] • It is a large independent unit with a private garden with a wall surrounding it with a separate entrance, in addition, it usually consists of two or three floors [16] with a private gate, a private garden, and a special fence on all sides. [15]
The common factor between the townhouse and the twin houses in which each of them does not have enough privacy and independence. [19]		

9.1 Town House
9.1.1 The History of the Townhouse
The word townhouse comes from England, as well as it was a stand-alone building in London. Then this type of housing unit was known in the United States of America, where it moved to, as well as was known as housing which shares a wall with another building, accommodates one family, and has two floors. It is lined in one row and similar in its facades. In addition, it spread in the United States until in 1940 it represented 7.6% of the total housing units there.

The old townhouse was the residence of nobles and wealthy people who wanted to live in the most luxurious buildings and real estate. They moved to the townhouse during meetings and events, which led them to these wonderful designs and distinctive buildings. [12] Economic and cultural conditions led the nobles to reside in townhouses, designed to imply social stratification. The high class sought to emulate the look and grandeur of the palace through its height and rich decoration. The townhouses evolved to be perceived only as home dwellings, as well as completely detached from connotations of mixed-use, portable medieval forms which facilitated the unification of the facades. [20]

It consists of two large windows and a front-façade entry door.
1. <u>**The ground floor**</u> was connected to the street by two steps, followed by an interior vestibule. <u>The salon</u> is located at the front of the ground floor. On the contrary medieval townhouses, the amalgamation of these mezzanines and halls separates the private interior from the public street. <u>The interface</u> acted as a threshold between the public and private spheres. Behind the lobby, the dining room overlooks the backyard. This was a convenient place to eat since the kitchen, cellar, and service rooms were usually located at ground level below them.
2. <u>**The second floor**</u> was called the "piano noble" or "noble floor" and contained formal reception rooms with high ceilings. The front salon is reserved for men, while the rear mansion is reserved for women.

3. **The third floor** was occupied by the bedrooms of the nobles, while the lower or upper floor was designated as a place for servants. The stairs have been given extra width to create the impression of a more luxurious place.

Townhouses are classified into several categories based on the width and height of the dwelling. Residents occupied different ranks depending on their social class. For instance, wealthy people usually lived in four-story high-rise homes with high vaults, while artisans and working-class families had three stories above a sunken basement. The differences in height were visible from the outside and dictated the social status of the population. From the late seventeenth century to the early nineteenth century, narrow-fronted American homes were associated with their style with both English and Dutch roots. However, there was a much faster pace of change in architectural design, which continued into the following era for the further development of floor plans and facades for townhouses. [20]

For as long as there have been cities, there have been homes. However, the modern study of the townhouse as a distinct architectural type has focused largely on the relatively recent past, from the mid-17th century to the mid-19th century. In this era, the independent townhouse sometimes referred to as the row house, and sometimes as the tiered house, became ubiquitous. "Townhouse" is used here to refer to the wide range of dwellings found in cities, while "row house" is a particular subset of apartment houses which share walls with their neighbors, usually in rows of three or more at a time. [21] Now, in the modern sense, we define the townhouse as a separate family house which shares one or more walls with other housing units, although it has its borders, private garden, and independent entrance. [22]
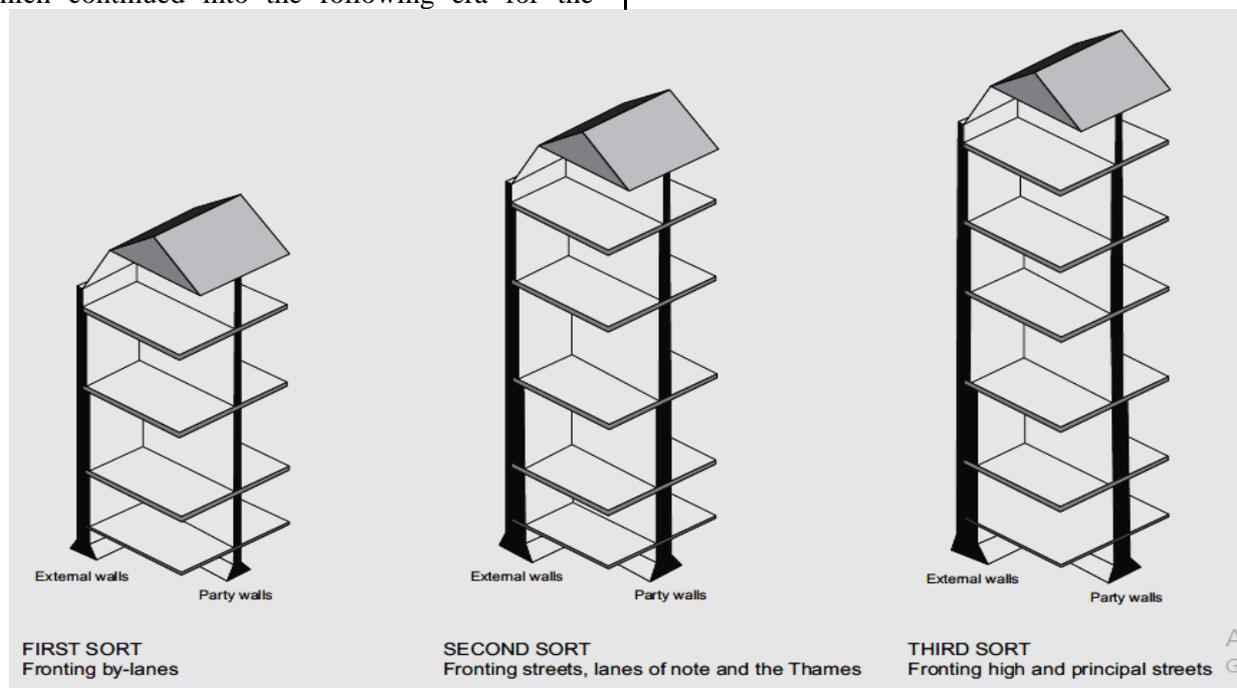

Figure 3. Three of the four housing types were introduced after London's Great Fire of 1666. **[20]**

9.1.2 Establishing Characters of Townhouses

The basic industrial revolution initiated rapid economic, social, and cultural transformations. As a technology, machine-based manufacturing has overtaken rural agricultural production as an economic driver. The emergence of new industries and the availability of jobs in major cities throughout Europe and North America attracted millions of people from rural areas to urban centers. Sharp housing demands have led to an increase in urban home construction. In addition, urban densities have reached unprecedented levels as a result. While the wealthy continued to live in palatial housing, working-class families resided in cramped, substandard conditions. The high demand for housing in the eighteenth and nineteenth centuries resulted in the construction of townhouses. The modest homes followed the pattern of two stories above a high basement. Inside, the lower floor contains the kitchen and dining room, while the main floor contains the two salon rooms and bedrooms which were located above. In the 1820s, a row house was usually wider than two rooms deeper to have adequate sunlight. Therefore, a house was more suitable for the human scale. The emergence of townhouses in America became the definition of the image which represented the ordinary way of life. The evolution of these houses relates to political changes and

shifts in cultural influence. [20]

9.1.3 Townhouses concept

A townhouse is a row of identical or similar pictured houses which share side walls (except for end units which have only one common wall). [23] The townhouse consists of two homes in one, where the two units are either stacked on top of each other or attached side by side. Although it looks like a home from the outside. [10] One of the most distinguishing features of townhouse villas is which they give their residents a sense of belonging to a close community, as well as can contribute to weaving closer social relations since the units are linked from the sides, unlike the independent villas which cover larger areas as well as greater distances between each other. For those who want independence and privacy, this may not be the best option for them. [14] They share the entrance, as well as each property often has a garden in front of it. In addition, each of the two properties is somewhat open to the other property. This contributes to the formation of social ties and relations between the residents of the two properties, although this option may not be suitable for those who wish to enjoy privacy as well as those who do not want this type of communication with others. [19] The townhouse units are characterized by the fact which they have a small garden in front of each unit. In addition, the houses connected from the side are similar in the design of the front façade. The townhouse units are often located within modern residential compounds which have community, commercial, and recreational facilities to meet all the demands of residents and families, which are among the most. Those who are willing to buy such homes, given the availability of more than one floor, give their residents a larger number of living spaces, a wider area, and also the convenience of living in semi-independent homes of this type compared to apartments in which the residents share doors, elevators, the reception hall, and other parts which fall under the joint ownership. [24]

9.1.4 Definition of Townhouse

▪ One of the most distinguishing features of townhouse villas is which they give their residents a sense of belonging to a close community and can contribute to weaving closer social relations since the units are linked from the sides, unlike the independent villas which cover larger areas and separate greater distances between each other, although others are willing to consider which independence and privacy may not be the best option for them. [25] Townhouses usually meet the specific housing needs of families who wish to have the same amenities as an independent home although with

lower construction and maintenance costs than a single-family villa. [26]

▪ In addition, the townhouse is a type of housing unit with a small area compared to standalone villas, and it is adjacent to the property next to it of the same category in one row. Each of them has its entrance, where the number of these attached houses does not exceed three houses. The real estate units are distinguished from the townhouse type which has a small garden in front of each unit. In addition, there is a great similarity between those three neighboring houses. [7]

▪ Townhouses range from two to five stories, built on long and narrow floors. [27]

▪ Townhouses are contiguous single-family buildings, built alongside identical dwellings.

▪ Townhouses are usually on two levels and equipped with two gardens. Construction depth (between 8 and 12 m) is generally considered greater than the width of the facade (between 5 and 7 m).

▪ Townhouses can be aligned to form tall, rectangular, or contiguous buildings, thus creating highly visible and variable settlement types.

9.1.5 General Characteristics of Townhouses

▪ The townhouse is one of the most popular types of housing units which have been developed in Egyptian society. In addition, it is a modern style considering the high real estate prices as well as the scarcity of land available for construction. The townhouse units provide the maximum benefit from the built space compared to the standalone villas. [22]

▪ Townhouses can be built in the form of a section for neighborhoods with a straight line or curved street grids, each with its unique advantages. Combining both configurations can increase the size of feature files. However, the straight style is best suited for a townhouse. Thin rectangular groups fit in nicely with the perpendicular grille, easily integrated into the grille to provide rear access to the units while also accommodating the townhouse. [3]

▪ Single-family dwellings are built as unconsolidated units, resembling detached or semi-detached homes, with two common perimeter walls, as well as one or two free facades for independent access, lighting, and ventilation. [26]

▪ Houses with patios or with gardens belong to the category of single-family houses which have recently been re-evaluated, especially as an alternative to detached single-family houses, due to the possibility of creating compounds with a higher density, with full respect for privacy.

▪ The townhouse usually consists of two-storey homes for one family grouped in rows, each with a garden at the back, a feature found in

many rational neighborhoods. [7]

- Accommodations, which are usually not very large, are standardized and sized for optimal performance concerning the needs of the family unit.
- Townhouses also include limited design options, as this type of housing is flexible in height, width, and depth. In addition, townhouses are usually built on two or more levels to meet customer requirements in terms of size.
- The design of classic spaces-the living area on the ground floor and the sleeping area on the upper floor differs in modern designs, with the use of different heights or balanced floors. [26]

9.1.6 The specifications of Townhouses

The townhouse has several specifications which differ from one housing unit to another: [22]

- Townhouse space starts at 200 and may reach 400 square meters or more.
- It consists of two or more floors.
- It includes at least 3 or 4 rooms, including a master bedroom, and 2 or more bathrooms.
- There are some common facilities such as gyms, swimming pools, and barbecue areas.
- The residential unit overlooks vast green gardens.

There are some of the most features in townhouses:

1. Open spaces	2. Private space	3. Public space

Figure 4. Diagram of townhouses features.

1. Open spaces

Open spaces are generally viewed as essential to the quality of life of each resident and the community. When housing density increases, as with townhouses, so do the functions and psychological significance of the outdoor areas. They cannot be treated as mere residual spaces, as they must be designed to enhance a sense of identity and unity while preserving the overall. The outdoor areas provide fresh air and let in sunlight. Moreover, they provide informal opportunities for interaction among the population, thus creating a healthy social network. The designer needs to decide whether green should divide the space between individual units, remain a public amenity, or be a combination of the two. A small family with children, for instance, might want a common open space with a playground. Conversely, an elderly couple may prefer a quiet private area to relax and entertain others. [3]

2. Private space

Townhouses usually have private outdoor spaces which can be used for a variety of purposes. These spaces can be divided into two categories: [3]

1. **Row areas,** such as front, back, and side yards, patios, balconies, and rooftop terraces.
2. **A private outdoor space,** at ground level, forms a direct relationship with both adjacent courtyards and open public spaces.

Upstairs balconies ensure more privacy, while complete seclusion can be enjoyed on the rooftop terraces. In each townhouse, each unit has an individual outdoor space. For instance, each unit needs to be furnished with a private area of no less than 10 m2.

There are two types of townhouses which do not require any private area. [3]

1. **The first is for units smaller than 65 m2.**
2. **The second exception includes dwellings which accommodate more than one family.**

3. Public space

- Public space is fundamental to promoting a sense of community identity and creating social opportunities for interaction. When personal space dwindles in a townhouse community, the common space takes on added importance, in addition to the visual and functional stimulation, it already provides. [3]

9.1.7 Types of Townhouses

Townhouse types vary according to the location of the unit from other units, as follows: [22]

1. Townhouse Middle	2. Townhouse Corner

Figure 5. Diagram of Townhouses Types.

- **Townhouse Middle**: It is a villa which is located in the middle, and it shares two common walls with two units on two sides.
- **Townhouse Corner**: It is the villa which is located on one side and shares a wall with one neighbor on the other side.

9.1.8 Advantages and disadvantages of Townhouses

1. Advantages of Townhouses

The townhouse has some features which differ according to the owner home, such as:

- Due to the limited dimensions of the site and the use of common installation systems (e.g., heating systems), construction and maintenance

costs are much lower than those of a classic single-family independent house. [7]

- It does not require much maintenance, as it is distinguished by its small garden which does not need extensive and continuous maintenance. [12]
- Housing in townhouses provides efficiency in living life in terms of detached houses and low cost.
- The existence of social ties among its residents may be a good thing, although some people who want independence may not find this a good thing. [19]
- This is a great choice for families or friends who want to live in one place.
- The purchase price of this type of unit is low compared to the cost of purchasing independent villas. [17]
- Housing inside it makes the residents feel calmer, away from any noise or hustle.
- The possibility of making any modifications to the unit according to the desire of the resident, given which he enjoys full ownership of the property.
- All units have a distinctive view of the green spaces and have a wonderful appearance.
- Full property ownership: Buying a townhouse is better than buying an apartment. [22]
- Living in a townhouse is an opportunity to live

in a successful, close-knit community, a living experience which involves more social contact and allows us to elevate.

- There is a social connection between residents. [25]

Disadvantages of Townhouses

- Townhouses have a much smaller garden compared to villas.
- There is no freedom of organization typical of villas because the floor plan of a townhouse has more limits, even when it is built on multiple levels.
- Townhouses are usually long and narrow, which leads to more difficulty in furnishing.
- Unless the apartment is facing outwards (first and last of the row), only two of the exterior walls will have windows, so the house will not be very light.
- The lifestyle is less private: living among the neighbors is a double-edged sword, which has several advantages but also has some disadvantages. Therefore, many people prefer to live in existing units on the outskirts of town, called "Town House Corner," where they can use sound insulation for walls and share walls with neighbors. [22]
- There is a lack of space, weak independence, and unifying the entrance. [14]
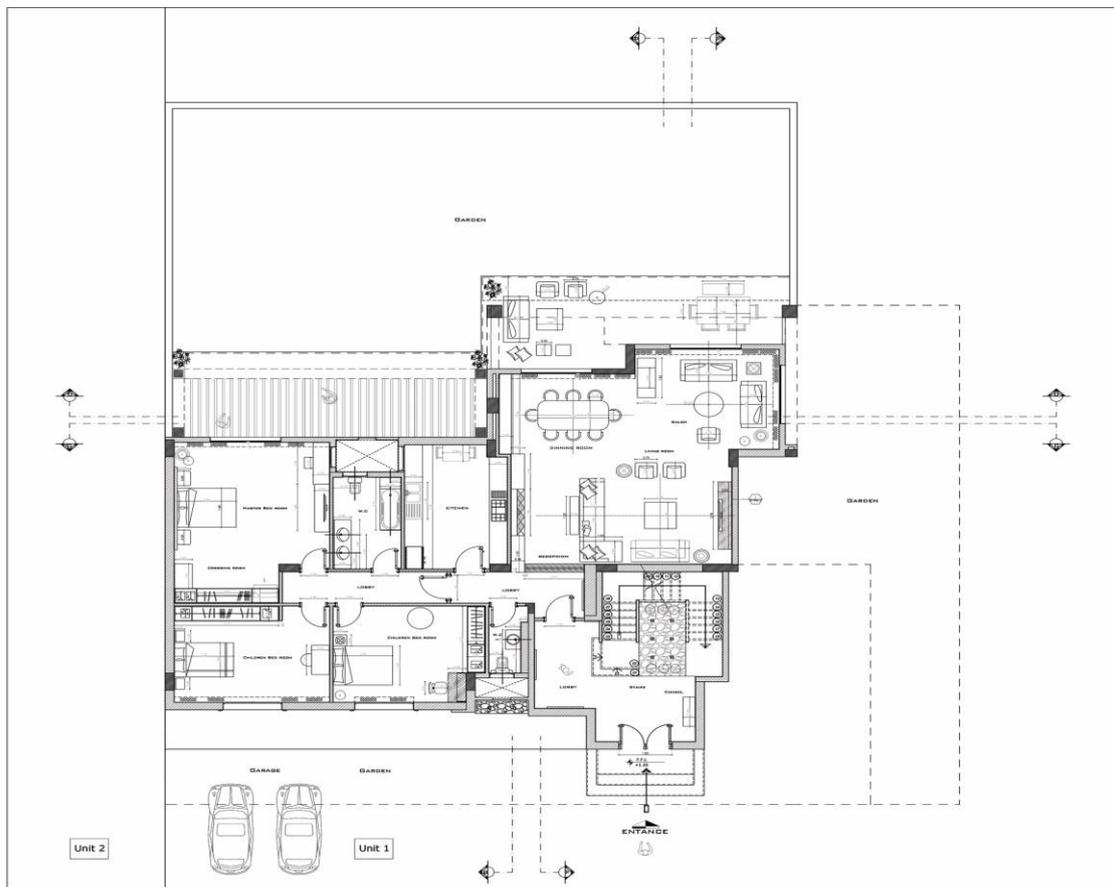
Ground - Furniture plan

Figure 6. Furniture Ground Floor Plan of Townhouse project. (source: Auther,2021).

Figure 7. Interior Design of Townhouse project. (source: Auther,2021).

Figure 8. Living room perspectives of Townhouse project. (source: Auther,2021).

9.2 Twin House

- The name was given to this type of residential real estate, a "Twin House," which can be translated literally as "a twin house." In addition, this indicates the presence of two similar houses or villas which are identical in exterior design, space, and interface. [24]
- A twin home is essentially two homes which share a common wall, with two separate owners and two yards. The property line runs down the center of the house. They can have different surfaces, as well as be of different colors and have different landscape designs. [10]
- In general, twin houses have a distinct layout consisting of two adjacent houses, each of which shares a common wall on one side only. In addition, each house has an independent entrance and a separate garden, as each of them has a single owner. [17]
- The twin house is an example of a two-family house, which is an apartment building. It comes from the union of two different units of one family. It represents an excellent alternative to the insulated single-family home for a series of functional and economic advantages. [28]
- A two-family home offers the advantage of granting independence and convenience like a single-family home, although at lower costs for land purchases and urbanization. Moreover, thanks to the potential combined use of technical systems (e.g., heating, external lighting, etc.) and maintenance, management

costs are lower than those of a typical single-family home. [28]
- A twin house, or what is called (a semi-detached house), is a two-family house. It is a type of building which usually combines two independent units for one family. It consists of two residential units, one private to the other, built on the same plot of land to increase density and improve land use.
- The two-family house has low dimensional characteristics compared to the average single-family house; its dwellings are generally of medium size. The distributional and functional characteristics are, the same: the structure can develop across one or more floors, with a common preference for this type of solution. [28]
- In addition, the stand-alone villa, which is two houses connected on one side, and each of them has a garden on three sides, has its entrance, whereas in the townhouses they share the entrance. Therefore, the twin houses allow their residents some independence. In addition, if we compare the twin house to the standalone villa, we find which the degree of independence in the standalone villa is much greater than the twin house as well as the townhouse. [25]
- The twin house differs from the townhouse with minor differences as it consists of two adjacent houses on one side, each surrounded by a garden on the other three sides. [19] Each of them has its entrance, unlike the townhouse, in which the two properties share the same

entrance. [26]

Figure 9. Furniture Ground and First Floor Plan of Twin House project. (source: Auther,2021).
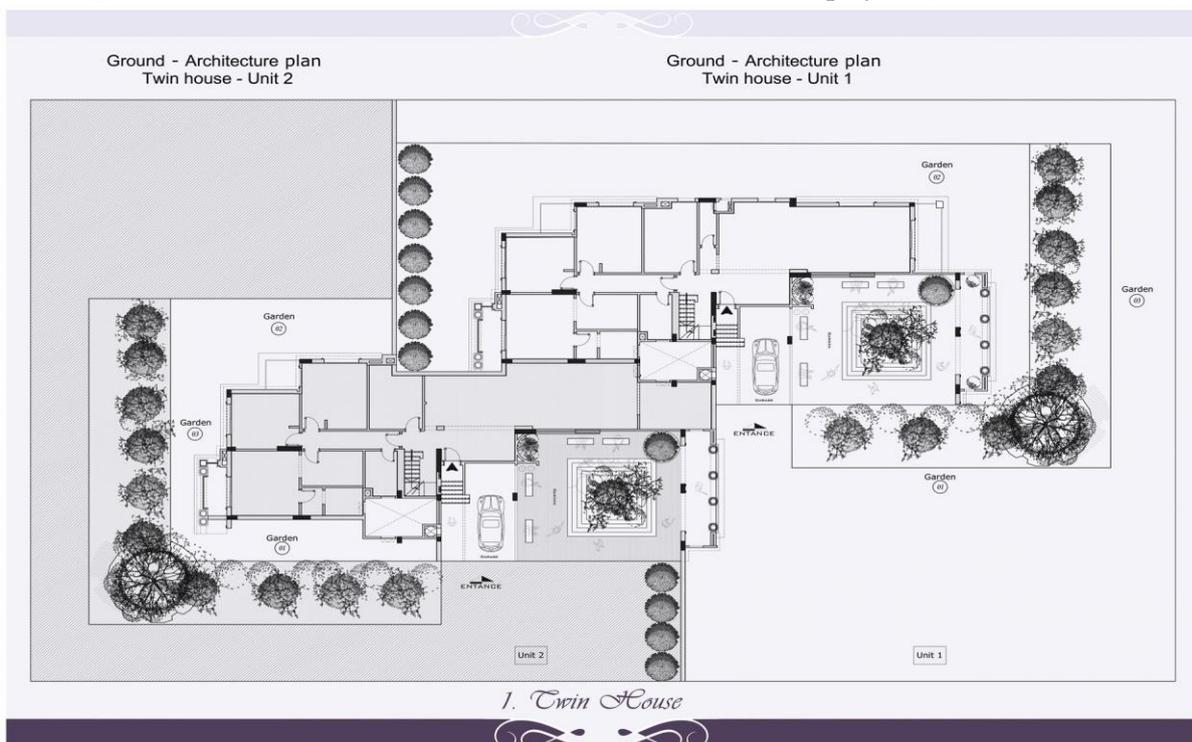

Figure 10. Site map Floor Plan of Twin House project which consists of two units of Twin Houses (Unit 1 and Unit 2). (source: Auther,2021).

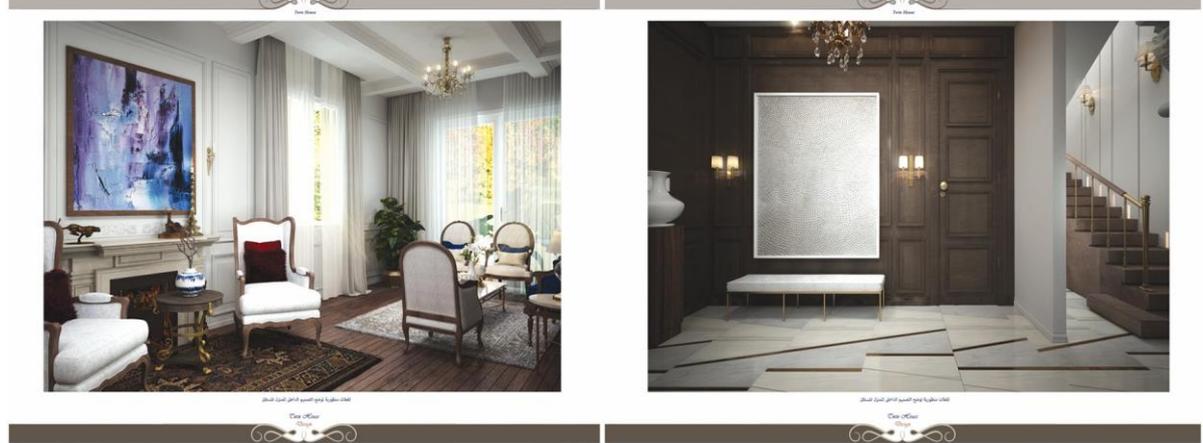**Figure 11.** Interior Design, Ground Floor of Twin House project. (source: Auther,2021).

Figure 12. Living room perspectives of Twin House project. (source: Auther,2021).

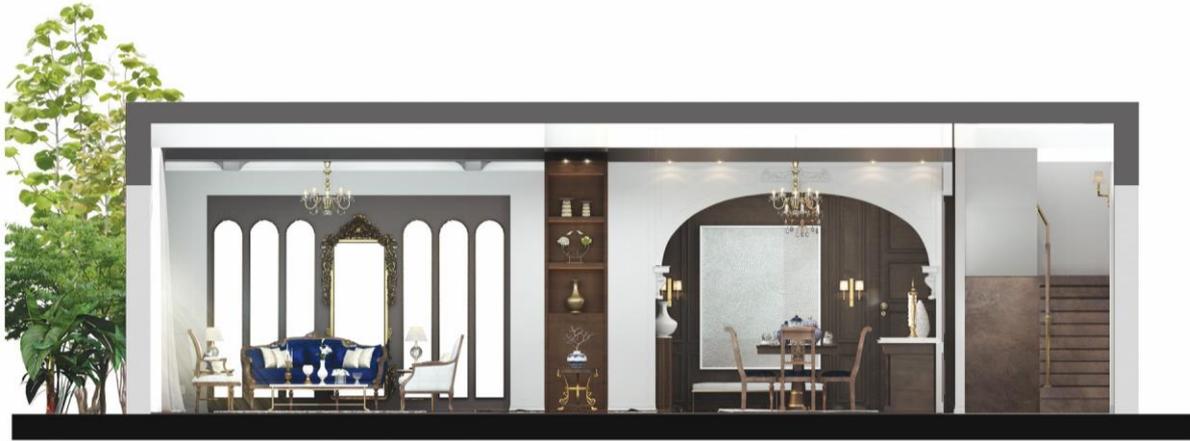**Figure 13.** Section (A-A), Ground Floor of Twin House project. (source: Auther,2021).

Figure 14. Section (B-B), Ground Floor of Twin House project. (source: Auther,2021).

Figure 15. Interior Design, Roof Floor of Twin House project. (source: Auther,2021).
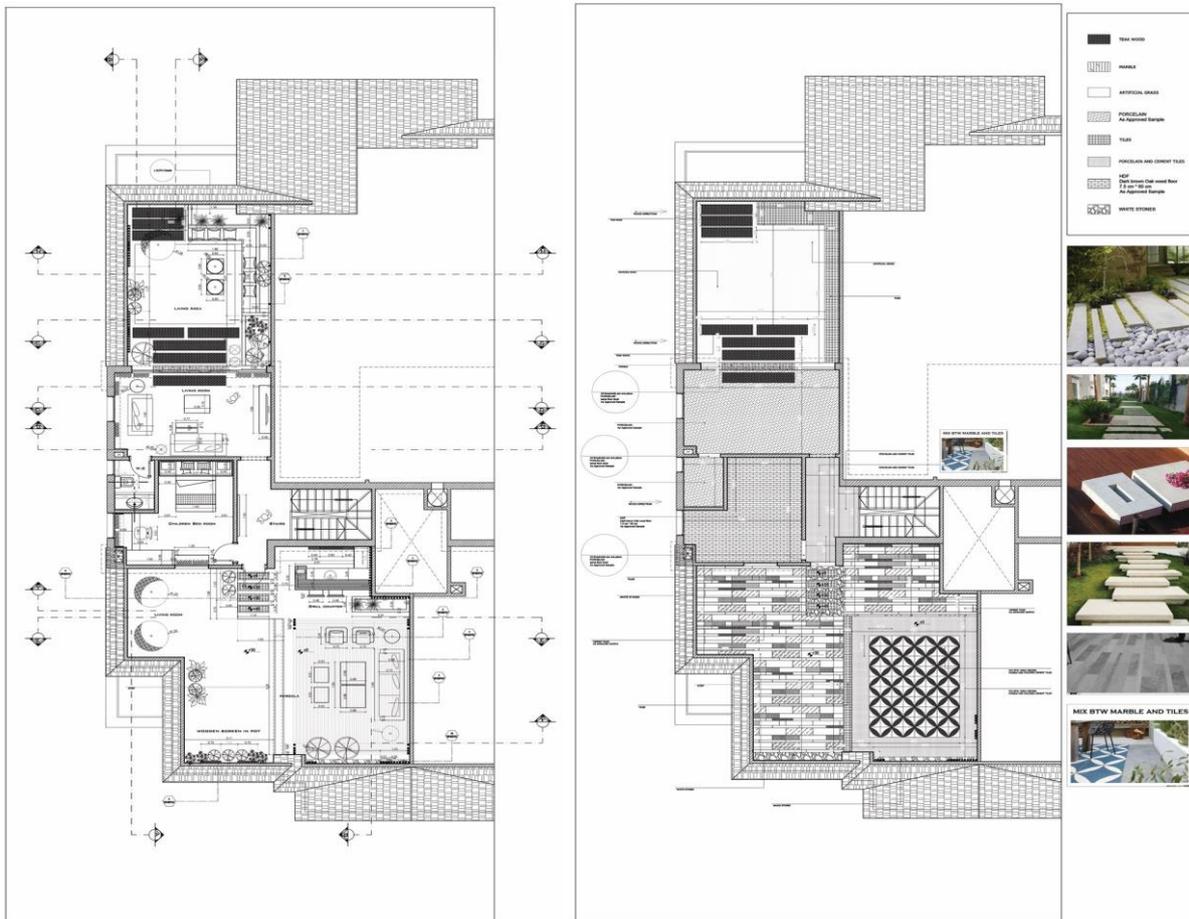

Figure 16. Furniture Ground and Flooring Plan, Roof Floor of Twin House project. (source: Auther,2021).

Figure 17. Section (A-A), Roof Floor of Twin House project. (source: Auther,2021).

Figure 18. Section (B-B), Roof Floor of Twin House project. (source: Auther,2021).
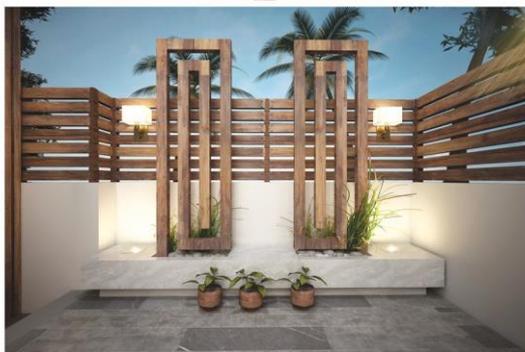

Figure 19. Pergola Area, Roof Floor of Twin House project. (source: Auther,2021).

Figure 20. Counter Area, Roof Floor of Twin House project. (source: Auther,2021).

9.3 Stand Alone Villa

▪ It is an independent unit with a private garden, a separate entrance, and a fence surrounding it. Independent villas are often classified among the luxury homes which give their owners more privacy, as some of them consist of one floor, two, three, or four floors. Individuals and families who are looking for more spacious living spaces and facilities should consider villas. These residential properties do not share any walls with other homes other than townhouses and twin houses.

▪ Standalone villas are a type of residential unit

which is characterized by an independent space with a private entrance and a private wall surrounding all sides. Independent villas are classified as the most luxurious real estate units in terms of luxury, privacy, and luxury, in addition to the large space which these units enjoy. The independent villas consist of two floors, or three to four floors as well.

- In the difference between the three types, the study can find one prominent difference, which is the possibility of independence and privacy. The most independent and private types are the independent villas, followed by the twin houses, and then the townhouses. [25] Residential villas are often located within luxury residential compounds which provide green spaces and various facilities in addition to the units. [14, 23]

10. Results and discussion

Home is our kingdom, where we can enjoy peace of mind and tranquility. For this reason, it is important to be careful when choosing it and provide it with all the necessary entertainment. The townhouse and the twin house are two different types of villas. A villa is a separate house with a private garden. In addition to what they have to offer, they will likely continue to be used by future designers. There are differences between a villa and a townhouse, on the one hand, as well as between a villa and a twin house, because the stand-alone residential villa is built on a separate plot of land which is perfectly divided to include an attractive building and a home garden. In addition, they are ideal housing for large families. There is one notable difference, which is the possibility of independence and privacy. The common factor between the townhouse and the twin houses in which they do not have enough privacy. Independent houses, such as townhouses, twin houses, and standalone villas, have remained suitable as environmentally friendly designs. Taking a small footprint and consuming fewer resources is perhaps more valuable today than ever before, which adds to the allure of this type of housing. Independent houses have gone through centuries of transformation. Finally, the research explored the most independent and private types, which are the townhouses, the twin houses, and the standalone villas.

11. Conclusion

The old townhouse was the residence of nobles and wealthy people who wanted to live in the most luxurious buildings and real estate. The evolution of these houses relates to political changes and shifts in cultural influence. The townhouse is one of the most popular types of housing units which have been developed in Egyptian society. In addition, it is a modern style considering the high real estate prices as well as the scarcity of land available for construction. The townhouse units provide the maximum benefit from the built space compared to the standalone villas. The research focuses on the types of independent houses in detail so the residents can know their suitability to their needs, requirements, and budget. The research also focuses on the difference between a townhouse and a twin house, which will help a person determine the type which suits him. In conclusion, the study encompassing the modern study of the townhouse as a distinct architectural type has focused largely on the relatively recent past, from the mid-17th century to the mid-19th century. In this era, the independent townhouse sometimes referred to as the row house, and sometimes as the tiered house, became ubiquitous. Finally, the study concluded in the features of the townhouse and twin house as separate family houses which share one or more walls with other housing units, although they have their borders, private garden, and independent entrance.

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