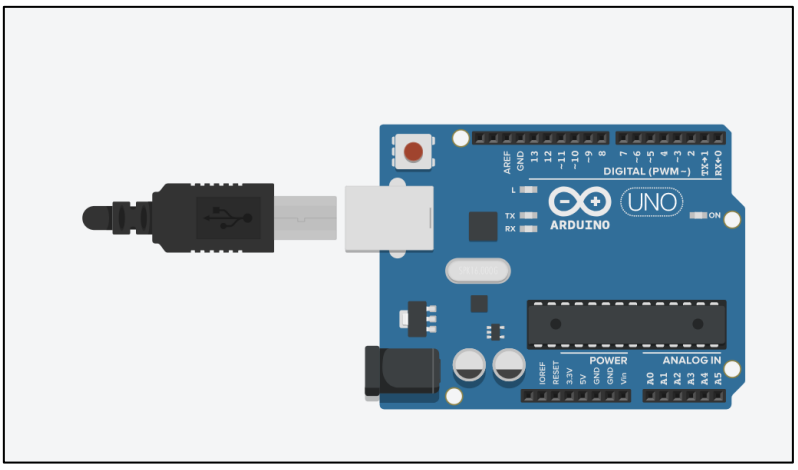
Experiment 2 IOT

Hemish Shah – J056

B. Tech Data Science

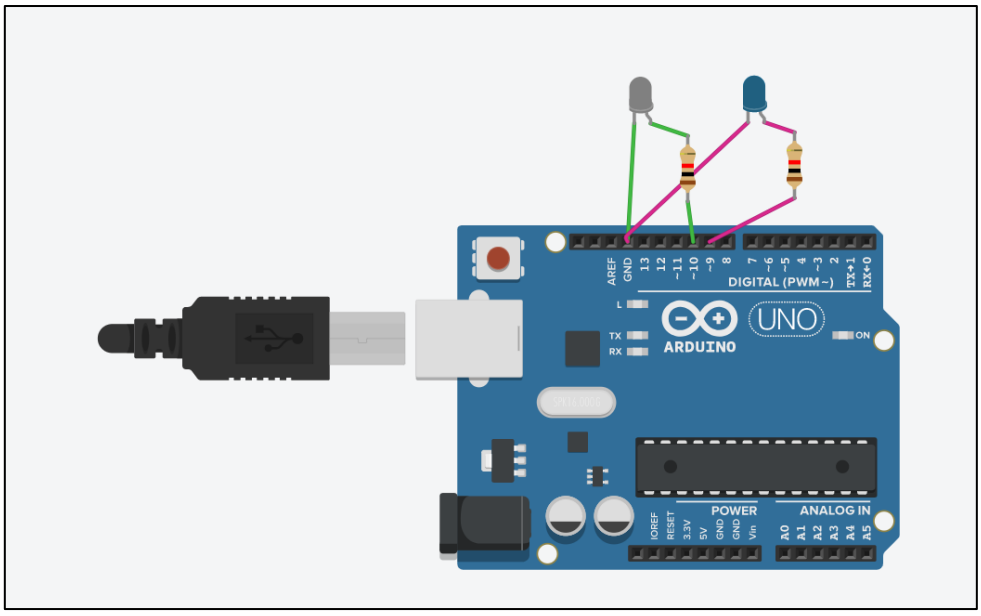
1.

```
void setup()
{
 pinMode(13, OUTPUT);
}

void loop()
{
 for (int i=0;i<255;i++)
 {
  analogWrite(13,i);
  delay(10);
 }
 for (int i=255;i>0;i--)
 {
  analogWrite(13,i);
  delay(10);
 }
}
```



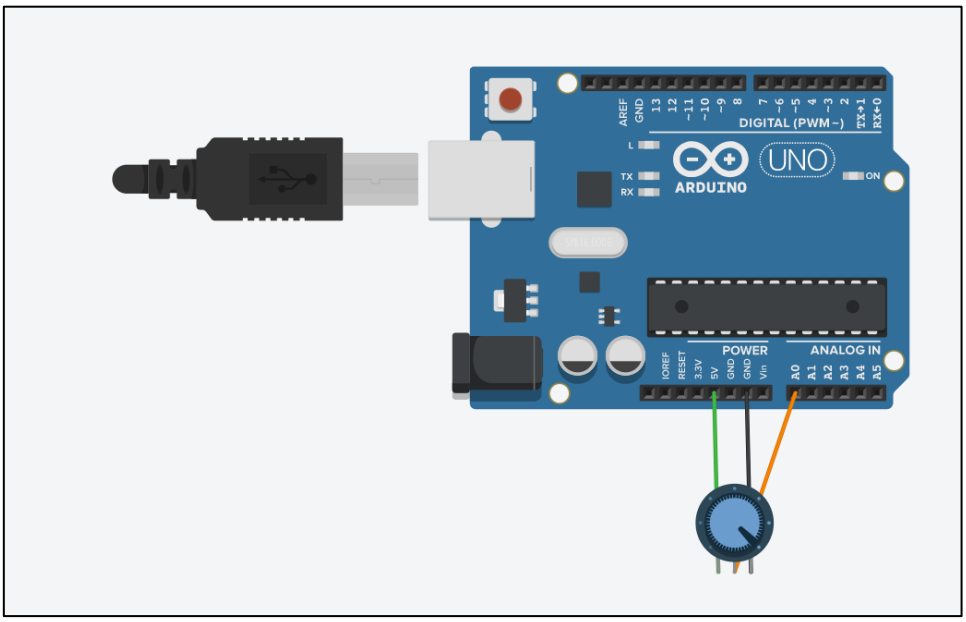
2.

```
void setup()
{
 pinMode(9, OUTPUT);
 pinMode(10, OUTPUT);
}

void loop()
{
 for (int i=0; i<255; i++){
  analogWrite(9, 255-i);
  analogWrite(10,i);
  delay(10);
 }
 for (int i=255; i>0; i--){
  analogWrite(9, 255-i);
  analogWrite(10, i);
  delay(10);
 }
}
```



3.

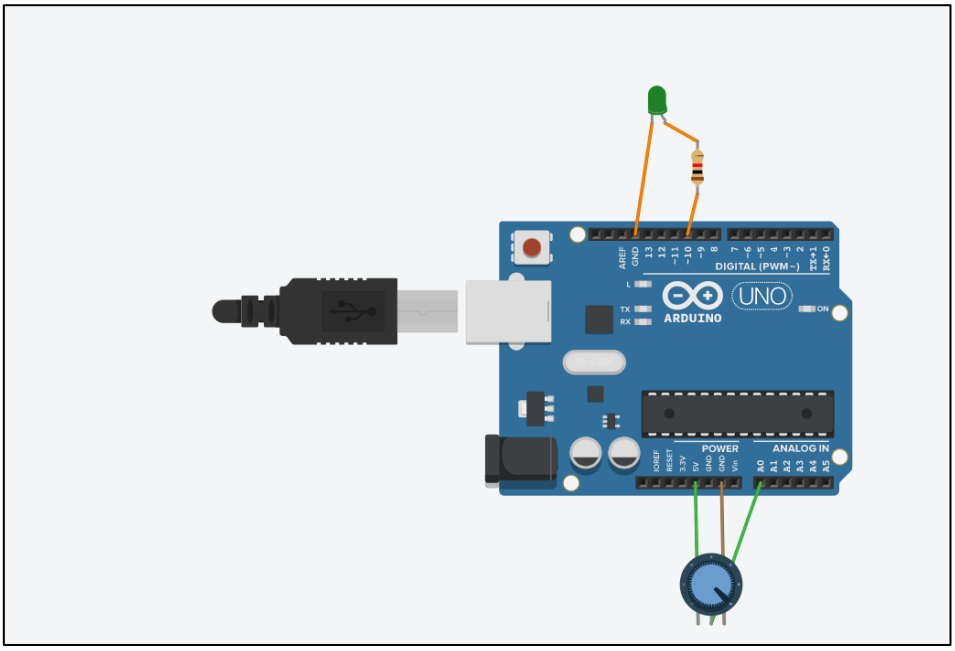
```
void setup()
{
 pinMode(A0, INPUT);
 Serial.begin(9600);
}

void loop()
{
 int read = analogRead(A0);
 Serial.println(read);
 delay(10);
}
```



4.

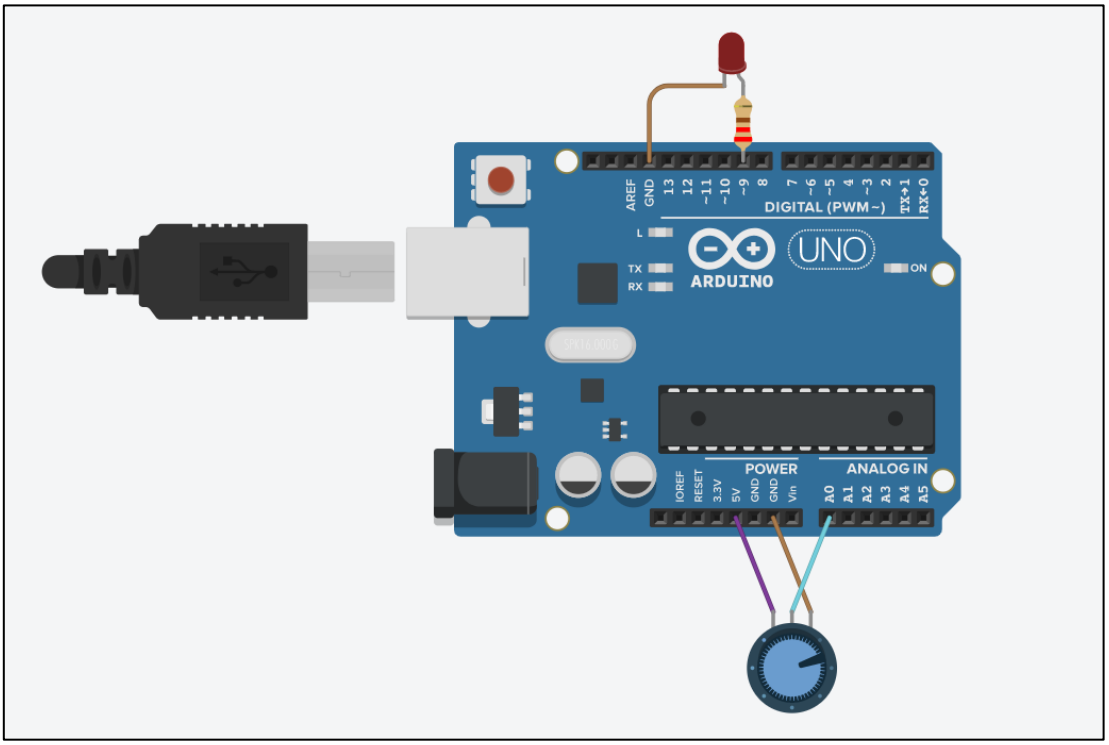
```
int read = 0;

void setup()
{
```

```
  pinMode(A0, INPUT);
  pinMode(10, OUTPUT);
  Serial.begin(9600);
}

void loop()
{
  read = analogRead(A0);
  if(read>512)
   {
     digitalWrite(10,HIGH);
     Serial.println(read);
   }
  else
   {
    digitalWrite(10,LOW);
    Serial.println(read);
   }
  delay(10);
}
```



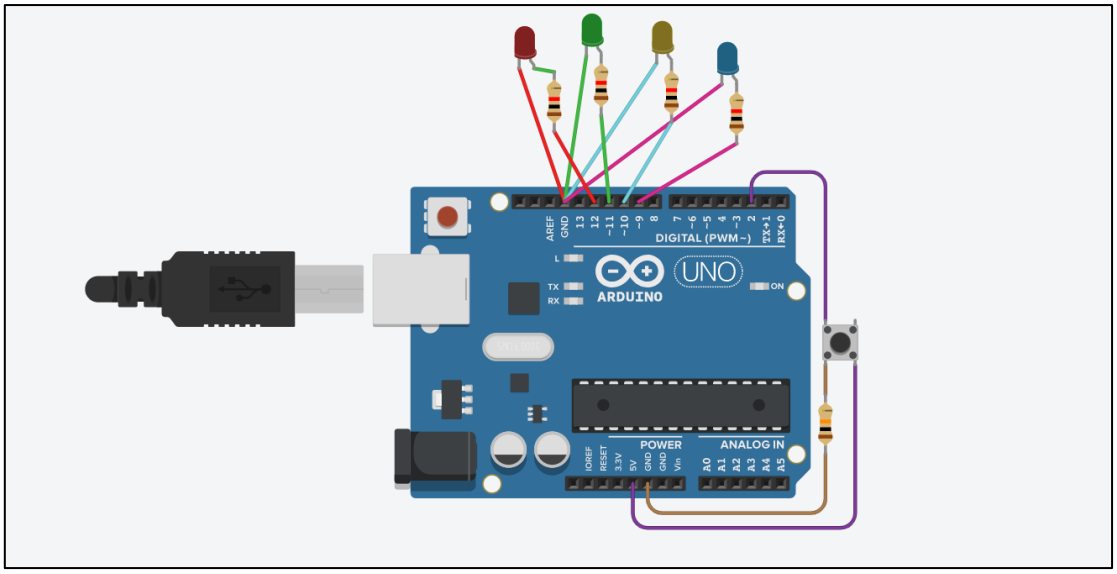
5.

```
const int P= A0;


void setup()
{
  pinMode(P,INPUT);
  pinMode(9,OUTPUT);
  Serial.begin(9600);
}
void loop()
{
  int a = analogRead(P);
  int y = map(a,0,1023,0,255);
  analogWrite(9,y);
  Serial.println(a);
  Serial.println(y);
  delay(1000);
}
```



6.

```
int buttonState = 0;

void setup()
{
  pinMode(2, INPUT);
  pinMode(12, OUTPUT);
  pinMode(11, OUTPUT);
  pinMode(10, OUTPUT);
  pinMode(9, OUTPUT);
}

void loop()
{
  buttonState = digitalRead(2);
  if (buttonState == HIGH)
  {
    // turn LEDs on
    digitalWrite(12, HIGH);
    digitalWrite(11, HIGH);
    digitalWrite(10, HIGH);
    digitalWrite(9, HIGH);
  }
  else
  {
    // turn LEDs off
    digitalWrite(12, LOW);
    digitalWrite(11, LOW);
    digitalWrite(10, LOW);
    digitalWrite(9, LOW);
  }
  delay(10);
}
```


DIGITAL (PWM~)
UNO
ARDUINO
POWER
ANALOG IN