DESIGN AN LED Chaser.

Circuit diagram:

Theory:

Concept used:

> **By using kirchoff's voltage law**

            &

> **By using kirchoff's current law**
> **Series or parallel connections**

Learning and observations:

Connections in Breadboard and wiring.

How to control arduino and its coding.

Use of multimeter for continuity.

OBSERVATION:

➢ Blinking of leds in a pattern and in chasing form.

➢ Relation between software and hardware.

Programming:

```
void setup()
{
  pinMode(13, OUTPUT);
  pinMode(12, OUTPUT);
  pinMode(11, OUTPUT);
  pinMode(10, OUTPUT);
}
void loop()
{
  digitalWrite(13, HIGH);
  digitalWrite(12, LOW);
  digitalWrite(11, LOW);
  digitalWrite(10,LOW);


  delay(1000);
  digitalWrite(13, LOW);
  digitalWrite(12, HIGH);
  digitalWrite(11, LOW);
  digitalWrite(10,LOW);


  delay(1000);
```

```
        digitalWrite(13, LOW);

    digitalWrite(12, LOW);

    digitalWrite(11, HIGH);

    digitalWrite(10,LOW);


    delay(1000);

     digitalWrite(13, LOW);

    digitalWrite(12, LOW);

    digitalWrite(11, LOW);

    digitalWrite(10,HIGH);


    delay(1000);

}
```

Problems & Troubleshooting:

- o **To select the right port and type of arduino**
- o **To check the loose connections**
- o **To check the connections according to the codes**
- o **To check the continuity of the circuit**
- o **To check the flow of current in the circuit**

Precautions:

- o **Handle tools carefully**
- o **Wear gloves**
- o **Do not connect arduino till the circuit is complete**

Outcomes:

- LEDs glows in a chasing pattern
- It can be used as for decorating purpose