Assignment 2

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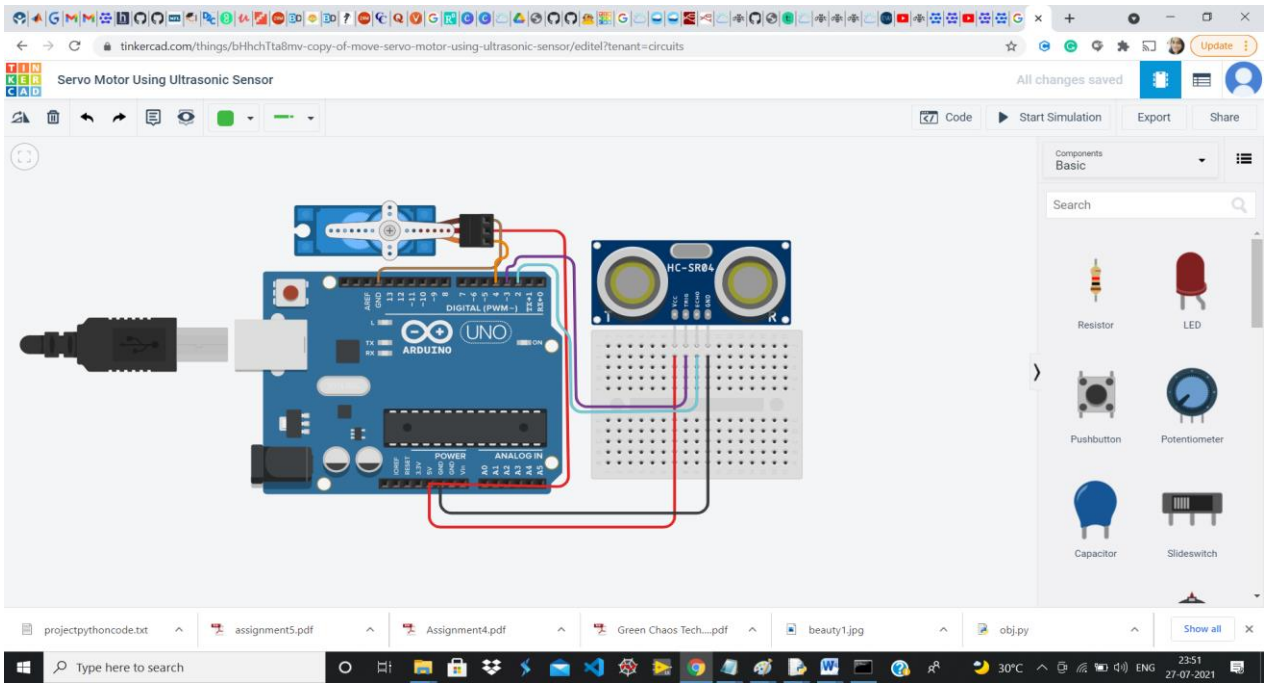
2) Develop an "Automatic garage door opening system". Use an Ultrasonic sensor to detect if there is a vehicle in front of the garage. if any vehicle is detected open the garage door (rotate the servo motor) for some time and close it.



CODE:

```
#include <Servo.h>

#define trigPin 3

#define echoPin 2

Servo servo;

int sound = 250;

void setup() {

Serial.begin (9600);

pinMode(trigPin, OUTPUT);

pinMode(echoPin, INPUT);
```

```
servo.attach(4);
}
void loop() {
long duration, distance;
digitalWrite(trigPin, LOW);
delayMicroseconds(2);
digitalWrite(trigPin, HIGH);
delayMicroseconds(10);
digitalWrite(trigPin, LOW);
duration = pulseIn(echoPin, HIGH);
distance = (duration/2) / 29.1;
if (distance < 5) {
Serial.println("the distance is less than 5");
servo.write(90);
}
else {
servo.write(0);
}
if (distance > 60 || distance <= 0){
Serial.println("The distance is more than 60");
}
else {
Serial.print(distance);
Serial.println(" cm");
}
delay(500);
}
```