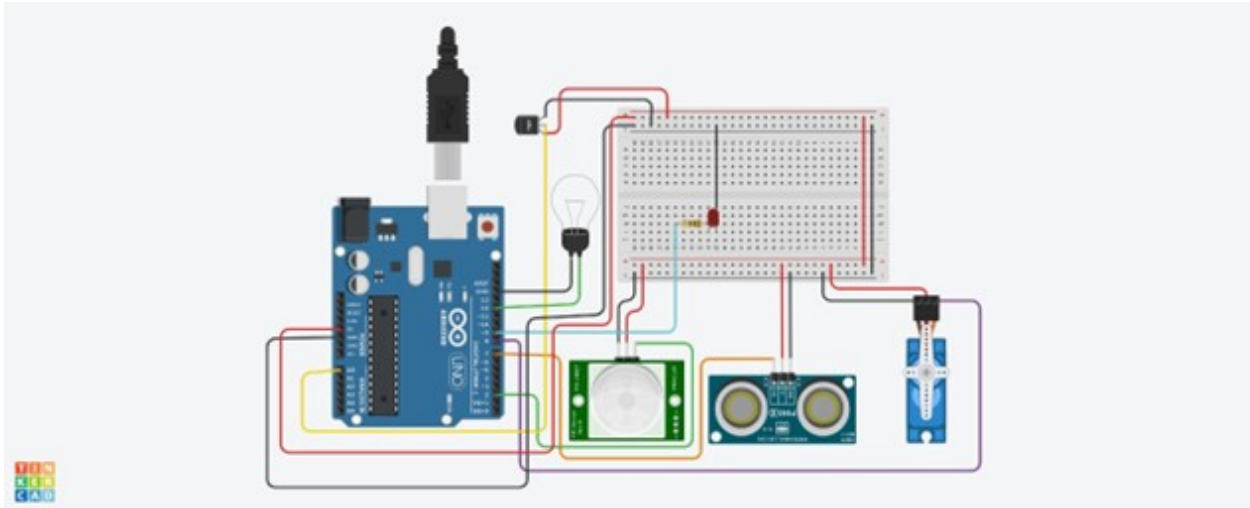


ASSIGNMENT 1 - HOME AUTOMATION

SARAVANAN S 113119UG03092

CIRCUIT :



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)
```

```
}
```

```
}
```

TINKERCAD LINK :

<https://www.tinkercad.com/things/7IV68hGUW5V-neat-tumelo-luulia/editel?sharecode=l8Q0lPz33Wtv2RUkavarascqH8ZiVImQJyo46hjCYMrQ>