

Aim: To design automatic led chaser (consisting of 6 led's) to generate two patterns which can be toggled with switch

A. pattern 1- led chaser

B. pattern 2- even, odd led's

Hardware components:

1. Arduino UNO ×1
2. 5mm led ×6
3. Breadboard ×1
4. Jumper wires
5. Switch ×1

Theory: In this experiment we have done coding to blink LED , which is held together on the breadboard.

Learning and Observations: The coding is done on computer from which the instructions are given to the Arduino Uno board . Arduino is a single board microcontroller meant to make the application more accessible which are interactive objects and its surroundings.

Procedure:

- Take 6 led of different colours.
- Take one switch .
- Connect the cathode end of all led's to the GND pin of arduino.
- Connect the anode pin of all led's with each resistor connected to the end.
- Now connect the resistor end to pins of arduino.
- And connect switch with circuit.
- Do all connections same as circuit diagram.

Problems of trouble shooting:

1. The incorrect coding might cause problems in the working of hardware .
2. Hardware should be correctly fitted on the breadboard or they might get fuse or damaged.
3. Arduino wire must be checked if they are loose or not and the ports should be properly cleaned before using they might cause problem in program.

Learning outcomes: from this experiment we have learn how to code in the software this project was the pillar for the upcoming project .