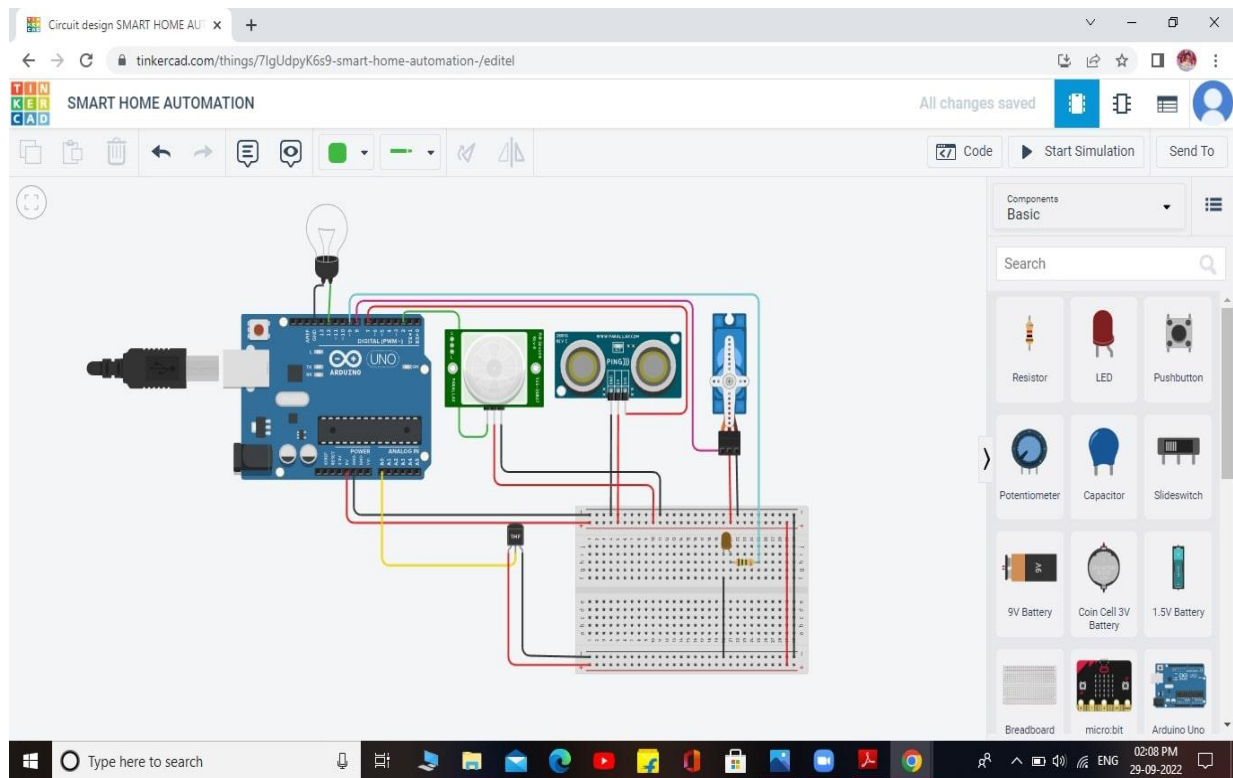


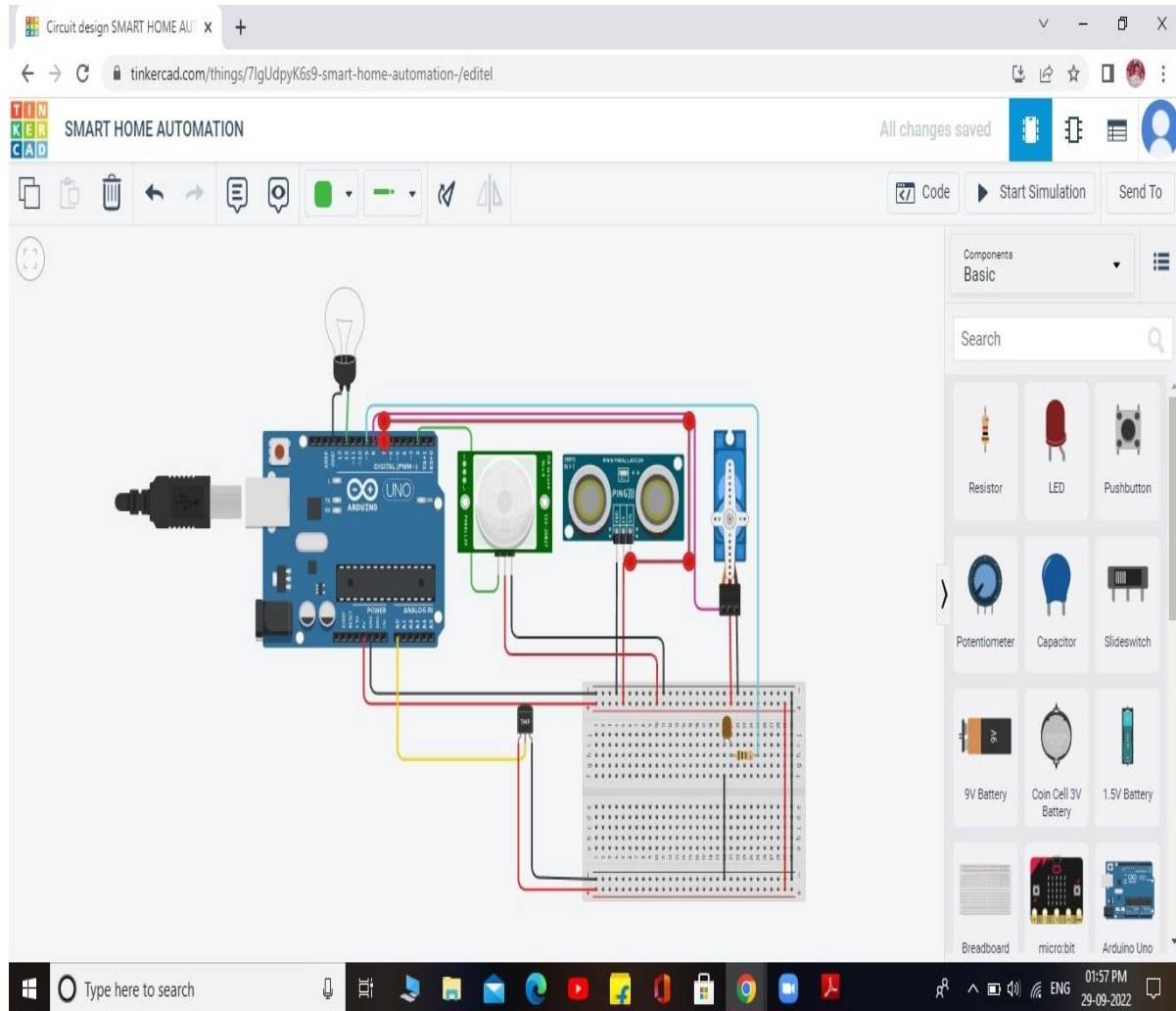
# ASSIGNMENT 1:

## SMART HOME AUTOMATION

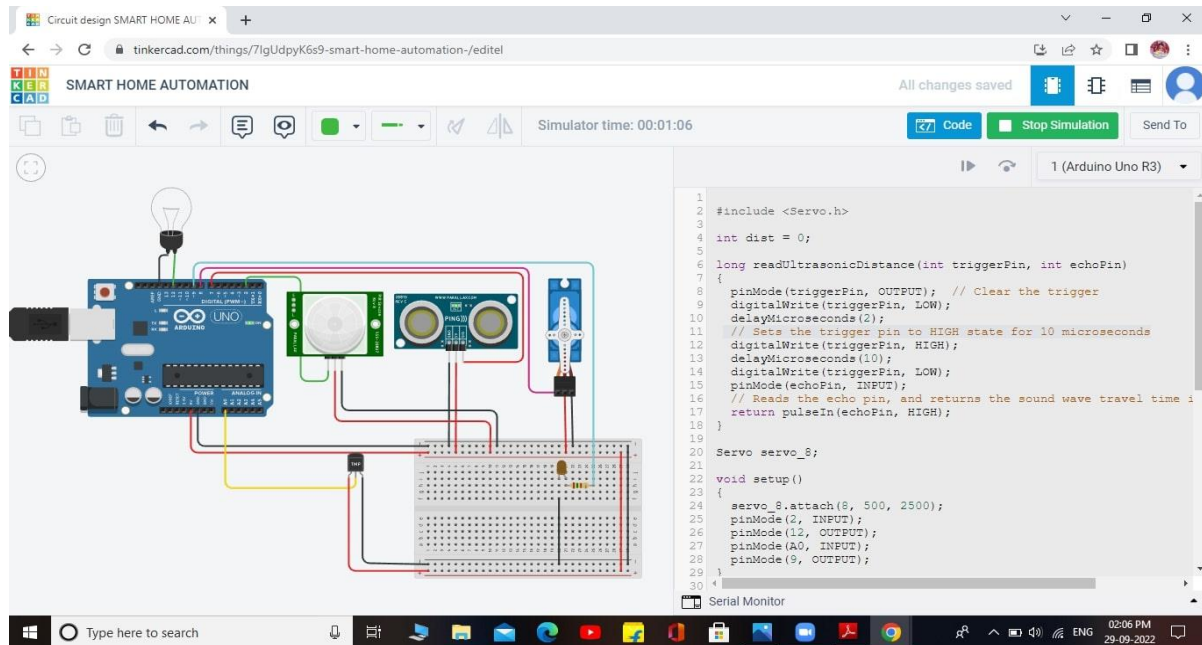
### USING TINKERCAD



# USING TINKERCAD CONNECTING THE CIRCUIT



# AFTER INSERTING THE CODE



## PROGRAM CODE :

```
#include <Servo.h>
```

```
int dist = 0;
```

```
long readUltrasonicDistance(int triggerPin, int echoPin)
```

```
{
```

```
    pinMode(triggerPin, OUTPUT); // Clear the trigger
```

```
    digitalWrite(triggerPin, LOW);
```

```
    delayMicroseconds(2);
```

```
    // Sets the trigger pin to HIGH state for 10 microseconds
```

```
    digitalWrite(triggerPin, HIGH);
```

```
    delayMicroseconds(10);
```

```
    digitalWrite(triggerPin, LOW);
```

```
    pinMode(echoPin, INPUT);
```

```
    // Reads the echo pin, and returns the sound wave travel time in microseconds
```

```
    return pulseIn(echoPin, HIGH);
```

```
}
```

```
Servo servo_8;
```

```
void setup()
```

```
{
```

```
    servo_8.attach(8, 500, 2500);
```

```
    pinMode(2, INPUT);
```

```
    pinMode(12, OUTPUT);
```

```
pinMode(A0, INPUT);
```

```
pinMode(9, OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
  dist = 0.01723 * readUltrasonicDistance(7, 7);
```

```
  if (dist <= 100) {
```

```
    servo_8.write(90);
```

```
    delay(1000); // Wait for 1000 millisecond(s)
```

```
  } else {
```

```
    servo_8.write(0);
```

```
    delay(1000); // Wait for 1000 millisecond(s)
```

```
  }
```

```
  if (digitalRead(2) == 1) {
```

```
    digitalWrite(12, HIGH);
```

```
    delay(1000); // Wait for 1000 millisecond(s)
```

```
  } else {
```

```
    digitalWrite(12, LOW);
```

```
    delay(1000); // Wait for 1000 millisecond(s)
```

```
  }
```

```
  if (analogRead(A0) > 200) {
```

```
    digitalWrite(9, HIGH);
```

```
    delay(1000); // Wait for 1000 millisecond(s)
}
else
{

    digitalWrite(9, LOW);
    delay(1000); // Wait for 1000 millisecond(s)
}
}
```

# OUTPUT:

