```
/*

Experiment No. :    02

Statement      :    Make experiment 1 work with two switches. One
switch press would result running of LEDs in one direction, while
the second switch press would result running of LEDs in opposite
direction.

Date of Exp.   :    xx/xx/xxxx

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*/


const int numLeds = 5;         // Number of LEDs

const int ledPins[] = {2, 3, 4, 5, 6};  // Pins for the LEDs

const int switch1Pin = 7;         // Switch for running in one
direction

const int switch2Pin = 8;       // Switch for running in opposite
direction


int currentLed = 0;             // Current LED index

int direction = 1;  // Direction of LED movement (1 for forward,
-1 for backward)


void setup() {

  for (int i = 0; i < numLeds; i++) {

    pinMode(ledPins[i], OUTPUT);

  }

  pinMode(switch1Pin, INPUT_PULLUP);
```
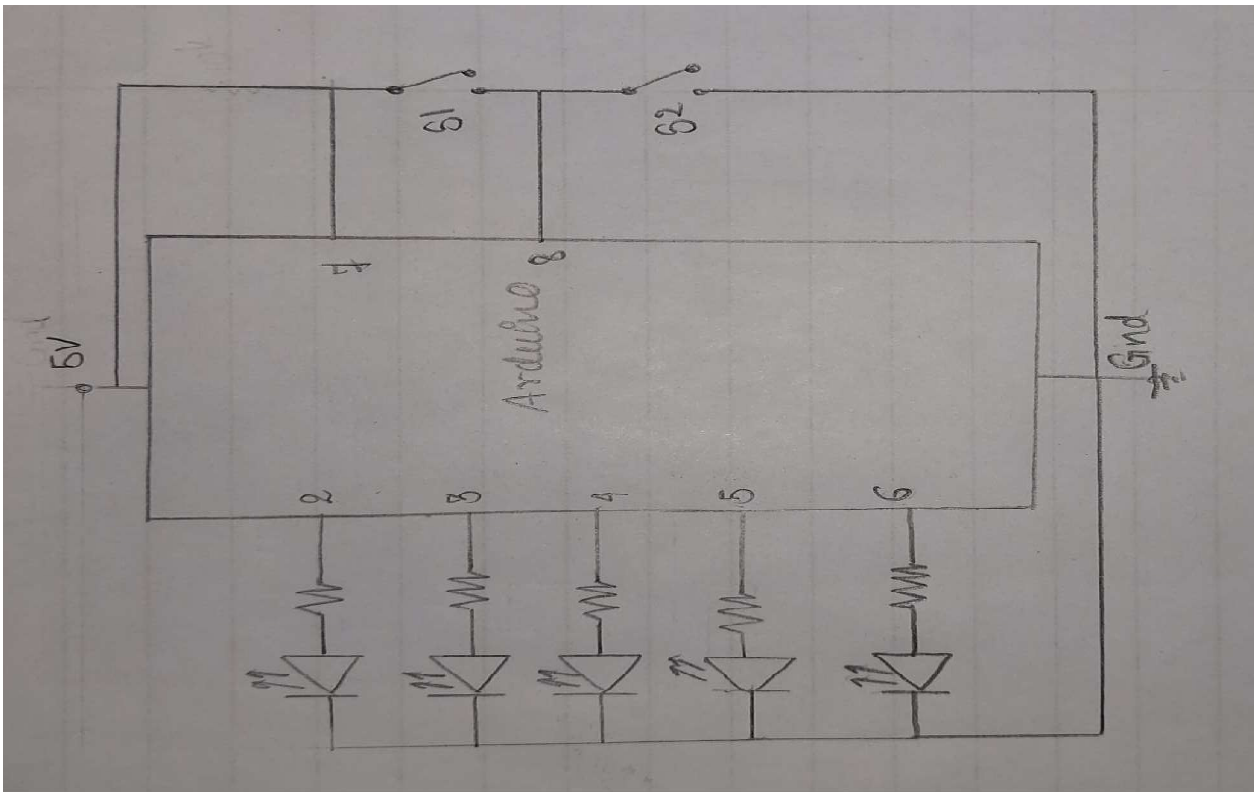

```
  pinMode(switch2Pin, INPUT_PULLUP);
}
void loop() {
  // Check if the first switch is pressed to change direction to
forward
  if (digitalRead(switch1Pin) == LOW) {
    direction = 1;
    delay(500);  // Debounce delay to prevent rapid changes
  }

// Check if the second switch is pressed to change direction to
backward
  if (digitalRead(switch2Pin) == LOW) {
    direction = -1;
    delay(500);  // Debounce delay to prevent rapid changes
  }

  // Turn off all LEDs
  for (int i = 0; i < numLeds; i++) {
    digitalWrite(ledPins[i], LOW);
  }
  // Turn on the current LED
  digitalWrite(ledPins[currentLed], HIGH);
```

```
  // Move to the next LED
  currentLed += direction;

  // Wrap around to the first or last LED if needed
  if (currentLed >= numLeds) {
    currentLed = 0;
  } else if (currentLed < 0) {
    currentLed = numLeds - 1;
  }

  // Adjust the speed of the running lights by changing the delay
  delay(100);
}
```


S1
S2
Arduino
5V
Gnd
2
3
4
5
6