

Assignment -1
Python Programming

Assignment Date	13 September 2022
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Maximum Marks	2 Marks

Question-1:

Make a Smart Home in Tinkercad, using 2+ sensors, Led, Buzzer in single code and circuit.

Code:

```
int distance = 0;

int cm = 0;

long readUltrasonicDistance(int triggerPin, int echoPin)
{
    pinMode(triggerPin, OUTPUT); // Clear the trigger
    digitalWrite(triggerPin, LOW);
    delayMicroseconds(2);
    digitalWrite(triggerPin, HIGH);
    delayMicroseconds(10);
    digitalWrite(triggerPin, LOW);
    pinMode(echoPin, INPUT);
    return pulseIn(echoPin, HIGH);
}

void setup()
{Serial.begin(9600);

    pinMode(2, OUTPUT);
    pinMode(3, OUTPUT);
    pinMode(4, OUTPUT);
}

void loop()
{
    distance = 330;
    cm = 0.01723 * readUltrasonicDistance(6, 7);
```

```
Serial.print(cm);  
Serial.println("cm");  
if (cm > distance) {  
    digitalWrite(2, LOW);  
    digitalWrite(3, LOW);  
    digitalWrite(4, LOW);  
} else {  
    if (cm > 230) {  
        digitalWrite(2, LOW);  
        digitalWrite(3, LOW);  
        digitalWrite(4, HIGH);  
    } else  
    {  
        if (cm > 100) {  
            digitalWrite(2, LOW);  
            digitalWrite(3, HIGH);  
            digitalWrite(4, LOW);  
        } else  
        {  
            if (cm > 1) {  
                digitalWrite(2, HIGH);  
                digitalWrite(3, LOW);  
                digitalWrite(4, LOW);  
            } else  
            {  
                digitalWrite(2, LOW);  
                digitalWrite(3, LOW);  
                digitalWrite(4, LOW);  
            }  
        }  
    }  
}
```

```
}  
delay(100);  
}
```

