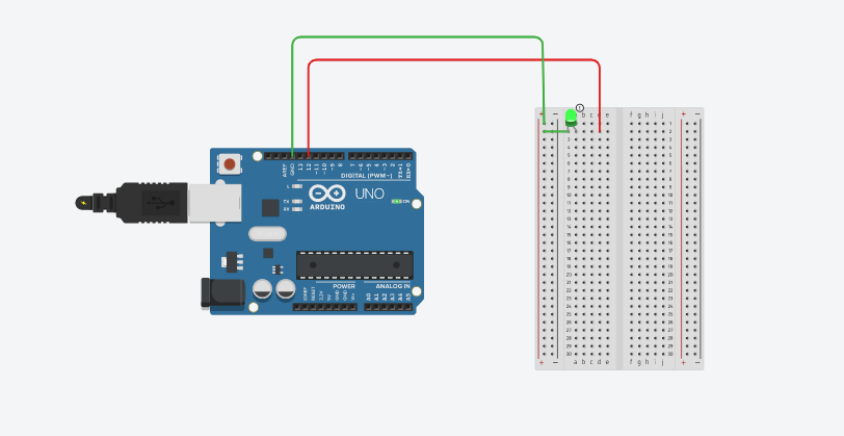
22.10.2021	**1. Embedded application development using Arduino to blink an LED in regular interval**

PROGRAM

```
void setup()
{
  pinMode(12,OUTPUT);
}

void loop()
{
  digitalWrite(12,HIGH);
  delay(500);
  digitalWrite(12,LOW);
  delay(100);
}
```

OUTPUT

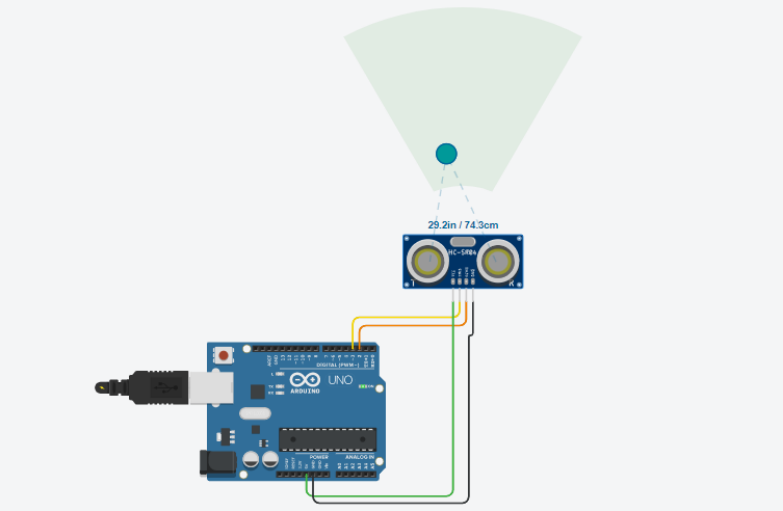


29.10.2021	**2. IOT application development using ultra sonic sensor to find the distance obstacle and sensor.**

PROGRAM

```
#define echopin 2
#define tringpin 3
long duration;
long Distance;
void setup()
{
  pinMode(tringpin,OUTPUT);
  pinMode(tringpin,INPUT);
  Serial.begin(9600);
  Serial.print("Ultra sonic sensor test");
}
void loop()
{
  digitalWrite(tringpin,LOW);
  delayMicroseconds(2);
  digitalWrite(tringpin,HIGH);
  delayMicroseconds(10);
  digitalWrite(tringpin,LOW);
  duration=pulseIn(echopin,HIGH);
  Distance=duration*0.03412;
  Serial.print("Distance");
  Serial.print("Distance");
  Serial.print("Cm");
}
```

OUTPUT



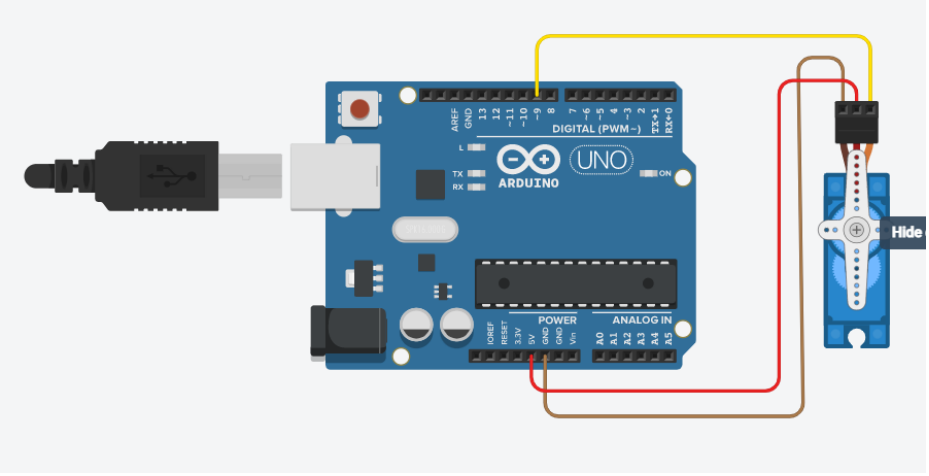
19.11.2021	**3. IOT application development using Arduino to rotate the servo motor in all possible direction.**

PROGRAM

```
#include<Servo.h>
int pos=0;
Servo servo_9;
void setup()
{
 servo_9.attach(9,500,2500);
}

void loop()
{
 for(pos=0;pos<=180;pos+=1)
 {
  servo_9.write(pos);
  delay(15);
 }
 for(pos=180;pos>=0;pos-=1)
 {
  servo_9.write(pos);
  delay(15);
 }
}
```

OUTPUT



03.12.2021	**4. IOT application development using temperature sensor to read the temperature.**

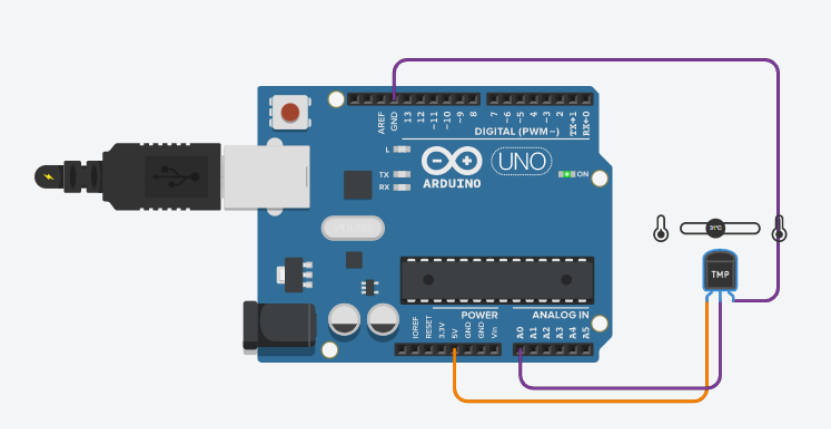
PROGRAM

```
float temp;
int tempPin = 0;

void setup()
{
  Serial.begin(9600);
}

void loop()
{
  temp = analogRead(tempPin);
  temp = temp * 0.48828125;
  Serial.print("TEMPERATURE = ");
  Serial.print(temp);
  Serial.print("*C");
  Serial.println();
  delay(1000);
}
```

OUTPUT

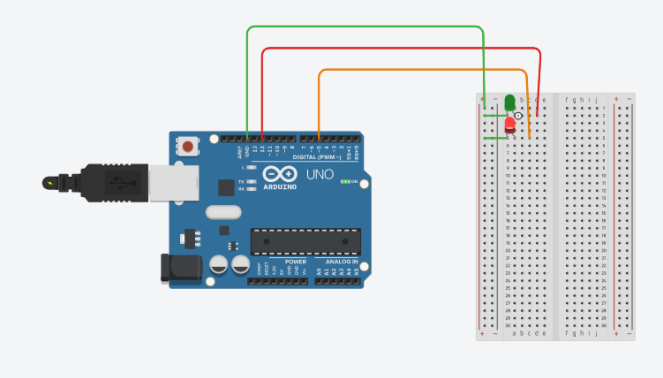


17.12.2021	**5. Implement assembly and interfacing program to blink an LED using embedded C**

PROGRAM

```
#include<avr/io.h>
#include<util/delay.h>
int main(void)
{
 while (1)
 {
   DDRB |= (1 << PB5);
   PORTB |= (1 << PB5);
   _delay_ms(500);
   PORTB &= ~(1 << PB5);
   _delay_ms(500);
 }
 return 0;
}
```

OUTPUT



OR