ASSIGNMENT 2 by Sanskar Vidyarthi

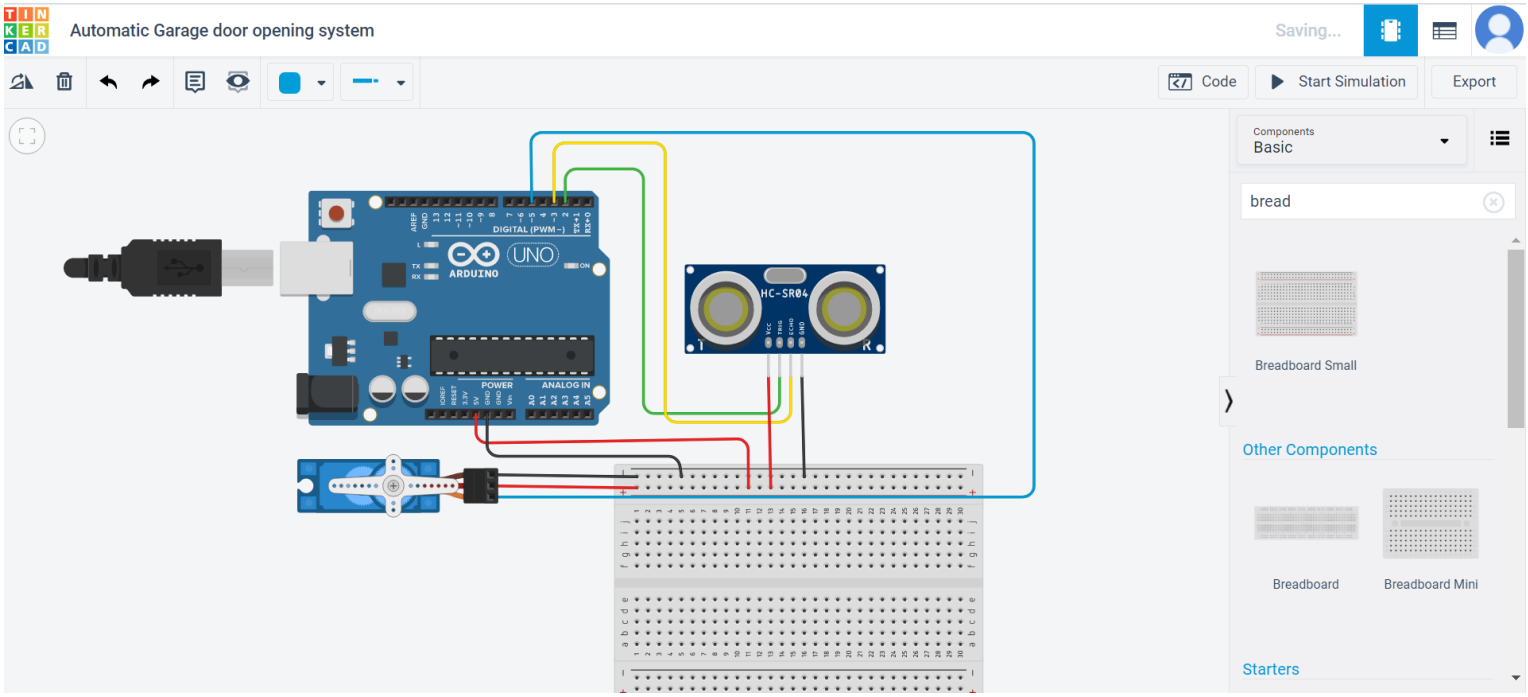
Develop an "Automatic garage door opening system". Use an Ultrasonic sensor to detect if there is a vehicle in front of the garage. if any vehicle is detected open the garage door (rotate the servo motor) for some time and close it.

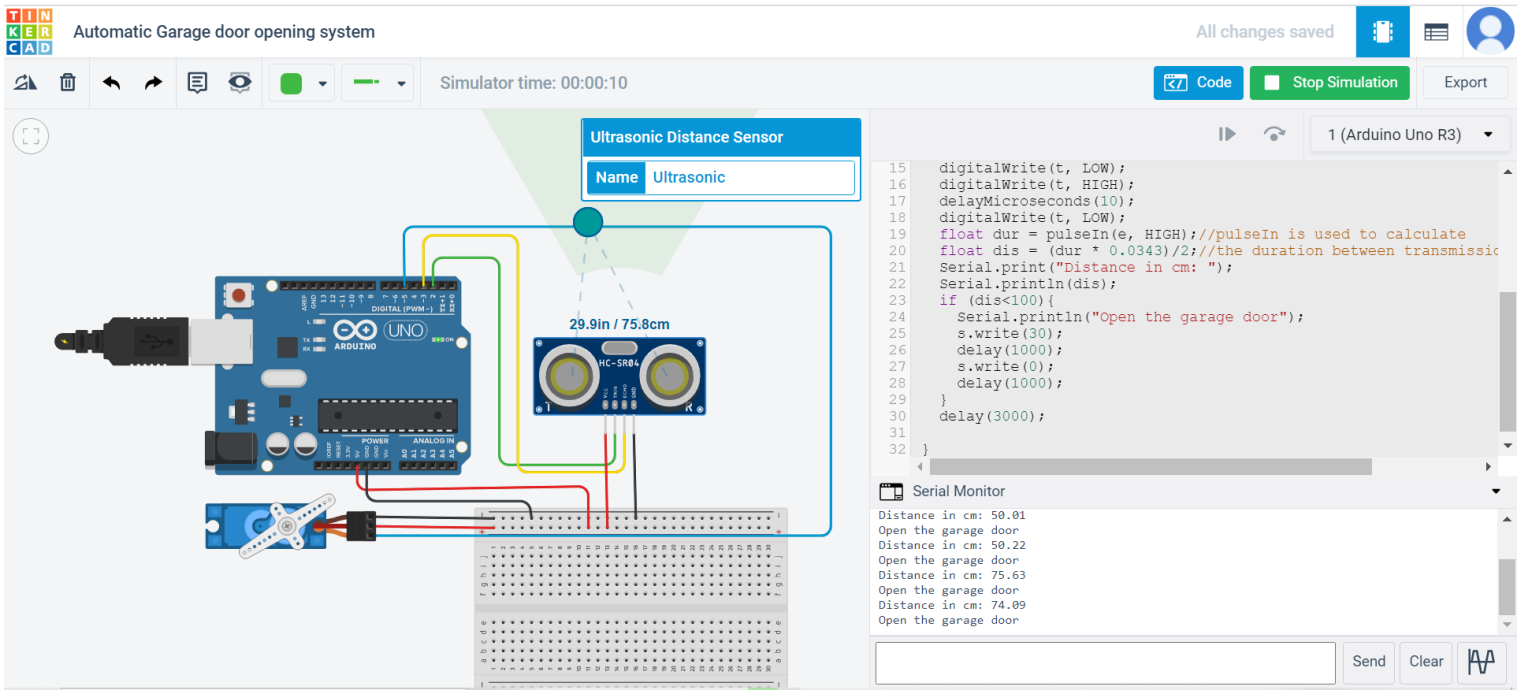
Code –

```
int t=2;
int e=3;
#include<Servo.h>
Servo s;
void setup()
{
  s.attach(5);
  pinMode(t, OUTPUT);
  pinMode(e, INPUT);
  Serial.begin(9600);
}
//formula for calculations is (duration/2)*vel of sound (340m/s)
void loop()
{
  digitalWrite(t, LOW);
  digitalWrite(t, HIGH);
  delayMicroseconds(10);
  digitalWrite(t, LOW);
  float dur = pulseIn(e, HIGH);//pulseIn is used to calculate
  float dis = (dur * 0.0343)/2;//the duration between transmission and reception
  Serial.print("Distance in cm: ");
  Serial.println(dis);
  if (dis<100){
    Serial.println("Open the garage door");
    s.write(30);
    delay(1000);
```

```
    s.write(0);
    delay(1000);
  }
  delay(3000);
}
```

Screenshots





Link to working video:

https://drive.google.com/file/d/1ucVcdyZ20-yQ2V0dTIICDuclJVX2VD_2/view?usp=sharing