**Assignment-1**

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| 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:**



