**Experiment-3**

**Aim**: Design Christmas dual LED chaser light

**Apparatus**: Arduino board,LEDs,resistance – 470 ohm,breadboard,wires

**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:

* Keep the connections clean.
* Do not plug into unknown circuits.
* Do not short circuit.

Result:

Changing of LED was verified after uploading the program.

Learning Outcomes:

* How to use C/C++ programming on Arduino Board.
* Application of Arduino board.
* Working of digital pins.

Sources of errors:

* Improper connections on Arduino board.
* Errors in the code written.