

ARCHITECTURAL THEORIES

Residential Buildings

Dr. Kamal Mahmoud Elgabalawy Dr. Rasha Mohammed Shaban

مادة تاريخ ونظريات العمارة (٢-ب)

الفرقة الثانية - الترم الثاني - ٢٠٢٠

كود المادة: ع ١٢٣٢

د.م/ كمال محمود الجبلاوي د.م/ رشا محمد شعبان

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كيفية الأسئلة:

١- أذكر أنواع المباني السكنية المختلفة من خلال الشرح والرسومات التوضيحية؟

٢- وضح من خلال الشرح والاستكشافات أنواع السكن من حيث التصميم ومكوناته؟



Building Types : أنواع المباني



Residential Buildings: المباني السكنية



Types Of Housing : أنواع السكن

• *By Land Ownership* من خلال ملكية الأرض
(Rent Property, Ownership) إيجار / تملك

• *By location* حسب الموقع
(countryside, cites)
بالمدينة الحضرية/ الريف

• *By height* من خلال الأرتفاع
(Multi-Storey Housing, Low-Rise Residential)
متعدد الطوابق / منخفض الأرتفاع

• *By Design* من خلال التصميم



Types Of Housing :

1. Bachelor Apartment:

شقة ستوديو متعددة الأستعمال

2. Junior Apartment

3. Condo

4. Duplex House , Apartment

5. Detached House

6. Semi-detached House

7. Townhouse



Types Of Housing :

1. Bachelor Apartment
2. Junior Apartment
شقة لزوجين مبتدئين
3. Condo
4. Duplex House , Apartment
5. Detached House
6. Semi-detached House
7. Townhouse



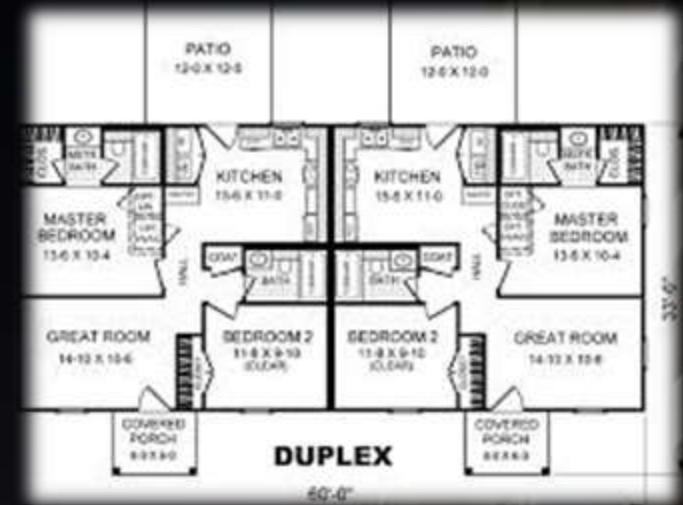
Types Of Housing :

- 1. Bachelor Apartment*
- 2. Junior Apartment*
- 3. Condo*
- شقة عائلية*
- 4. Duplex House , Apartment*
- 5. Detached House*
- 6. Semi-detached House*
- 7. Townhouse*



Types Of Housing :

1. Bachelor Apartment
 2. Junior Apartment
 3. Condo
 4. Duplex House , Apartment
- فيلا دورين بعمارة سكنية
5. Detached House
 6. Semi-detached House
 7. Townhouse



Types Of Housing :

- 1. Bachelor Apartment*
- 2. Junior Apartment*
- 3. Condo*
- 4. Duplex House , Apartment*
- 5. Detached House*
- 6. فيلات أو بيوت مستقلة*
- 7. Semi-detached House*
- 8. Townhouse*



Types Of Housing :

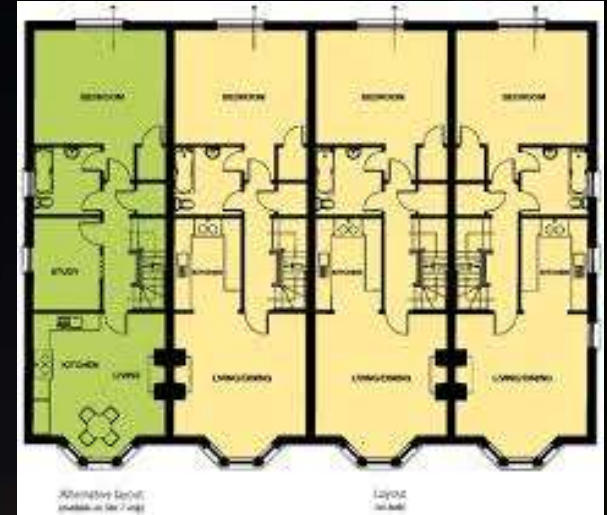
1. Bachelor Apartment
 2. Junior Apartment
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 4. Duplex House , Apartment
 5. Detached House
 6. Semi-detached House
 7. Townhouse
- فيلا أو بيوت شبه منفصلة



Types Of Housing :

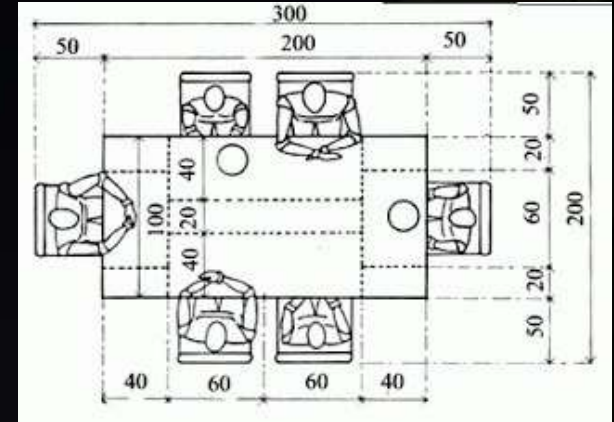
1. Bachelor Apartment
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فيلات أو بيوت متصلة

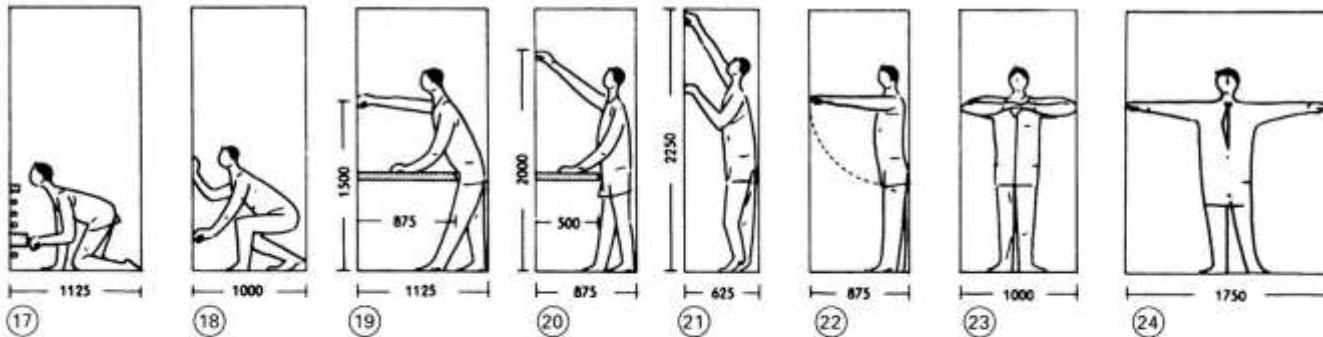


Residential Design Standards:

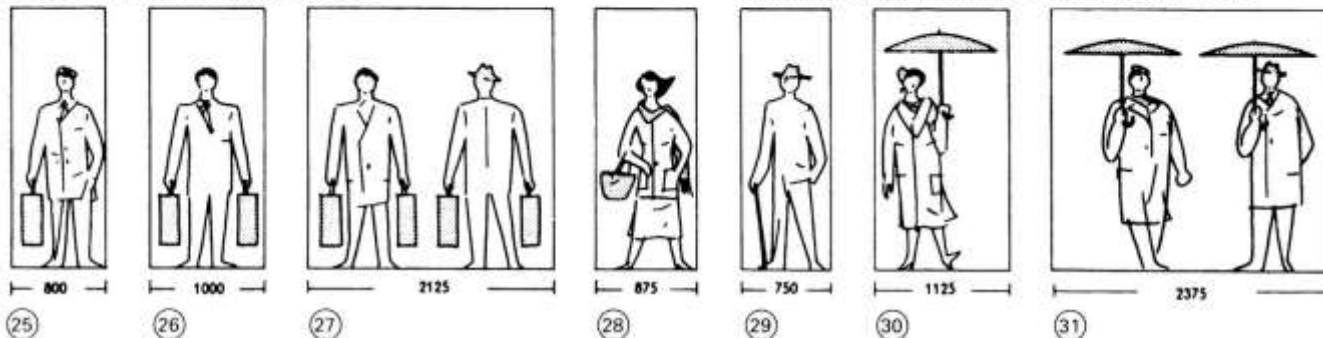
- *constructive program*
- *Functional relationships*
- *Solarisation*
- *Shadows*
- *Natural lighting, natural ventilation*



SPACE REQUIREMENTS OF VARIOUS BODY POSTURES

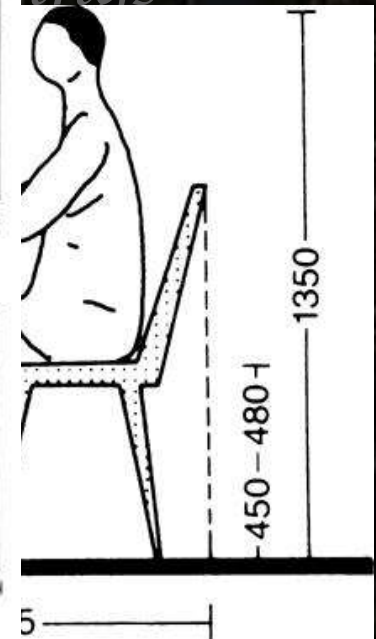


SPACE REQUIREMENTS WITH LUGGAGE



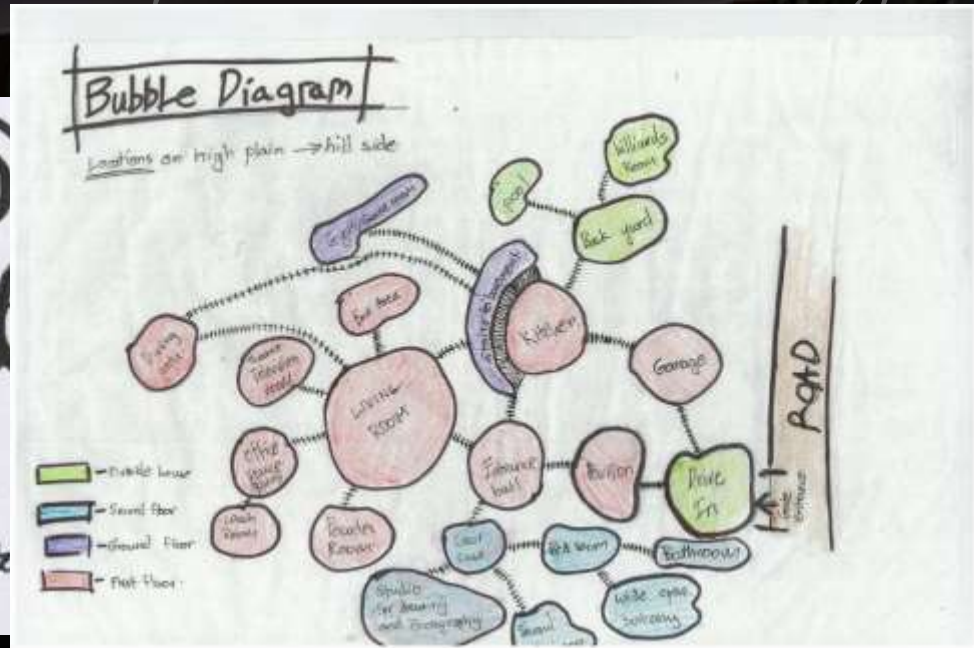
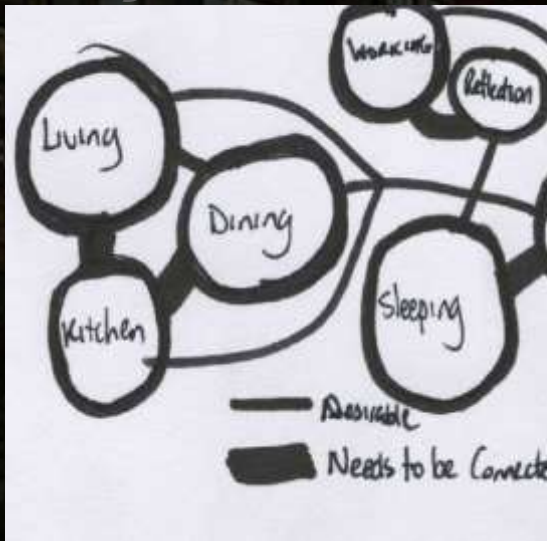
SPACE REQUIREMENTS WITH STICKS AND UMBRELLAS

ingas



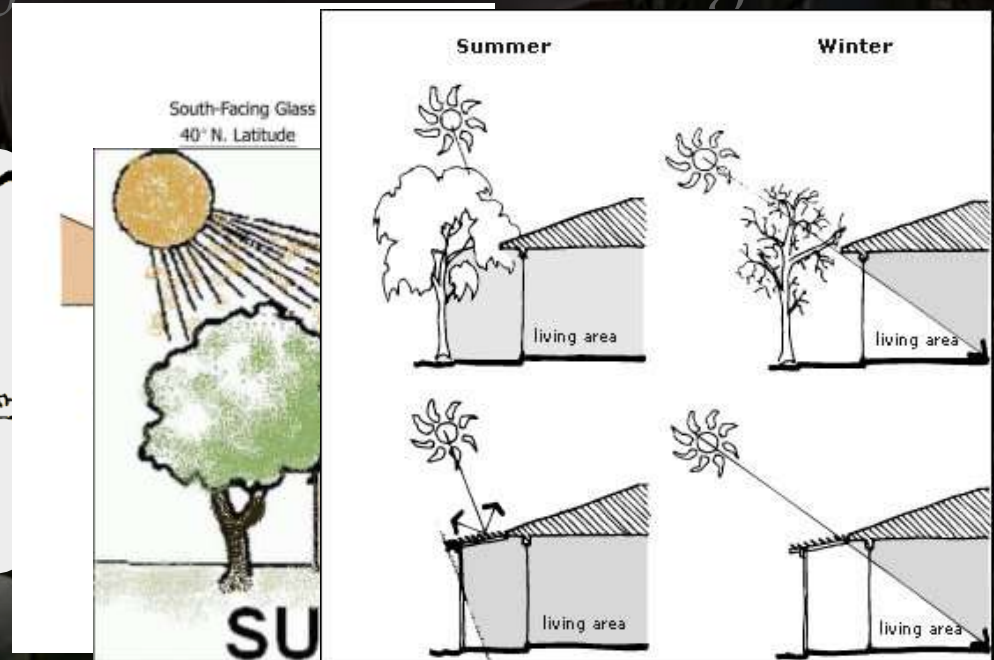
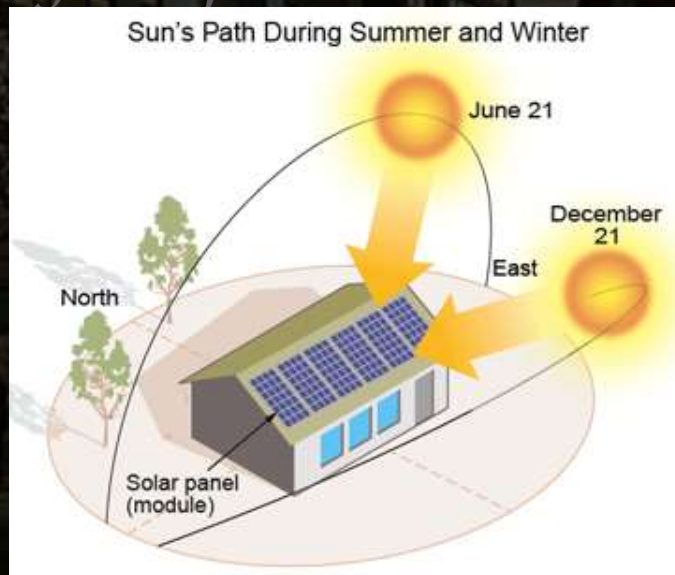
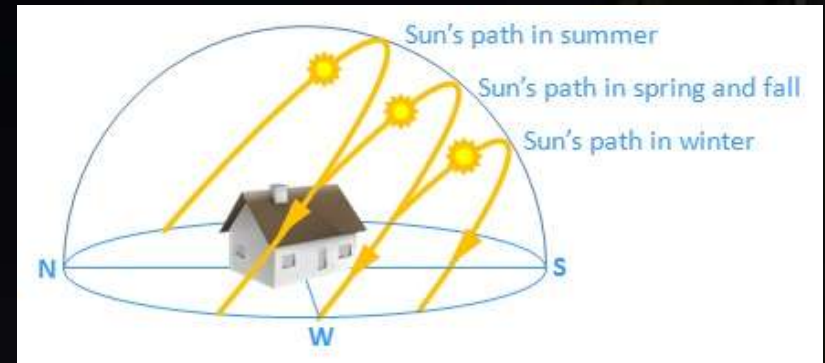
Residential Design Standards:

- constructive program
- Functional relationships
- Solarisation
- Shadows
- Natural lighting, natural ventilation
- Block out noise and acoustic insulation
- Thermal properties of the walls and ceilings
- Fire protection



Residential Design Standards:

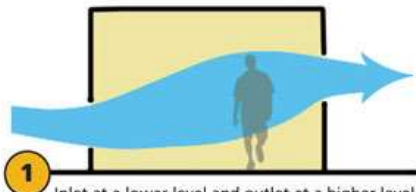
- *constructive program*
- *Functional relationships*
- *Solarisation*
- *Shadows*
- *Natural lighting, natural ventilation*
- *Block out noise and acoustic insulation*
- *Thermal properties of the walls and ceilings*
- *Fire protection*



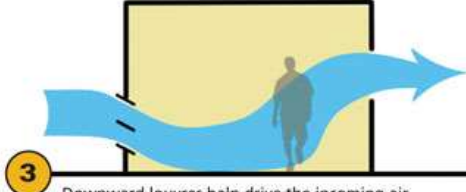
Residential Design Standards:

- *constructive program*
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- *Solarisation*
- *Shadows*
- *Natural lighting, natural ventilation*
- *Block out noise and acoustic insulation*
- *Thermal properties of the walls and ceilings*

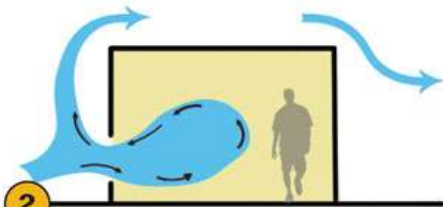
How ventilation works



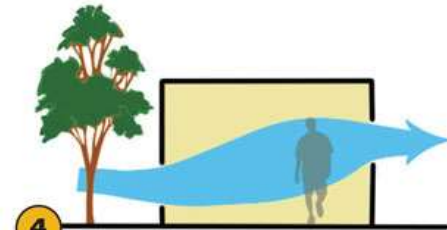
1 Inlet at a lower level and outlet at a higher level make an ideal combination for optimising cross ventilation



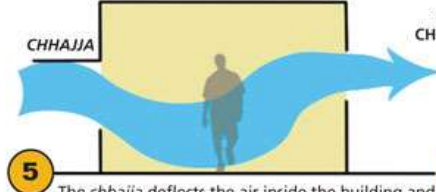
3 Downward louvres help drive the incoming air towards the floor, thereby providing circulation in a larger volume of the room



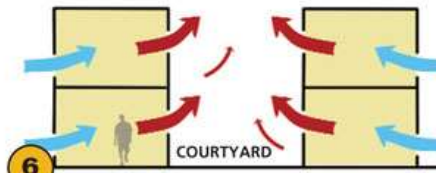
2 A room with no outlet will not have enough air circulating inside



4 Trees and other landscaping features should be suitably placed so as not to obstruct air flow

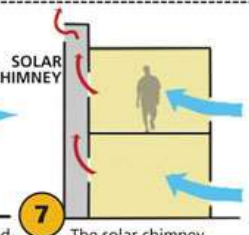


5 The *chhajja* deflects the air inside the building and uses the same principle as the downward louvres to enhance ventilation



6 A courtyard enhances air circulation through principle of stack effect (air movement driven by buoyancy). After the air passes through the interiors it heats up and starts rising. The courtyard allows this air to escape

summer sun

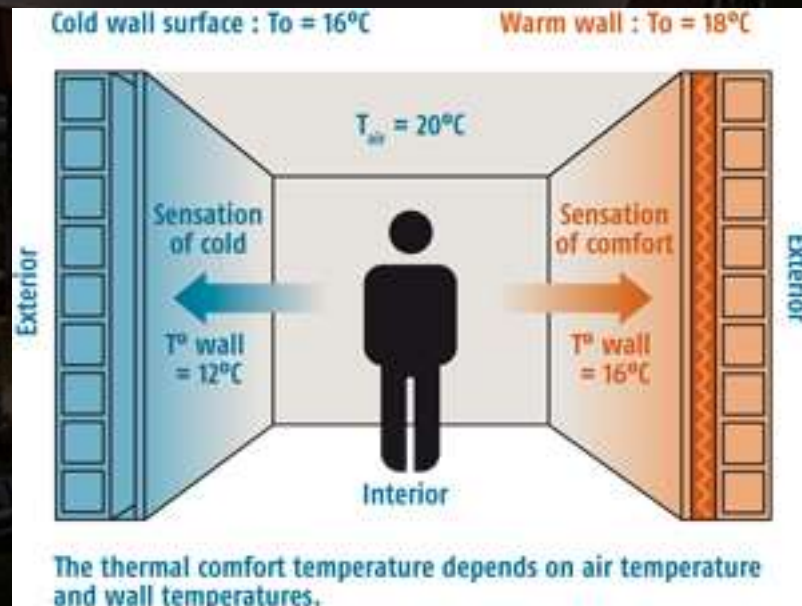
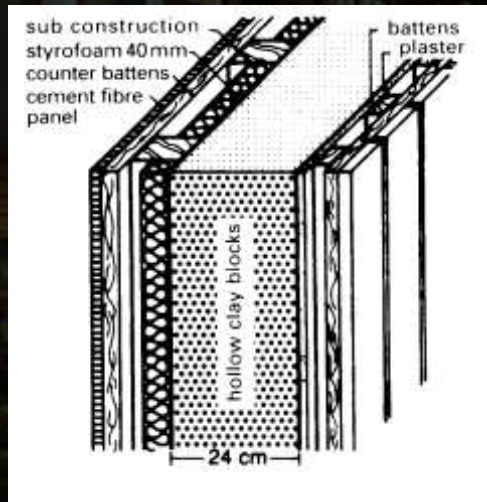


7 The solar chimney enhances the stack effect and sucks out the exhaust warm air from the rooms. Consequently, cool air from outside rushes in to take the place of the warm air, thereby increasing natural ventilation

→ Cold air
→ Hot air

Residential Design Standards:

- constructive program
- Functional relationships
- Solarisation
- Shadows
- Natural lighting, natural ventilation
- Block out noise and acoustic insulation
- Thermal properties of the walls and ceilings
- Fire protection



Components of residential buildings:

مكونات المباني السكنية

- *Entrances + Lobby* : بهو المدخل
- *Living Room* : معيشة
- *Reception Hall* : صالون
- *Bedrooms* : غرف النوم
- *Master bedroom* : غرفة نوم رئيسية
- *Children's room* : غرف نوم أطفال
- *Library* : مكتبة
- *Music Hall* : مكان للموسيقى
- *Bathrooms* : حمامات
- *Balcony* : بلكونات
- *Parking* : جراج
- *Gardens* : حدائق

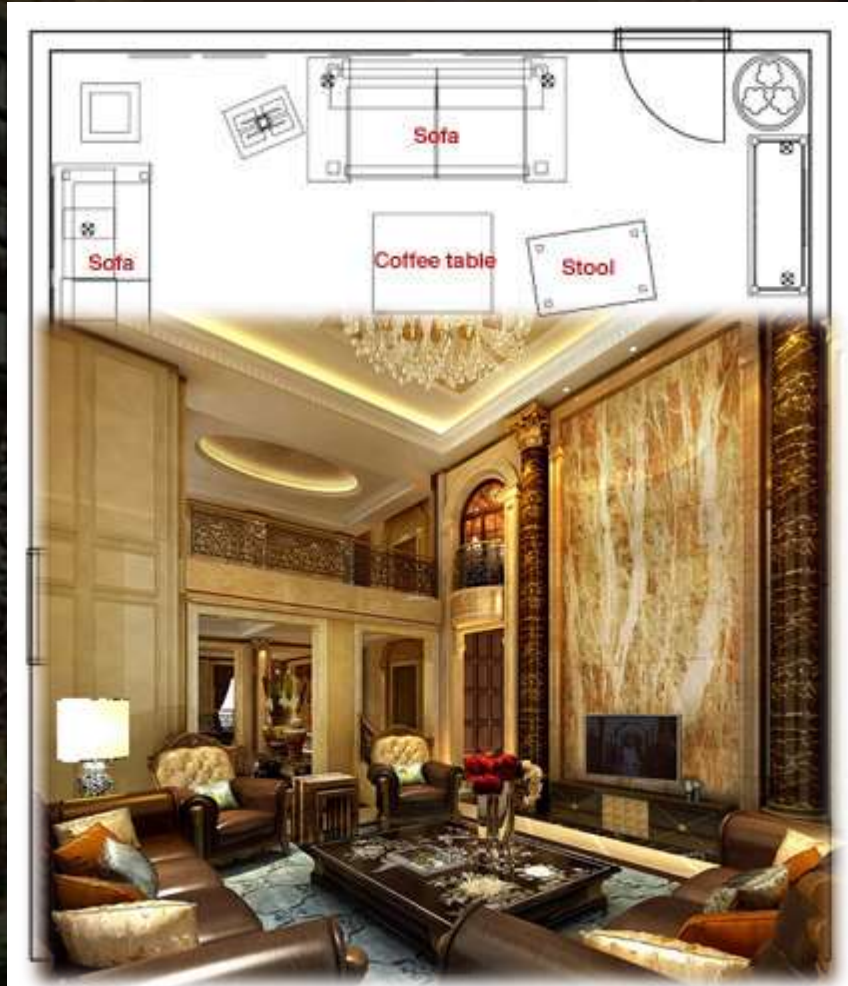
Components of residential buildings:

- *Entrances*



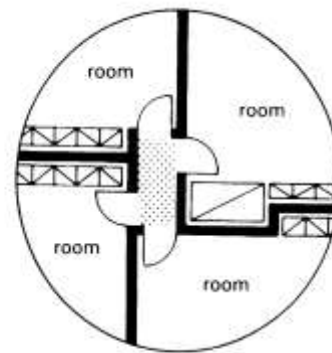
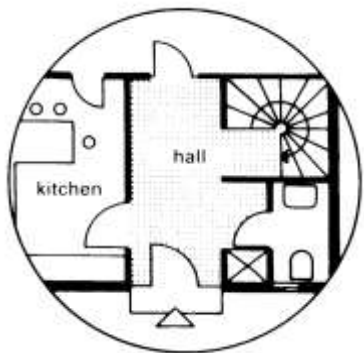
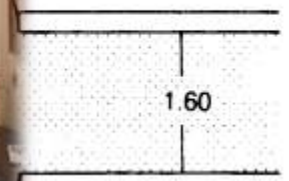
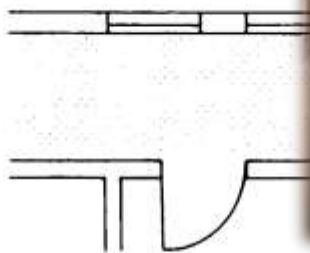
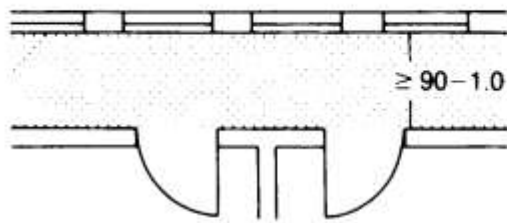
Components of residential buildings:

- *Living Room*



Components of residential buildings:

- *Contact Elements :*



Components of residential buildings:

- *Reception Hall*

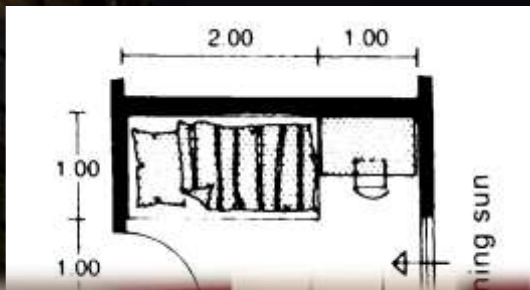


Components of residential buildings:



Components of residential buildings:

- *Children's room*



Components of residential buildings:

- *Library*



Components of residential buildings:

- *Music Hall*



Components of residential buildings:



Components of residential buildings:



Walking
between
hall and
entrance

Walking
between
hall and
entrance



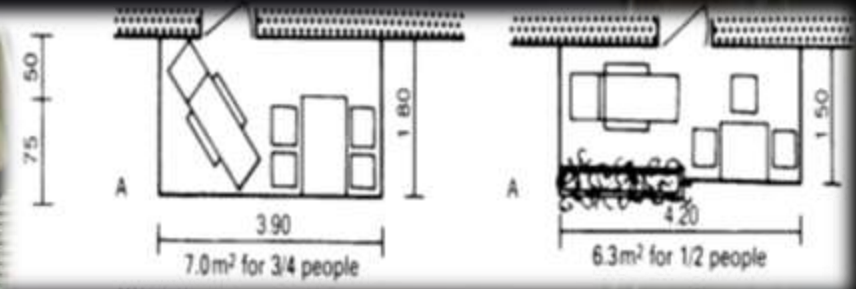
Components of residential buildings:

- ## Bathrooms



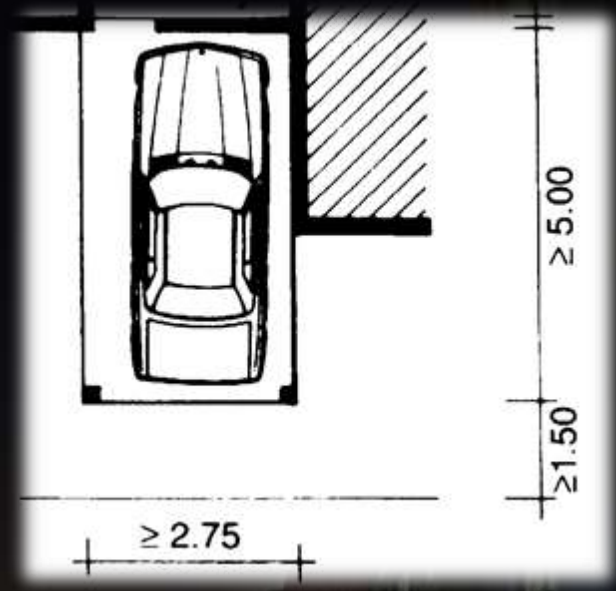
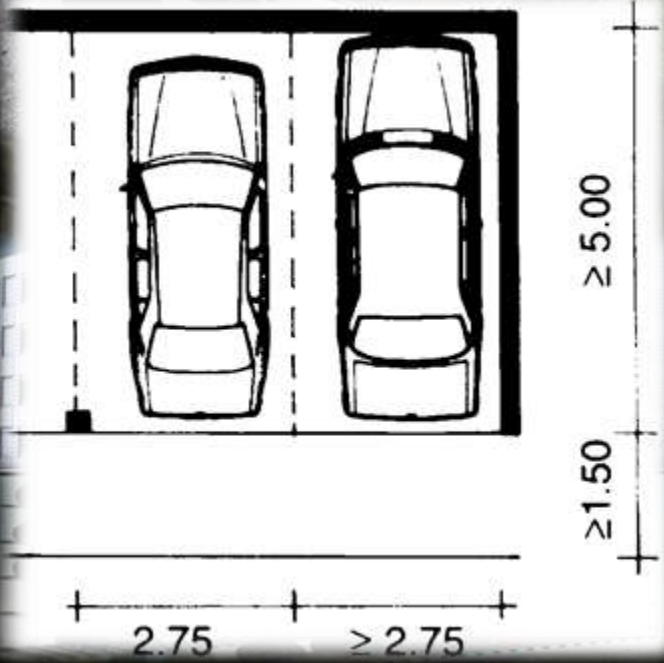
Components of residential buildings:

- *Balcony*



Components of residential buildings:

- *Garage*



Components of residential buildings:

- *Gardens*



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