

# ASSIGNMENT 2

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**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.**

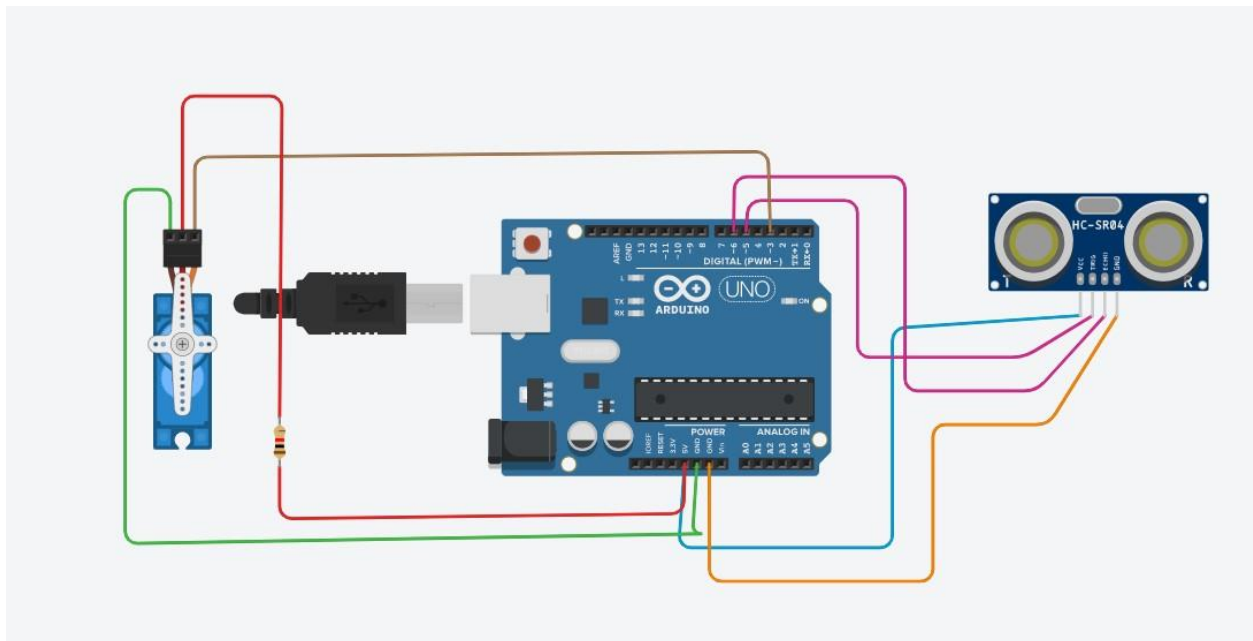
## CODE

```
#include<Servo.h
> Servo servo; int
trig=5; int echo=6;
void setup()
{
  servo.attach(3);
  pinMode(trig, OUTPUT);
  pinMode(echo, INPUT);
  Serial.begin(9600);
  servo.write(0);
}

void loop()
{
  digitalWrite(trig,LOW);
  digitalWrite(trig,HIGH); delay(10); //
  Wait for 1000 millisecond(s)
  digitalWrite(trig,LOW);
  float dur=pulseIn(echo,HIGH);
  float dis=(dur*0.0343)/2;
```

```
Serial.print("distance in cm;");  
Serial.println(dis);  
if(dis>=250){  
  servo.write(180);  
  Serial.println("door closed");  
  Serial.print("distance ");  
  Serial.println(dis);  
  delay(500);  
}  
else{  
  servo.write(0);  
  Serial.println( "door open");  
  Serial.print("distance");  
  Serial.println(dis);  
  delay(500);  
}  
}
```

## DESIGN



# OUTPUT

<del>distance 333.41</del>	<del>distance in cm;167.74</del>
distance in cm;333.45	door open
door closed	distance167.74
distance 333.45	distance in cm;166.85
distance in cm;333.41	door open
door closed	distance166.85
distance 333.41	distance in cm;166.85
distance in cm;334.22	door open
door closed	distance166.85
distance 334.22	distance in cm;167.64
distance in cm;333.41	door open
	distance167.64
	distance in cm;168.41
	door open
	distance168.41
	distance in cm;168.41
	door open
	distance168.41

