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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.

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);
```

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```
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);
  }
}
```

Screenshots:

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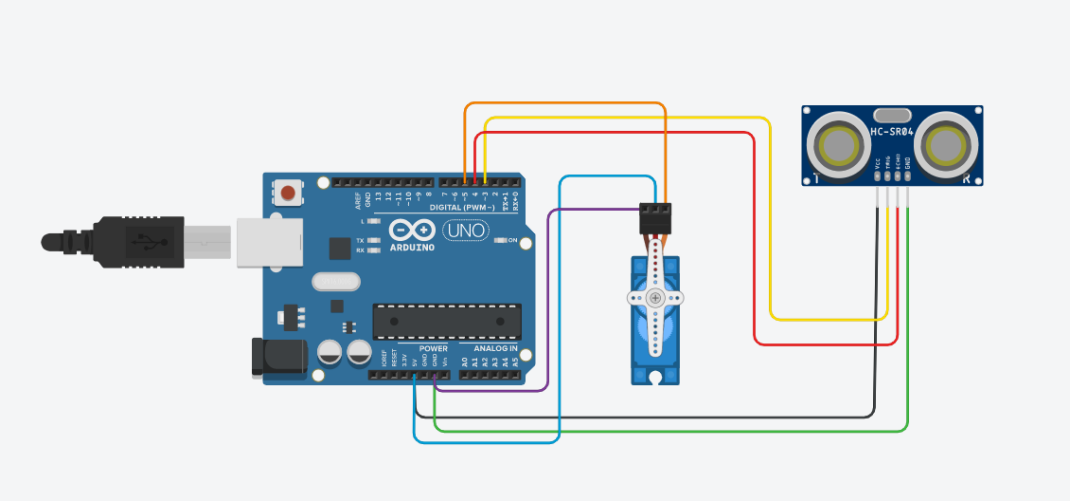

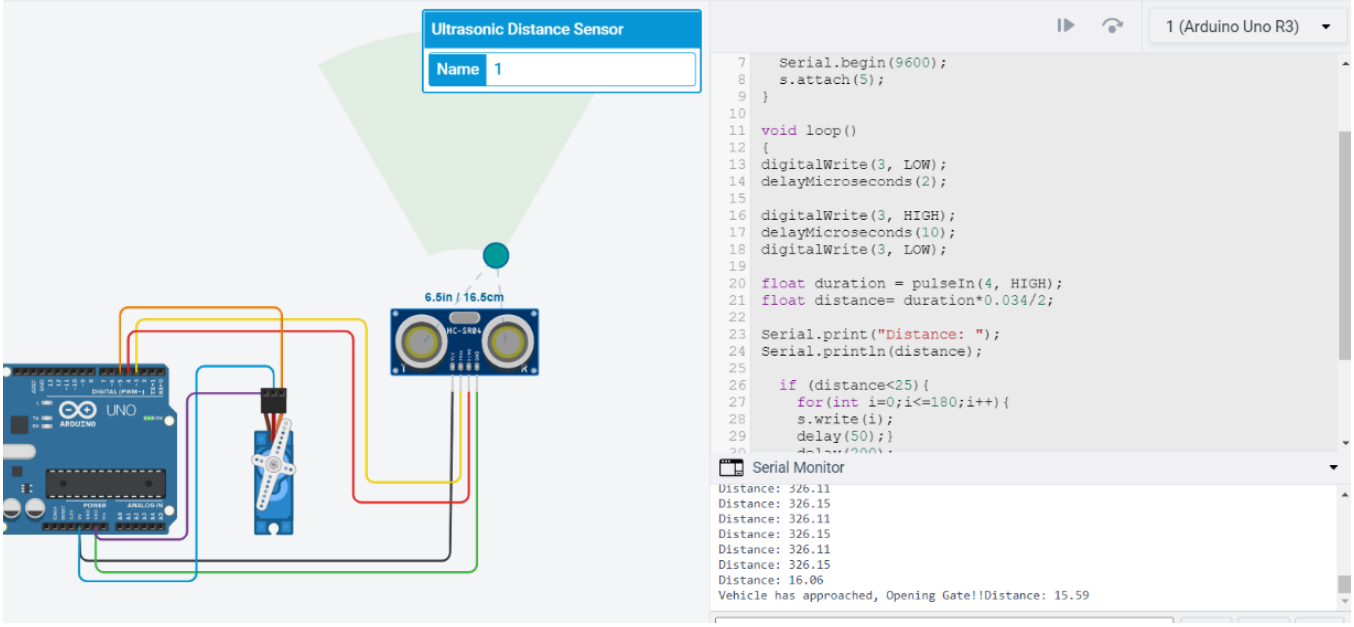

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