

### Assignment-1

|                     |                   |
|---------------------|-------------------|
| Assignment Date     | 19 September 2022 |
| Student Name        | Madhavan.v        |
| Student Roll Number | 911019106006      |
| Maximum Marks       | 2 marks           |

#### QUESTION 1 :

**BUID A SMART HOME AUTOMATION USING THINKERCAD**

**USE ATLEAST 2 SENSORS, LED, BUZZER IN A CIRCUIT.**

**SIMULATE IN A SINGLE CODE**

#### SOLUTION:

```
int baselineTemp = 0;
```

```
int celsius = 0;
```

```
int fahrenheit = 0;
```

```
void setup()
```

```
{
```

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

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

```
  pinMode(2, OUTPUT);
```

```
  pinMode(3, OUTPUT);
```

```
  pinMode(4, OUTPUT);
```

```
  pinMode(7, OUTPUT);
```

```
}
```

```
void loop()
```

```
{
```

```
  baselineTemp = 40;
```

```
celsius = map(((analogRead(A0) - 20) * 3.04), 0, 1023, -40, 125);
```

```
fahrenheit = ((celsius * 9) / 5 + 32);
```

```
Serial.print(celsius);
```

```
Serial.print(" C, ");
```

```
Serial.print(fahrenheit);
```

```
Serial.println(" F");
```

```
if (celsius < baselineTemp) {
```

```
    digitalWrite(2, LOW);
```

```
    digitalWrite(3, LOW);
```

```
    digitalWrite(4, LOW);
```

```
}
```

```
if (celsius >= baselineTemp && celsius < baselineTemp + 10) {
```

```
    digitalWrite(2, HIGH);
```

```
    digitalWrite(3, LOW);
```

```
    digitalWrite(4, LOW);
```

```
}
```

```
if (celsius >= baselineTemp + 10 && celsius < baselineTemp + 20) {
```

```
    digitalWrite(2, HIGH);
```

```
    digitalWrite(3, HIGH);
```

```
    digitalWrite(4, LOW);
```

```
}
```

```
if (celsius >= baselineTemp + 20 && celsius < baselineTemp + 30) {
```

```
    digitalWrite(2, HIGH);
```

```
    digitalWrite(3, HIGH);
```

```
    digitalWrite(4, HIGH);
```

```
    tone(7, 220, 100);
```

```
    delay(100);
```

```
}
```

```
if (celsius >= baselineTemp + 30) {
```

```

digitalWrite(2, HIGH);

digitalWrite(3, HIGH);

digitalWrite(4, HIGH);

tone(7, 220, 100);

delay(100);

}

delay(1000);

}

```

**OUTPUT:**

