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 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("door opened,vehicle detected");
Serial.println(dis); delay(1000);
 }
 else if(dis > 100){
 s.write(0);
 Serial.println("door closed,vehicle not detected");
```
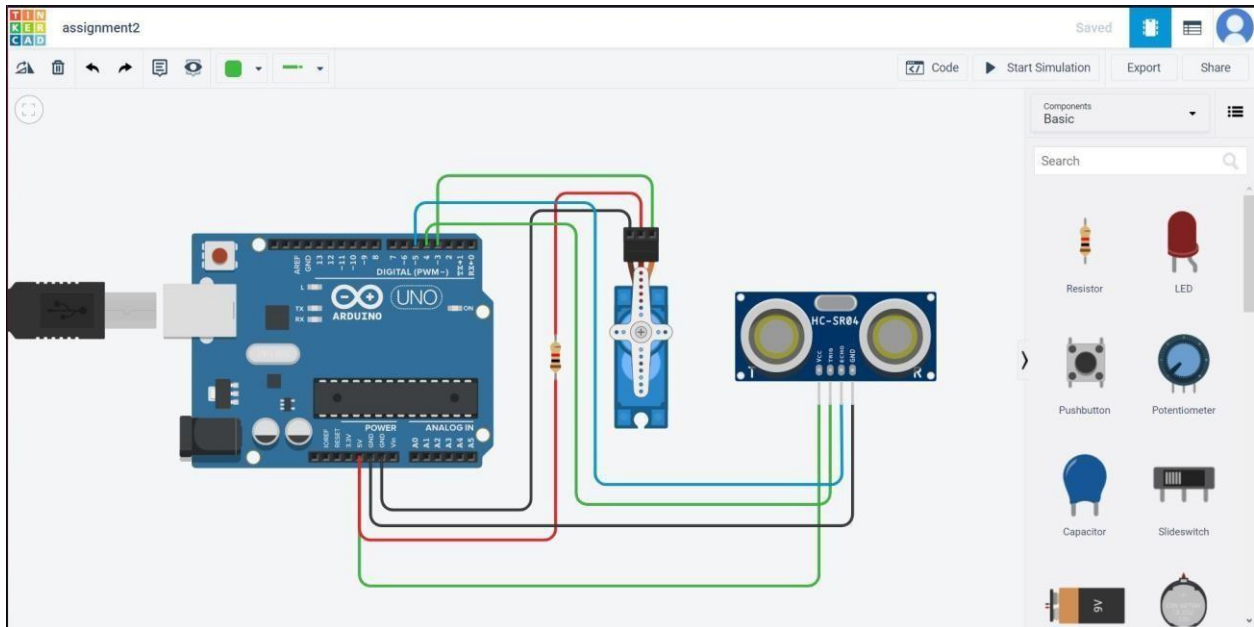
```
Serial.println(dis);   delay(1000);
```

 }

}

Circuit