

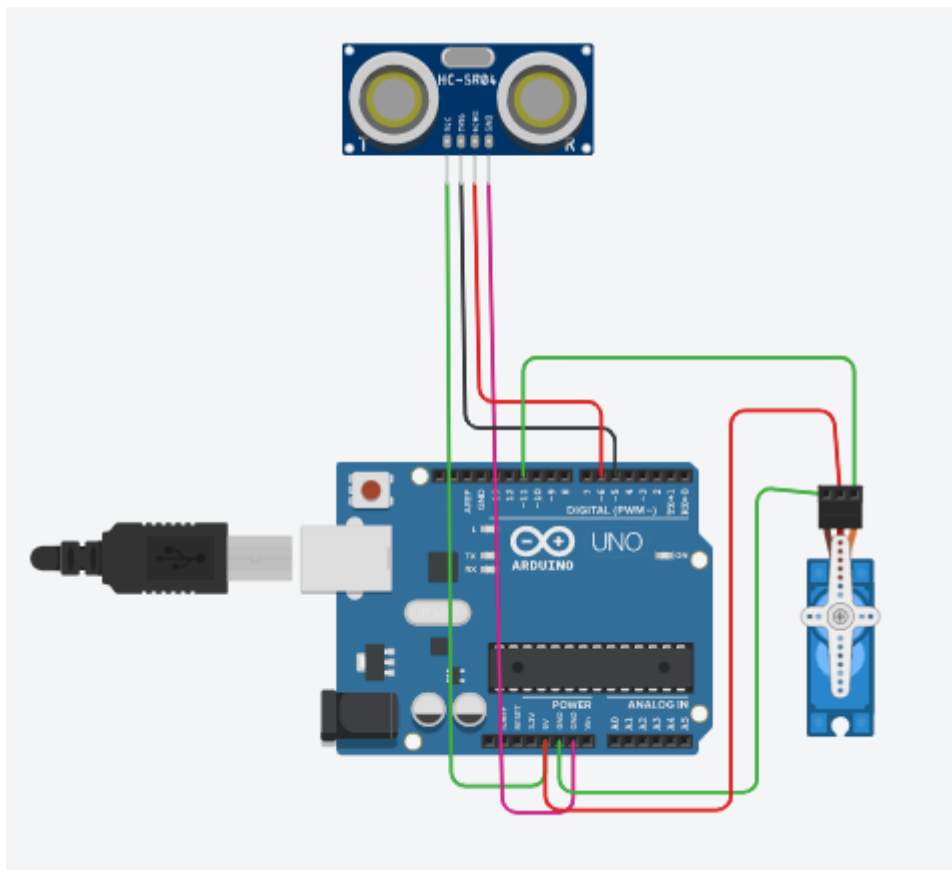
ASSIGNMENT-2:

NAME:JEYVARSHA.S

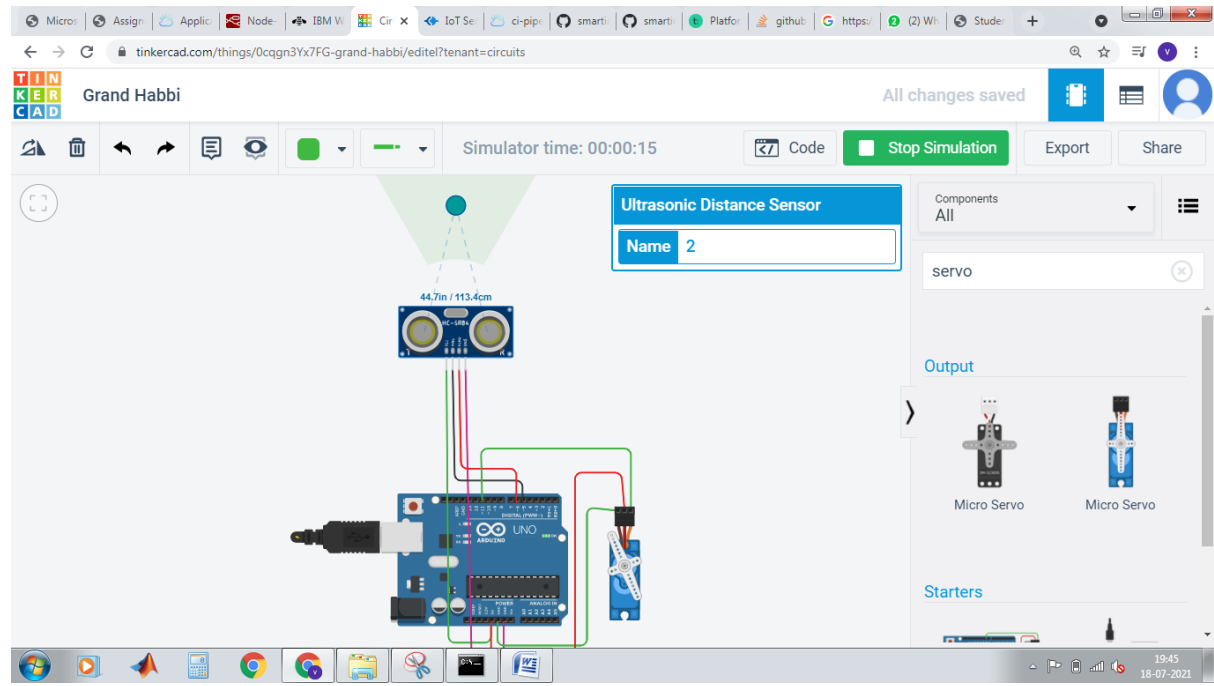
REG NO: 19BEE1096

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:



OUTPUT:



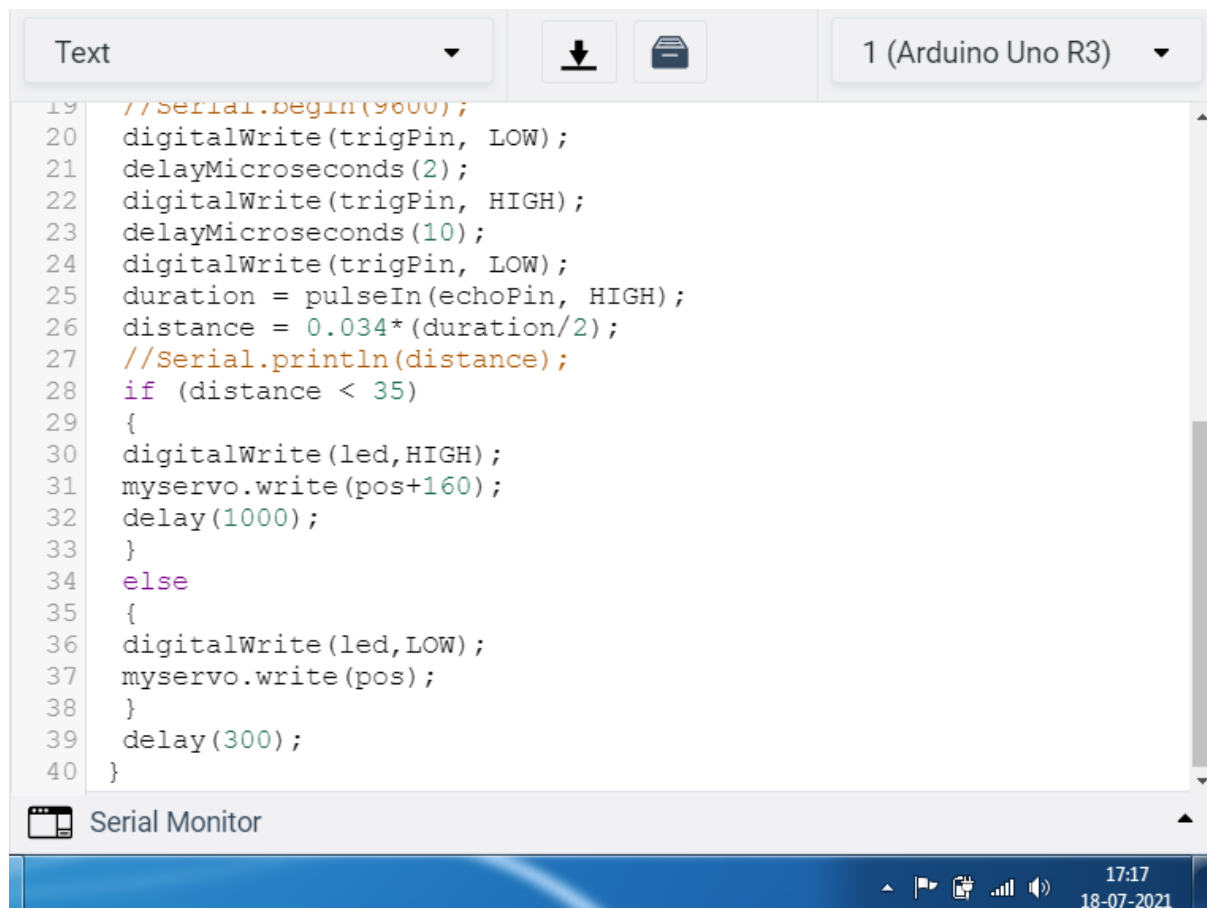
CODE:

```
Text 1 (Arduino Uno R3)

1 #include <Servo.h>
2 Servo myservo;
3 int pos = 20;
4 const int trigPin = 5;
5 const int echoPin = 6;
6 const int led = 13;
7 long duration;
8 float distance;
9 void setup()
10 {
11   myservo.attach(11);
12   pinMode(trigPin, OUTPUT);
13   pinMode(echoPin, INPUT);
14   pinMode(led, OUTPUT);
15   myservo.write(pos);
16 }
17 void loop()
18 {
19   //Serial.begin(9600);
20   digitalWrite(trigPin, LOW);
21   delayMicroseconds(2);
22   digitalWrite(trigPin, HIGH);
  
```

Serial Monitor

17:17
18-07-2021



CODE:

```
#include <Servo.h>
```

```
Servo myservo;
```

```
int pos = 20;
```

```
const int trigPin = 5;
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```
const int echoPin = 6;
```

```
const int led = 13;
```

```
long duration;
```

```
float distance;
```

```
void setup()
{
  myservo.attach(11);
  pinMode(trigPin, OUTPUT);
  pinMode(echoPin, INPUT);
  pinMode(led, OUTPUT);
  myservo.write(pos);
}
```

```
void loop()
{
  //Serial.begin(9600);
  digitalWrite(trigPin, LOW);
  delayMicroseconds(2);
  digitalWrite(trigPin, HIGH);
  delayMicroseconds(10);
  digitalWrite(trigPin, LOW);
  duration = pulseIn(echoPin, HIGH);
  distance = 0.034*(duration/2);
  //Serial.println(distance);
  if (distance < 35)
  {
    digitalWrite(led,HIGH);
    myservo.write(pos+160);
    delay(1000);
  }
}
```

```
}  
else  
{  
  digitalWrite(led,LOW);  
  myservo.write(pos);  
}  
delay(300);  
}
```