Experiment 2 :- Design a LED CHASER

THEORY :-

Led is used in many places like in our phones, cars, in homes, etc. Mostly electronics lights up due to LED. LED has lots of variety like different sizes, shapes and colors also. They have one common thing : they're bacon of electronics.

LED are a particular type of diode that convert electrical energy into light. LED stands for Light Emitting Diode. It requires less power to glow.

Types of LEDs :- RGB (Red-Green-Blue) LEDs, IR LEDs, SMD LEDs

LEDs is used in remotes also for. LEDs guide us to help to avoid any accidental LED barbecues. They are like tiny lightbulbs.

1) Polarity Matters

Polarity indicates whether a circuit component is symmetric or not.

2) More Current Equals More Light

The brightness of LED is directly dependent on how much current it draws.

3) There is Such a Thing as Too Much Power

If we connect an LED directly to a current source it will try to dissipate as much power as it is allowed to draw.

Program :-

```
int led_red = 0; // the red LED is connected to Pin 0 of the Arduino

int led_yellow = 1; // the yellow LED is connected to Pin 1 of the Arduino

int led_green = 2; // the green LED is connected to Pin 2 of the Arduino


void setup() {

  // set up all the LEDs as OUTPUT

  pinMode(led_red, OUTPUT);
```

```
  pinMode(led_yellow, OUTPUT);
  pinMode(led_green, OUTPUT);
}

void loop() {
  // turn the green LED on and the other LEDs off
  digitalWrite(led_red, LOW);
  digitalWrite(led_yellow, LOW);
  digitalWrite(led_green, HIGH);
  delay(2000);    // wait 2 seconds

  // turn the yellow LED on and the other LEDs off
  digitalWrite(led_red, LOW);
  digitalWrite(led_yellow, HIGH);
  digitalWrite(led_green, LOW);
  delay(1000);   // wait 1 second

  // turn the red LED on and the other LEDs off
  digitalWrite(led_red, HIGH);
  digitalWrite(led_yellow, LOW);
  digitalWrite(led_green, LOW);
  delay(3000);  // wait 3 seconds
}
```

Precautions :-

Don’t connect LED directly with high voltage source.