

**Name:** Sourabh Patnaik

## ASSIGNMENT-2

### Automatic garage door opening system

**Code:**

```
#include<Servo.h>

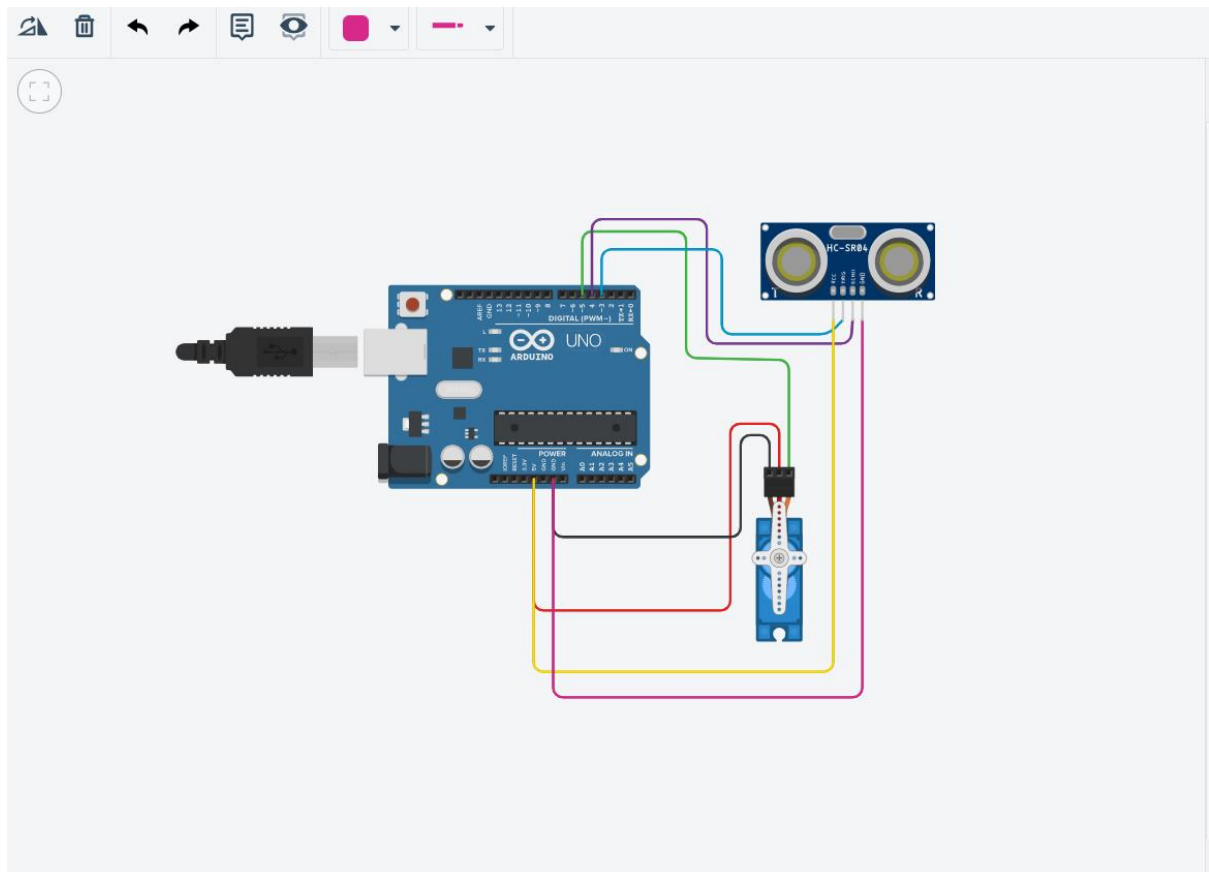
Servo s;

void setup()
{
  pinMode(3, OUTPUT);
  pinMode(4, INPUT);
  Serial.begin(9600);
  s.attach(5);
}

void loop()
{
  digitalWrite(3, LOW);
  delayMicroseconds(2);
  digitalWrite(3, HIGH);
  delayMicroseconds(10);
  digitalWrite(3, LOW);
```

```
float duration = pulseIn(4, HIGH);  
float distance= duration*0.034/2;  
Serial.print("Distance: ");  
Serial.println(distance);  
  if (distance<25)  
{  
  for(int i=0;i<=180;i++)  
{  
    s.write(i);  
    delay(50);  
  }  
  delay(200);  
  Serial.print("Vehicle has approached, Opening Gate!!");  
  for(int j=180;j>=0;j--)  
{  
    s.write(j);  
    delay(50);  
  }  
  delay(200);  
}  
}
```

## Circuit:



## Output:

Simulator time: 00:00:01.288

Ultrasonic Distance Sensor  
Name distance-1

85 cm / 227.6 cm

```
10 void loop()
11 {
12   digitalWrite(3, LOW);
13   delayMicroseconds(2);
14   digitalWrite(3, HIGH);
15   delayMicroseconds(10);
16   digitalWrite(3, LOW);
17
18   float duration = pulseIn(4, HIGH);
19   float distance = duration * 0.034 / 2;
20   Serial.print("Distance: ");
21   Serial.println(distance);
22   if (distance < 25) {
23     for (int i = 0; i <= 180; i++) {
24       s.write(1);
25       delay(50);
26     }
27     Serial.print("Vehicle has approached, Opening Gate!!");
28     for (int j = 180; j >= 0; j--) {
29       s.write(3);
30       delay(50);
31     }
32   }
33 }
```

Serial Monitor

Distance: 219.76  
Distance: 219.73  
Distance: 219.57  
Distance: 219.73  
Distance: 219.76  
Distance: 220.30  
Distance: 220.52  
D

Send Clear