

Assignment -1

Smart Home

Date	29 September 2022
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Maximum Marks	2 Marks

Question-1:

Build a smart home in Tinker cad with 2 sensors, an Led, buzzer and submit it

Code :

```
int diods = 13;
```

```
int pin = A0;
```

```
int value;
```

```
int red = 10;
```

```
int yellow = 11;
```

```
int green = 12;
```

```
int echo = 2;
```

```
int trigger = 3;
```

```
int const Pin_Gas = A1;
```

```
int green1 = 7;
```

```
int yellow1 = 6;
```

```
int red1 = 5;
```

```
void setup()
```

```
{
```

```
  pinMode(diods, OUTPUT);
```

```
  pinMode(pin, INPUT);
```

```
  pinMode(red, OUTPUT);
```

```
  pinMode(yellow, OUTPUT);
```

```
  pinMode(green, OUTPUT);
```

```
pinMode(trigger, OUTPUT);
```

```
pinMode(echo, INPUT);
```

```
pinMode(green1, OUTPUT);
```

```
pinMode(yellow1, OUTPUT);
```

```
pinMode(red1, OUTPUT);
```

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

```
}
```

```
void loop()
```

```
{
```

```
  //Lamp
```

```
  value = analogRead(pin);
```

```
  analogWrite(diods, map(value, 1023, 0, 0, 255));
```

```
  //Distance sensor
```

```
  digitalWrite(trigger, LOW);
```

```
  delayMicroseconds(2);
```

```
  digitalWrite(trigger, HIGH);
```

```
  delayMicroseconds(10);
```

```
  digitalWrite(trigger, LOW);
```

```
  long duration = pulseIn(echo, HIGH);
```

```
  long distance = (duration / 5) / 29.1;
```

```
  if(distance < 50 && distance >= 20)
```

```
  {
```

```
    digitalWrite(green, HIGH);
```

```
    digitalWrite(yellow, LOW);
```

```
    digitalWrite(red, LOW);
```

```
  }
```

```
if(distance < 20 && distance >= 5)
```

```
{
```

```
    digitalWrite(green, LOW);
```

```
    digitalWrite(yellow, HIGH);
```

```
    digitalWrite(red, LOW);
```

```
}
```

```
if(distance < 5)
```

```
{
```

```
    digitalWrite(green, LOW);
```

```
    digitalWrite(yellow, LOW);
```

```
    digitalWrite(red, HIGH);
```

```
}
```

```
//Smoke Detector
```

```
int input = analogRead(Pin_Gas);
```

```
input = map(input, 300, 750, 0, 100);
```

```
if(input < 30)
```

```
{
```

```
    digitalWrite(green1, HIGH);
```

```
    digitalWrite(yellow1, LOW);
```

```
    digitalWrite(red1, LOW);
```

```
}
```

```
if(input >= 30 && input < 50)
```

```
{
```

```
    digitalWrite(yellow1, HIGH);
```

```
    digitalWrite(red1, LOW);
```

```
    digitalWrite(green1, LOW);
```

```
}
```

```
if(input >= 80)
```

```
{
```

```
    digitalWrite(yellow1, LOW);
```

```
    digitalWrite(red1, HIGH);
```

```

digitalWrite(green1, LOW);

}

delay(150);

}

```

Output:



