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Program No. – 04

Program Title – LED fading with potentiometer

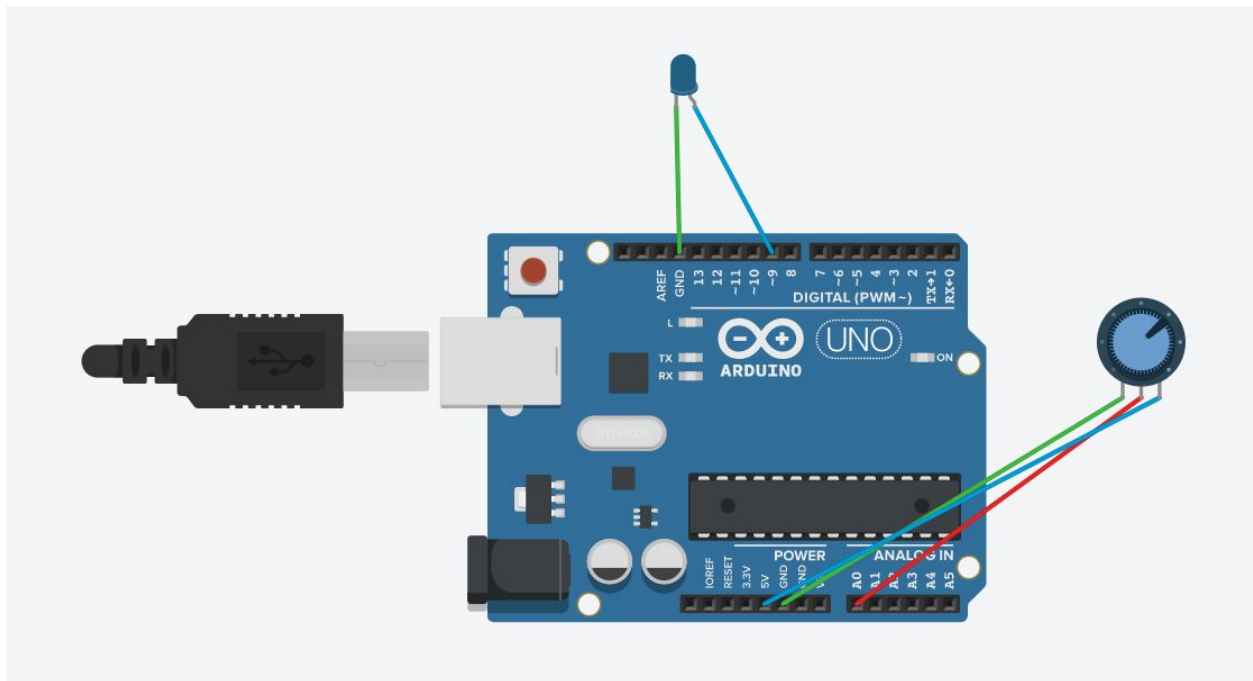
AIM

Demonstrate to show LED fading(analog output).

HARDWARES REQUIRED

- Arduino Board
- LED bulb
- Potentiometer

CIRCUIT DIAGRAM



WRITE-UP

PFA

CODE

```
int LED_PIN = 9;

void setup()
{
    Serial.begin(9600);
    pinMode(LED_PIN, OUTPUT);
}

void loop()
{

    int analogValue = analogRead(A0);
    int brightness = map(analogValue, 0, 1023, 0, 255);
    analogWrite(LED_PIN, brightness);
    Serial.print("Analog: ");
    Serial.print(analogValue);
    Serial.print(", Brightness : ");
    Serial.println(brightness);
```

```
delay(100);  
}
```

OUTPUT

Fading of LED with potentiometer.

Simulator time: 00:00:15

Code Stop Simulation

Text

```
1 int ledPin=9;  
2 void setup()  
3 {  
4   Serial.begin(9600);  
5   pinMode(ledPin,OUTPUT);  
6 }  
7 void loop()  
8 {  
9   int analogValue=analogRead(A0);  
10  int brightness=map(analogValue,0,1023,0,255);  
11  analogWrite(ledPin,brightness);  
12  Serial.print("Analog: ");  
13  Serial.print(analogValue);  
14  Serial.print(" ,Brightness : ");  
15  Serial.println(brightness);  
16  delay(100);  
17 }
```

Serial Monitor

```
Analog: 430 ,Brightness : 107  
Analog: 430 ,Brightness : 107  
Analog: 430 ,Brightness : 107  
Analog: 430 ,Brightness : 107  
Analog: 430 ,Brightness : 107  
Analog: 430 ,Brightness : 107  
Analog: 430 ,Brightness : 107  
Analog: 430 ,  
Analog: 430 ,
```