TYPES OF WIRING

- The type of wiring to be selected for a particular place of use is based on several factors such as durability , mechanical protection , appearance , environmental condition etc. The various type of wiring in practice are as follows:

➢ Cleat wiring

➢ Wooden casing and capping wiring.

➢ Batten wiring

➢ Conduit wiring.

➢ Lead sheathed wiring.

TYPES OF WIRING

- There are additional types of conduit wiring according to Pipes installation (Where steel and PVC pipes are used for wiring connection and installation).

➢ Surface or open Conduit type

➢ Recessed or concealed or underground type Conduit

SURFACE OR OPEN CONDUIT TYPE

- If conduits installed on roof or wall, It is known as surface conduit wiring. in this wiring method, they make holes on the surface of wall on equal distances and conduit is installed then with the help of rowel plugs

Surface Conduit Wiring

CONCEALED CONDUIT TYPE

- If the conduits is hidden inside the wall slots with the help of plastering, it is called concealed conduit wiring. In other words, the electrical wiring system inside wall, roof or floor with the help of plastic or metallic piping is called concealed conduit wiring. Obviously, It is the most popular, beautiful, stronger and common electrical wiring system nowadays.

Concealed Conduit wiring

CONCEALED CONDUIT TYPE

- Following conduits are used in the conduit wiring systems

➢ Metallic Conduit

➢ Non-metallic conduit

METALIC CONDUIT WIRING

- Metallic conduits are made of steel which are very strong but costly as well.
- There are two types of metallic conduits.

➢ **Class A Conduit**: Low gauge conduit (Thin layer steel sheet conduit)

➢ **Class B Conduit**: High gauge conduit (Thick sheet of steel cor

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NON - METALIC CONDUIT WIRING

- A solid PVC conduit is used as non-metallic conduit now a days, which is flexible and easy to bend.

ADVANTAGES

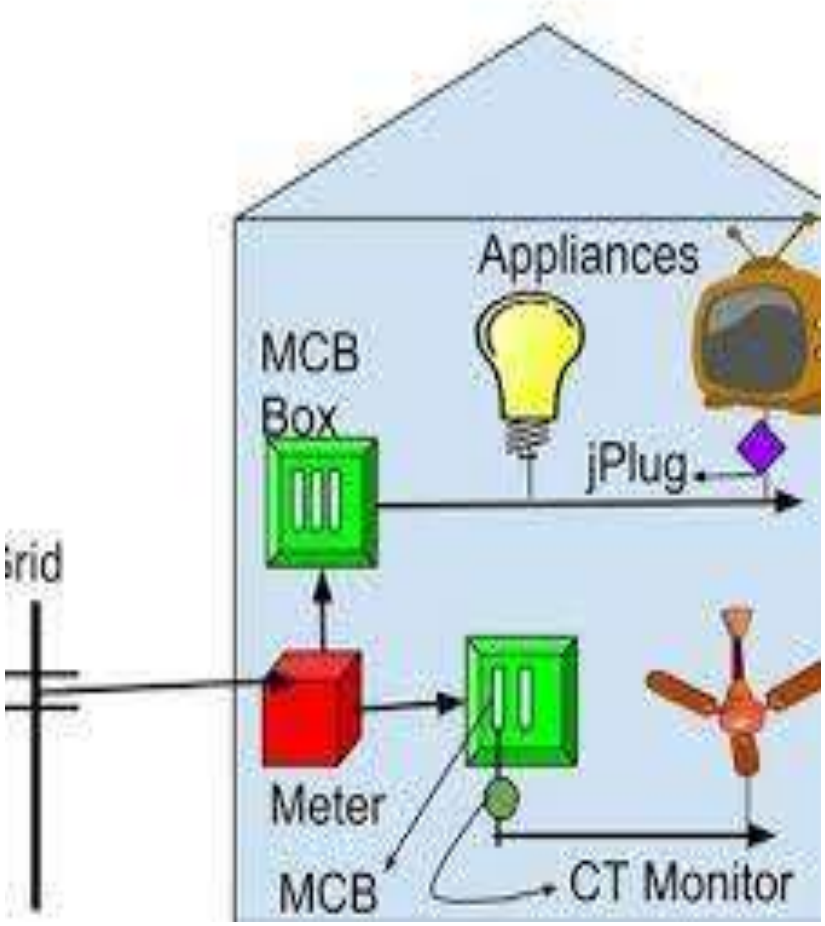
- It is the safest wiring system (Concealed conduit wring)
- Appearance is very beautiful (in case of concealed conduit wiring)
- No risk of mechanical wear & tear and fire in case of metallic pipes.
- Customization can be easily done according to the future needs.
- Repairing and maintenance is easy.
- There is no risk of damage the cables insulation
- It is safe from corrosion (in case of PVC conduit) and risk of fire.
- It can be used even in humidity , chemical effect and smoky areas.
- No risk of electric shock (In case of proper earthing and groundingof metallic pipes).
- It is reliable and popular wiring system.

DISADVANTAGES

- It is expensive wiring system (Due to PVC and Metallic pipes, Additional earthing for metallic pipes Tee(s) and elbows etc.
- Very hard to find the defects in the wiring.
- Installation is not easy and simple.
- Risk of Electric shock (In case of metallic pipes without proper earthing system)
- Very complicated to manage additional connection in the future.

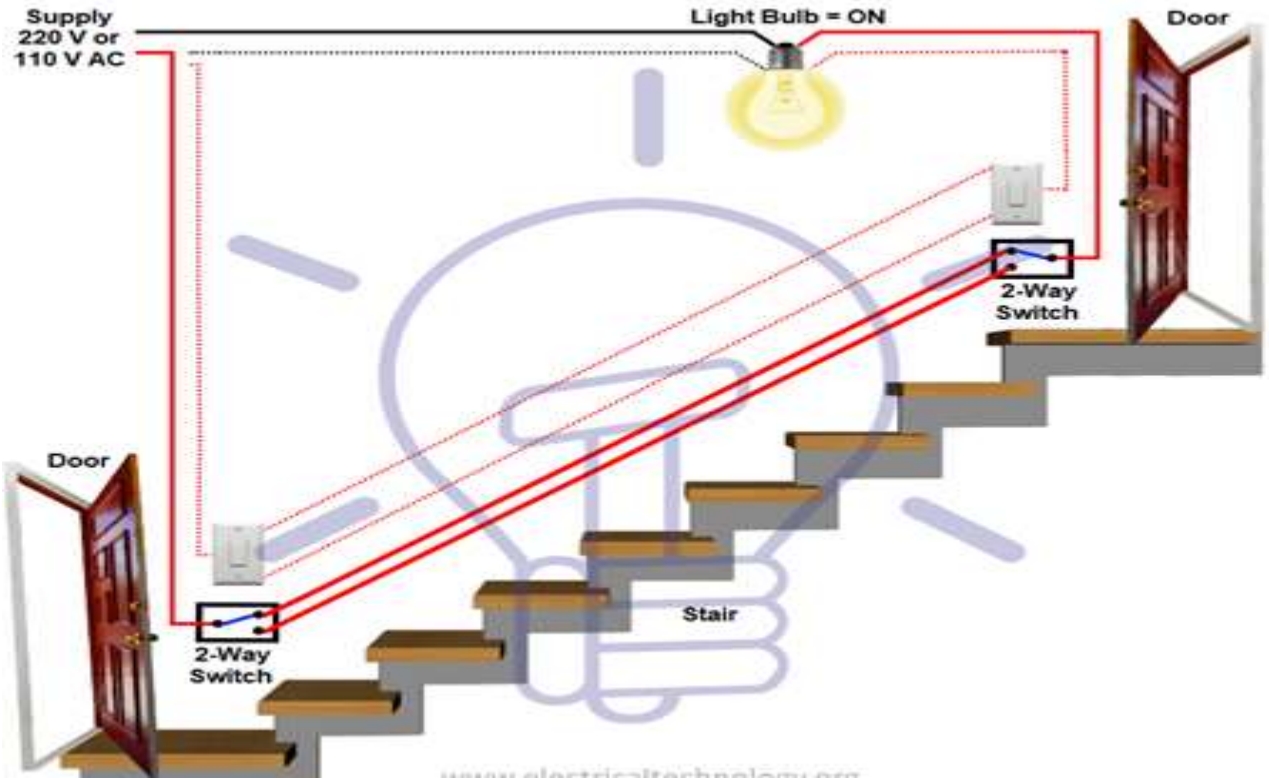
RESIDENTIAL WIRING

- Residential electrical wiring systems start with the utility's power lines and equipment that provide power to the home, known collectively as the service entrance.
- The power is run through an electric meter, which records how much energy is used in the home and is the basis for the monthly electric bill.



LAYOUT OF HOUSEHOLD WIRING

- **Staircase Wiring Circuit Diagram Connection**
- Here we can control a bulb from two different places by using two 2-way switches.



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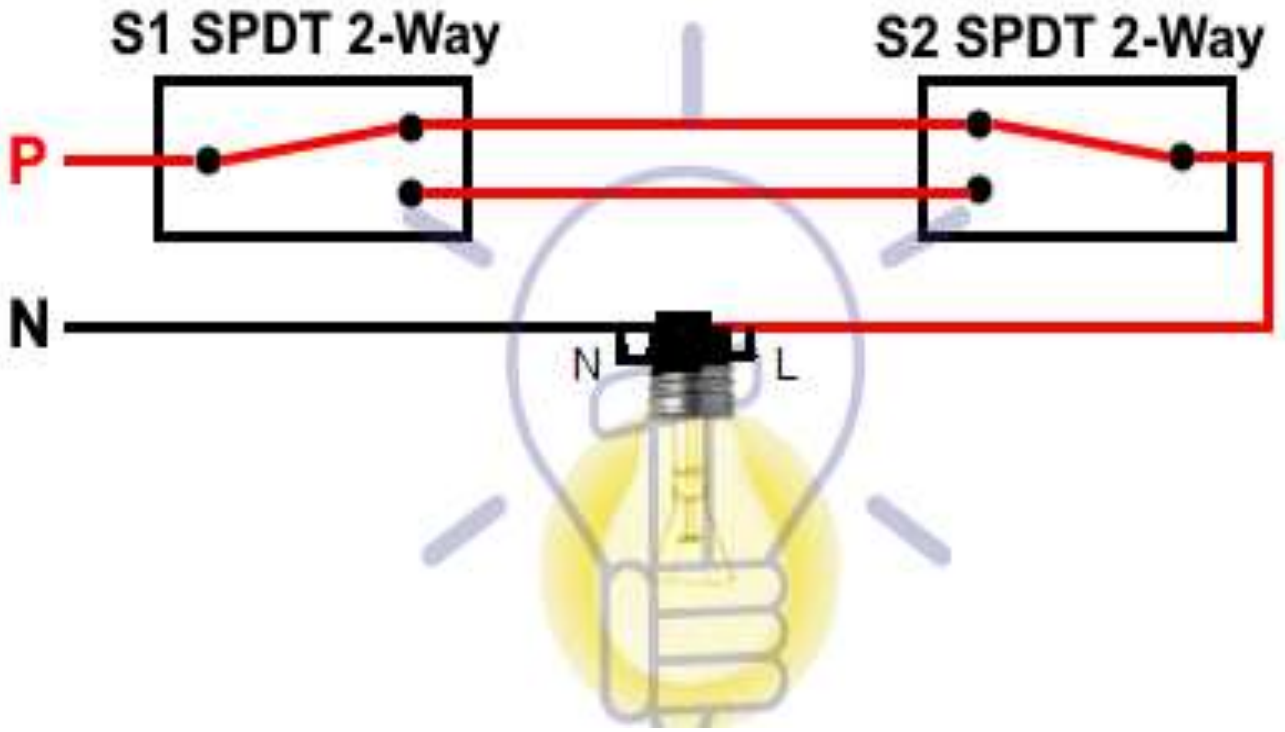
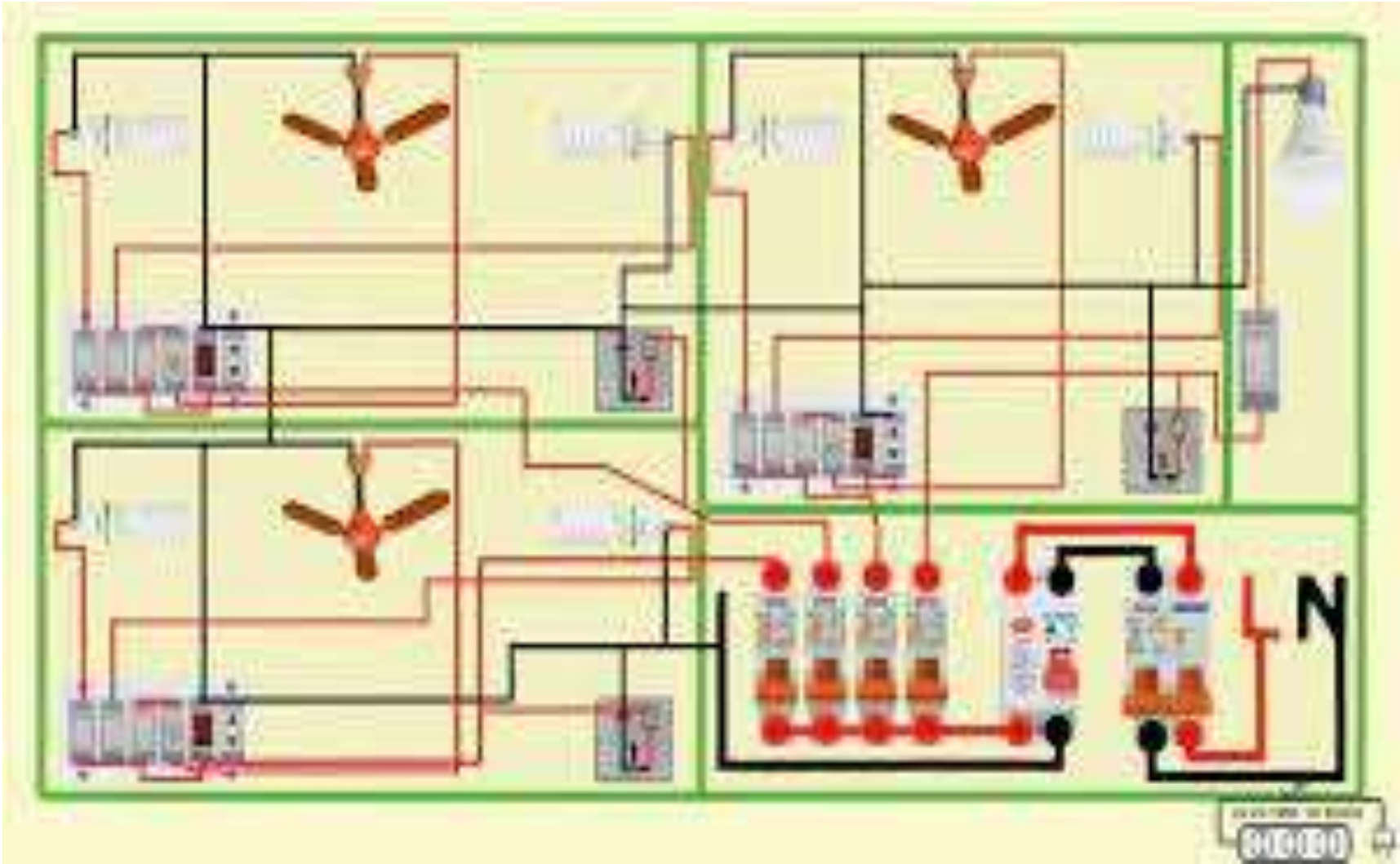


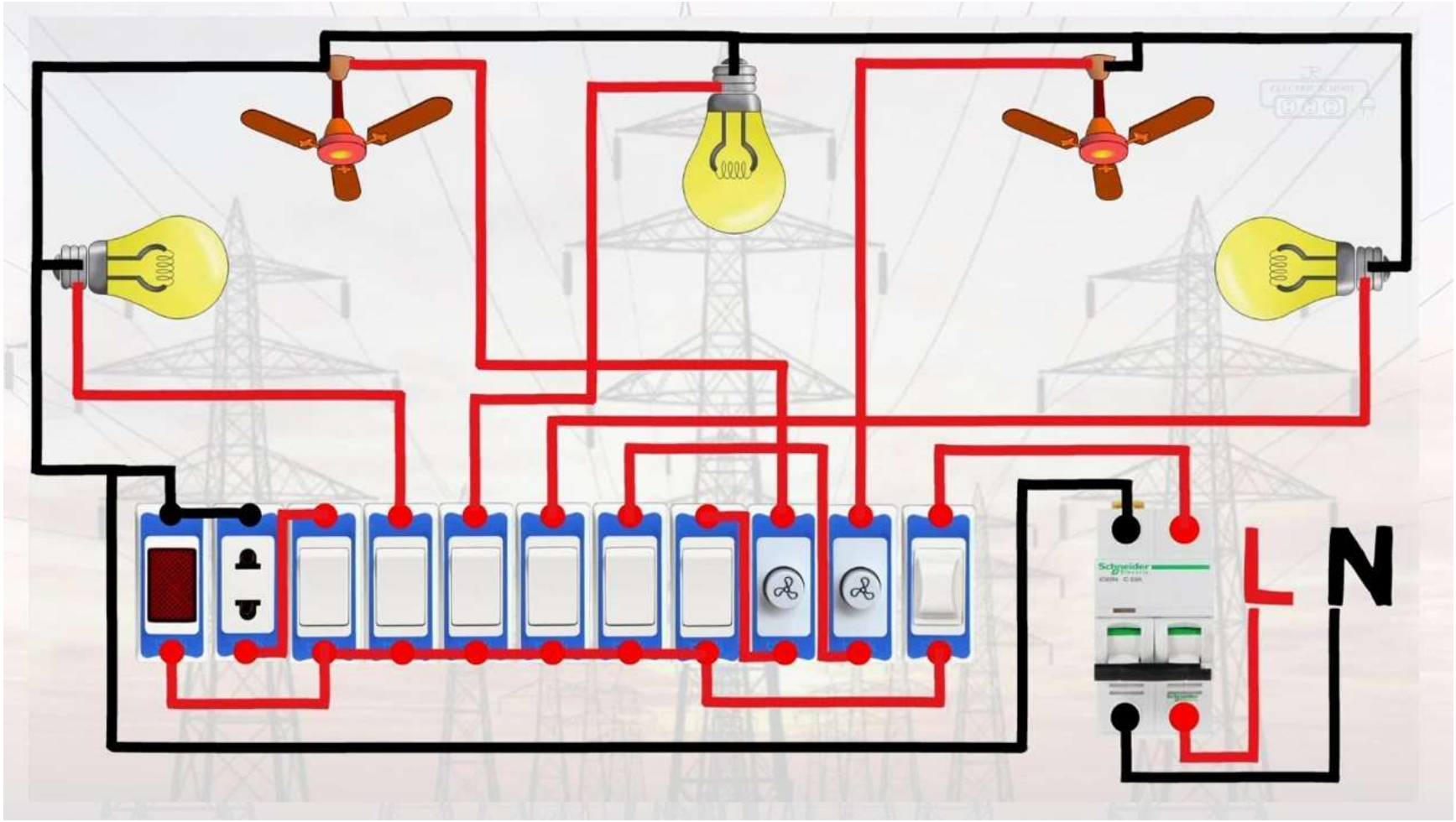
LAYOUT OF HOUSEHOLD WIRING

- **MODEL 1**



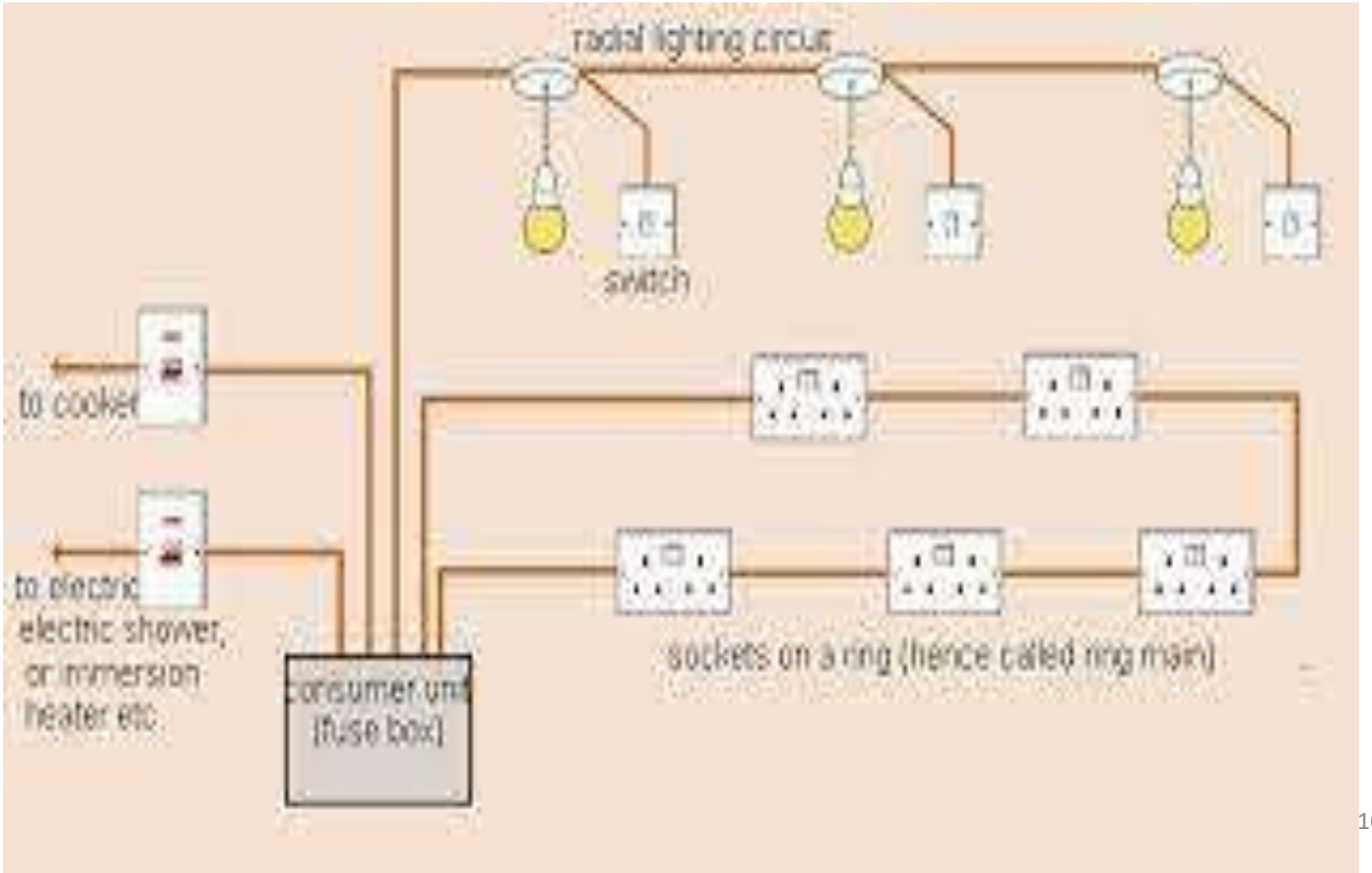
LAYOUT OF HOUSEHOLD WIRING

- **MODEL 2**



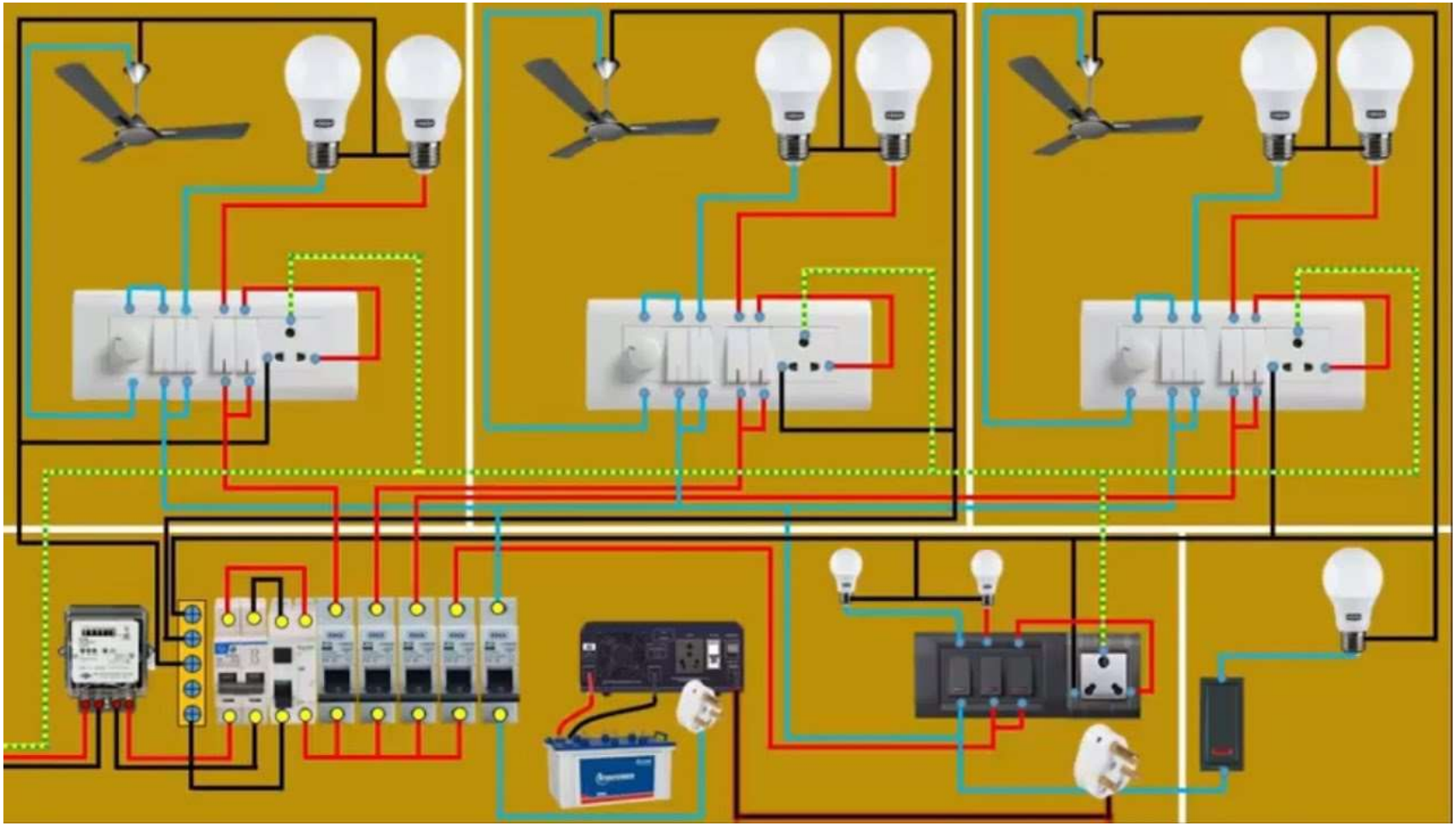
LAYOUT OF HOUSEHOLD WIRING

- **MODEL 3**



LAYOUT OF HOUSEHOLD WIRING

- **MODEL 4**



LAYOUT OF HOUSEHOLD WIRING

- **MODEL 5**