VIT-IOT(INDUSTRY CERTIFICATE INTERNSHIP PROGRAM)

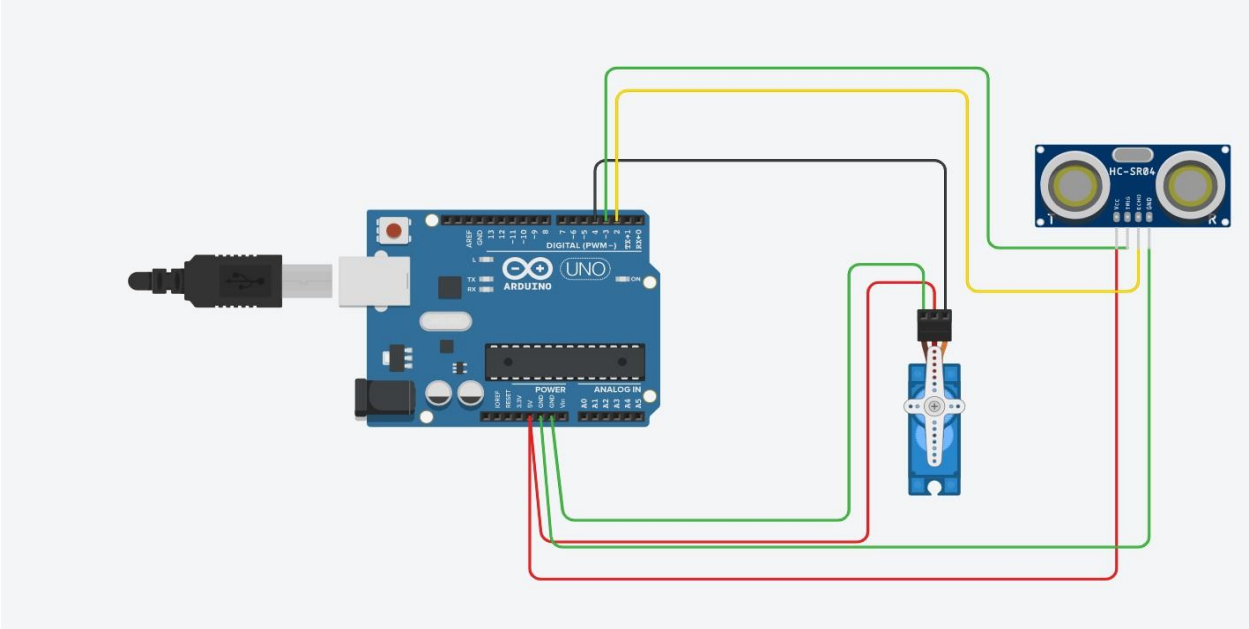
ASSIGNMENT-2

NAME:SAI GANESH THONTA
MAIL ID: thontasaiganesh117@gmail.com

Assignment-2:

Develop an "Automatic garage door opening system". Use an Ultrasonic sensor to detect if there is a vehicle in front of the garage. if any vehicle is detected open the garage door (rotate the servo motor) for some time and close it**.**

Circuit Diagram:



Code:

```
#include<Servo.h>
Servo s;
void setup()
{
  pinMode(3, OUTPUT);
  pinMode(2, INPUT);
  Serial.begin(9600);
  s.attach(4); //attaching D3 pin to servo motor
}

void loop()
{
  digitalWrite(3, LOW);
  digitalWrite(3, HIGH);
  delayMicroseconds(10);
  digitalWrite(3, LOW);
  float dur = pulseIn(2, HIGH);
  float dis = (dur / 2)/29.1;
  if(dis < 100){
  s.write(180);
  Serial.println("vehicle detected in less than 100 CM,opening the door");
  Serial.println(dis);
  delay(1000);
  }

  else if(dis > 100){
  s.write(0);
  Serial.println("Vehicle not detected");
  Serial.println(dis);
  delay(1000);
  }

}
```

Ac

#include<Servo.h>
Servo s; void
setup()
{ pinMode(3, OUTPUT);
 pinMode(2, INPUT);
 Serial.begin(9600);
 s.attach(4); //attaching D3 pin to servo motor
}

void loop()
{ digitalWrite(3, LOW);
 digitalWrite(3, HIGH);
 delayMicroseconds(10);
 digitalWrite(3, LOW);
 float dur = pulseIn(2,

```
HIGH); float dis = (dur
/ 2)/29.1; if(dis < 100){
s.write(180);
Serial.println("vehicle detected in less than 100 CM,opening the
door"); Serial.println(dis); delay(1000); }

else if(dis > 100){
s.write(0);
Serial.println("Vehicle not
detected"); Serial.println(dis);
delay(1000);
}

}
```

OUTPUT:

```
Vehicle noVehicle not detected
141.03
Vehicle not detected
139.62
Vehicle not detected
140.84
Vehicle not detected
139.43
vehicle detected in less than 100 CM,opening the door
83.37
vehicle detected in less than 100 CM,opening the door
43.51
vehicle detected in less than 100 CM,opening the door
42.77
vehicle detected in less than 100 CM,opening the door
49.64
Vehicle not detected
143.93
Vehicle not detected
144.60
Vehicle not detected
143.21
```