



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)



COIMBATORE-35

**Accredited by NBA-AICTE and Accredited by NAAC – UGC with A+ Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai**

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

**COURSE NAME: 19EET101/BASIC ELECTRICAL AND ELECTRONICS
ENGINEERING**

I YEAR / II SEMESTER

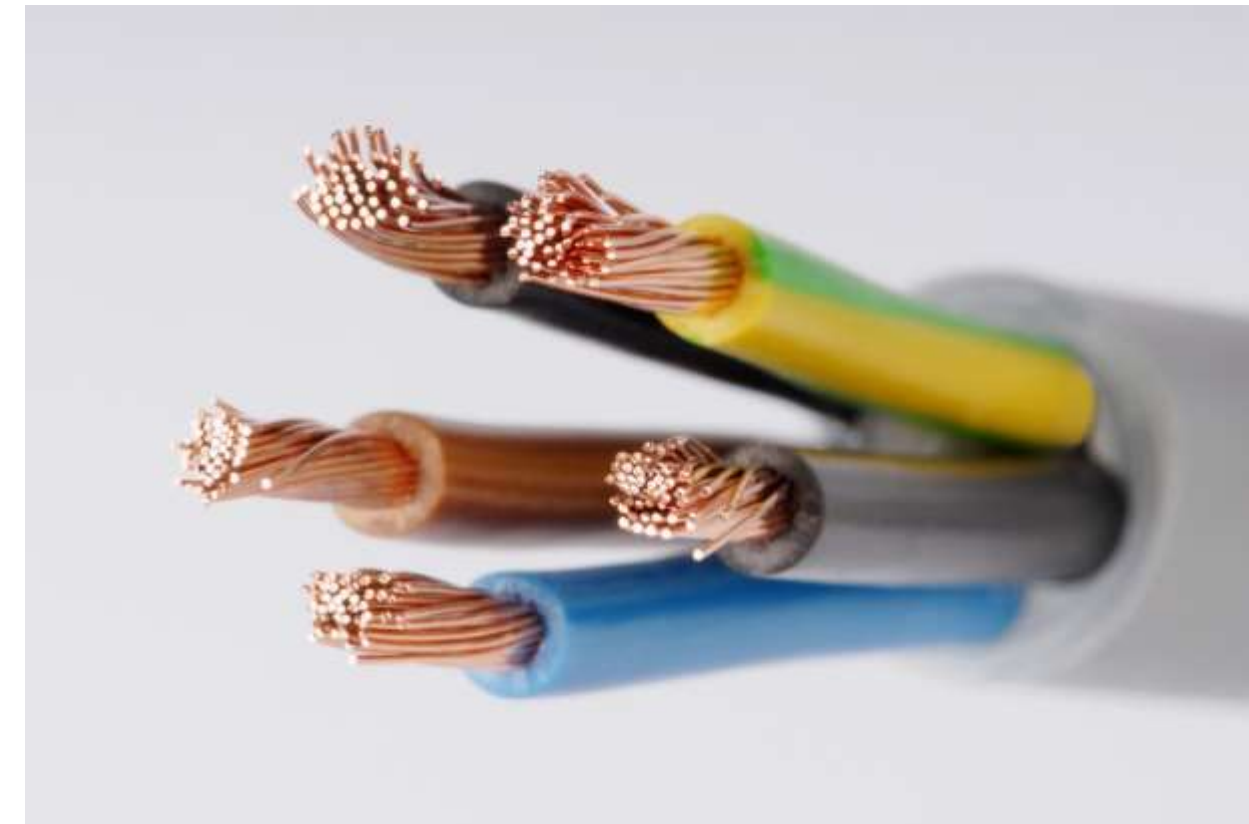
Unit III – WIRING, GROUNDING AND SAFETY

Topic : Electrical Wiring





GUESS THE TOPIC NAME...





ELECTRICAL WIRING

- A network of wires connecting various accessories for distribution of electrical energy from the supplier meter to the board to the numerous electrical energy consuming devices such as a lamps , fans and other domestic appliances through controlling and safety devices is known as wiring system.
- House wiring deals with the distribution within the domestic premises. House wiring is generally done for consumption of electrical energy at 230V, single phase or at 400V , three phase.



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FACTORS AFFECTING ELECTRICAL WIRING

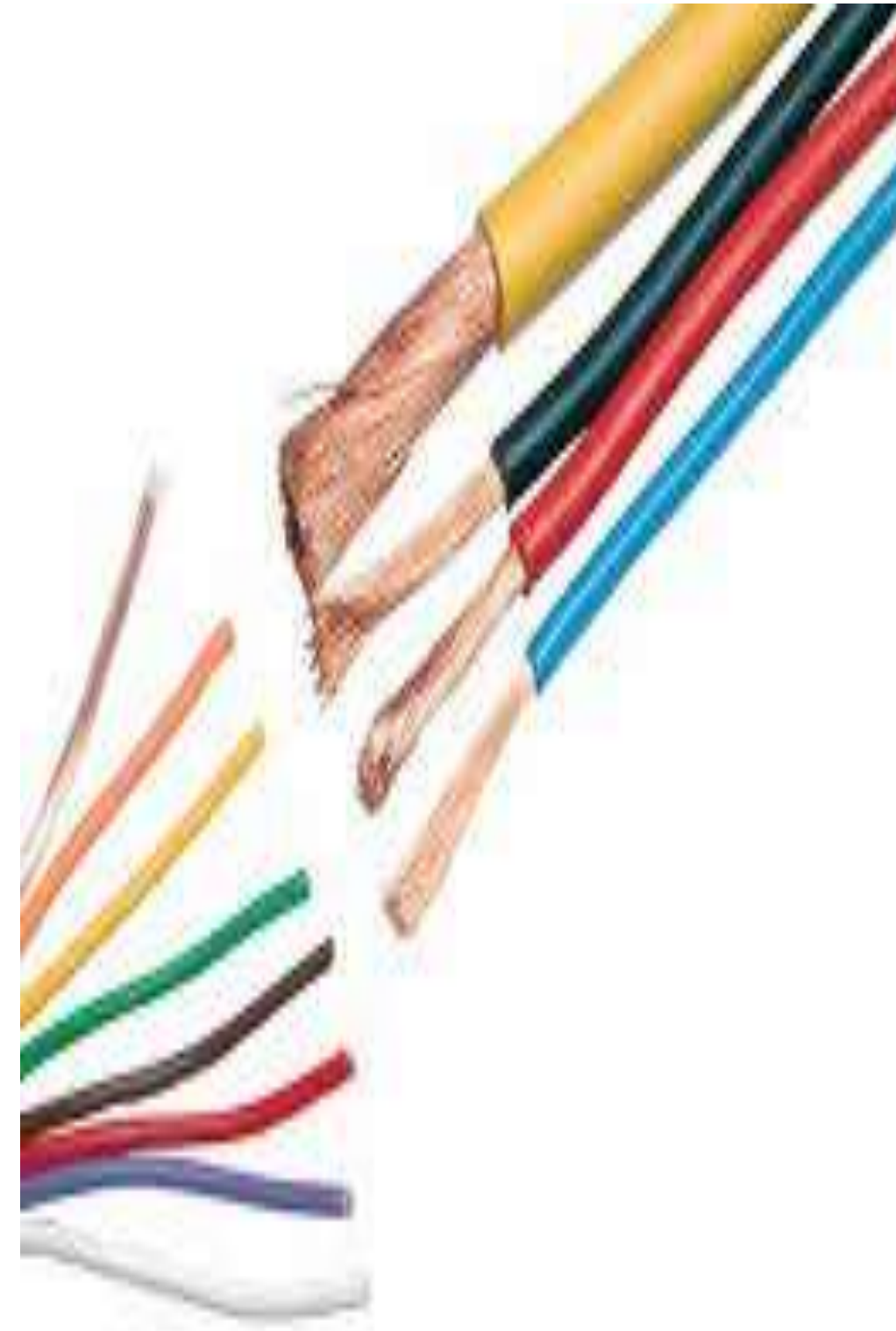
- The choice of wiring system for a particular installation should be based on technical or economic considerations. In general, the following factors should be considered.
- **Safety:** First and foremost consideration is safety to a person using electricity against leakage, shock and fire hazard.





FACTORS AFFECTING ELECTRICAL WIRING

- **Mechanical protection:** The wiring must be protected from mechanical damage during its use.
- **Permanency :** The wiring must not deteriorate unduly by action of weather, furnes , dampness etc.
- **Appearance:** The wiring must have a good appearance.
- **Accessibility:** In wiring there should be provision for extension , renewal or trouble shooting.





RULES OF ELECTRICAL WIRING

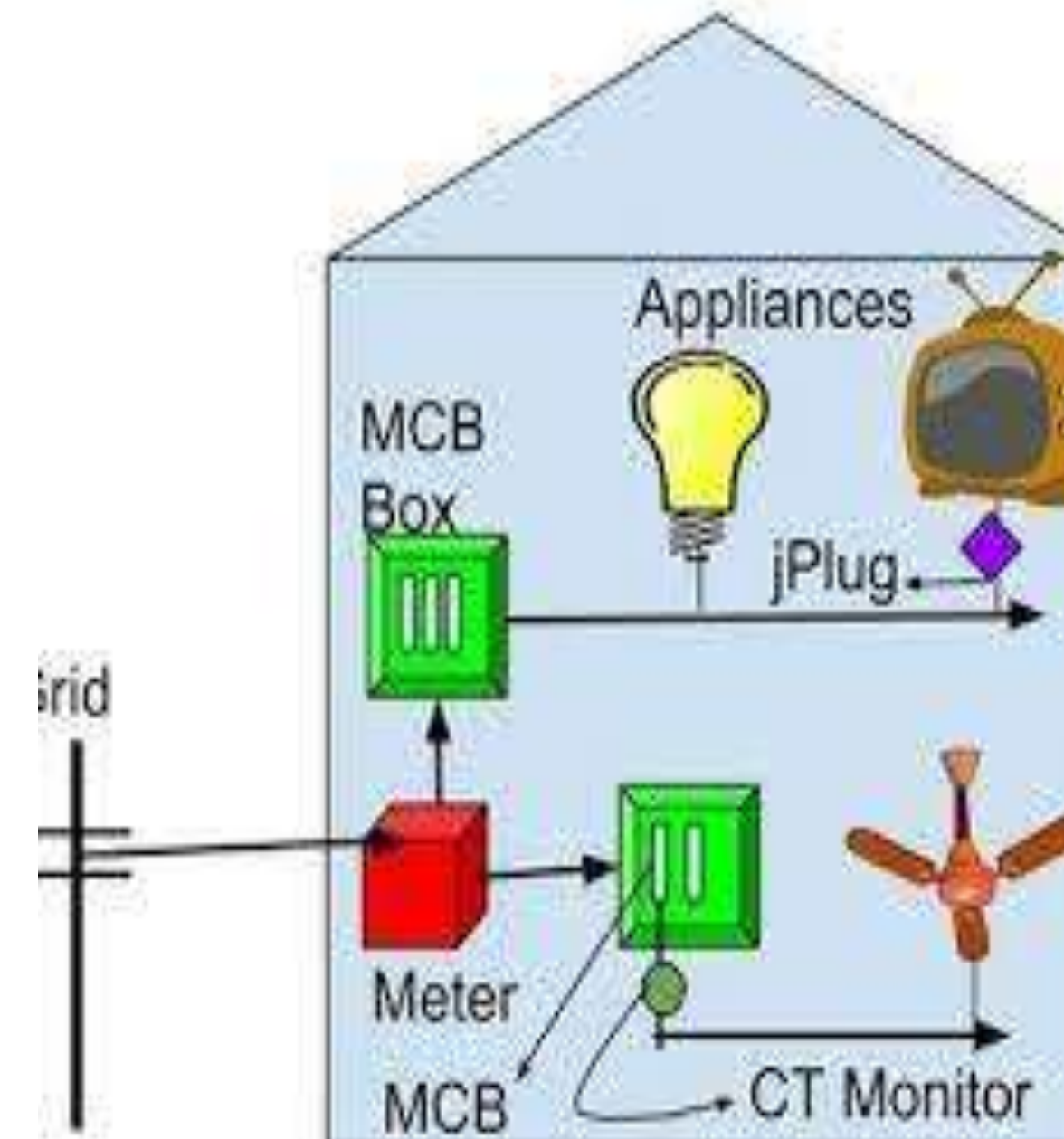


- The total lighting load in a sub circuit should not be more than 100W.
 - Every fitting or appliance must be controlled by switch.
 - Every socket outlet must be controlled by switch.
 - The switch should be on the line conductor.
 - The incandescent lamp should be hanged at least 2.5 m above the floor level.
 - All the metal coverings, frames etc. should be earthed.
 - Every sub circuit must have a separated distribution fuse.



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.

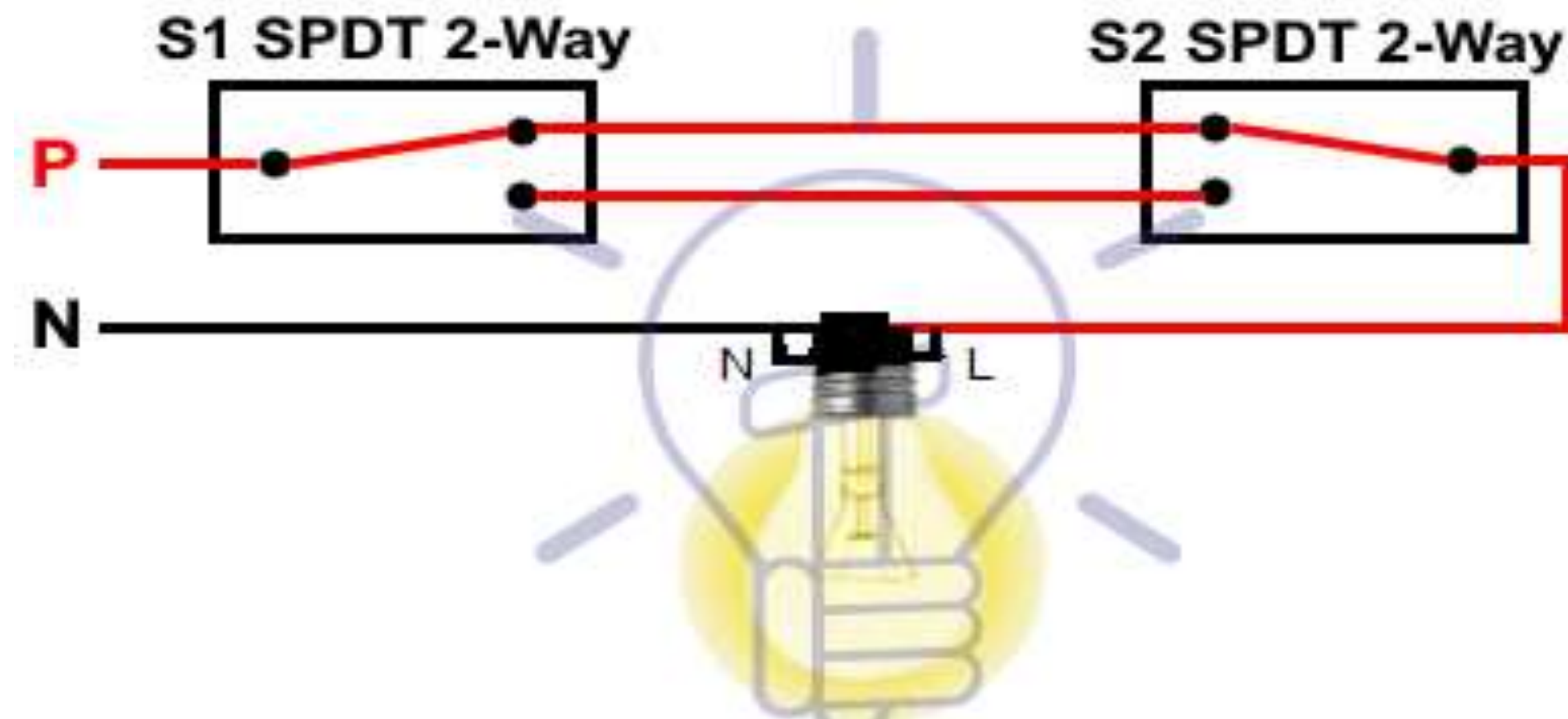




LAYOUT OF HOUSEHOLD WIRING

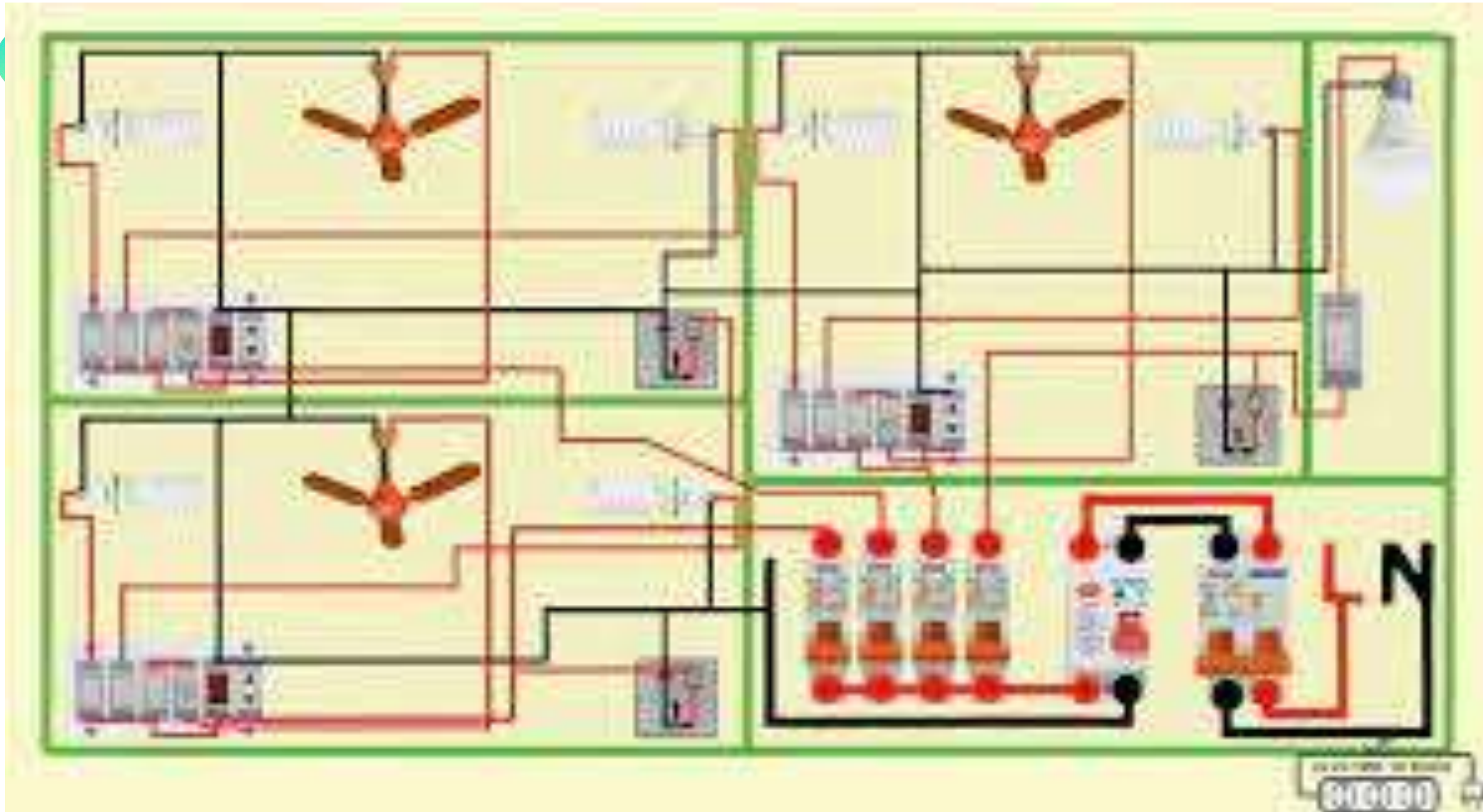
Staircase Wiring Circuit Diagram Connection

Here we can control a bulb from two different places by using two 2-way switches.





LAYOUT OF HOUSEHOLD WIRING





SUMMARY

Electrical Wiring, Factors affecting electrical wiring and Residential wiring



KEEP
LEARNING..
Thank u

SEE YOU IN NEXT CLASS