

## ASSIGNMENT 1

### Build a smart home in Tinkercad

Assignment Date	16 November 2022
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Maximum Marks	2 Marks

**Question:**

Build a smart home in Tinkercad use atleast 2 sensors, led, buzzer in a circuit. Simulate in a single code.

**Code:**

```
#Assignment1:
```

```
int trigger_pin=2;
```

```
int echo_pin=3;
```

```
int time;
```

```
int distance;
```

```
void setup()
```

```
{
```

```
  Serial.begin(9600);
```

```
  pinMode(trigger_pin,OUTPUT);
```

```
pinMode(echo_pin,INPUT);  
pinMode(4,INPUT);  
pinMode(13,OUTPUT);  
}
```

```
void loop()  
{  
  digitalWrite(trigger_pin,HIGH);  
  delayMicroseconds(10);  
  digitalWrite(trigger_pin,LOW);  
  time=pulseIn(echo_pin,HIGH);  
  distance=(time*0.34)/2;  
  if(distance<=10)  
  
  {  
    Serial.println("Door open");  
    Serial.print("Distance=");  
    Serial.println(distance);  
  }  
}
```

```
    delay(500);  
}
```

```
else{  
    Serial.println("Door closed");  
    Serial.println("Distance=");  
    Serial.println(distance);  
    delay(500);  
    int p=digitalRead(4);
```

```
    if(p)  
    {  
        digitalWrite(13,HIGH);  
        Serial.println("motion detector");  
    }
```

```
    else{  
        digitalWrite(13,LOW);  
        Serial.println("not detected");
```

