**Assignment-I**

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| Assignment Date | 16 September 2022 |
| Student name | Princy Diana A |
| Register Number | 422119104017 |
| Maximum Marks | 2 Marks |

**Question:**

Make a smart Home in Tinkercard using 2+ sensors, led, Buzzer in single code and circuit

**Program:**

|  |  |
| --- | --- |
|  |  |
|  | int |
|  | t=2; |
|  | int e=3; |
|  | void setup() |
|  | { |
|  | Serial.begin(9600); |
|  | pinMode(t,OUTPUT); |
|  | pinMode(e,INPUT); |
|  | pinMode(12,OUTPUT); |
|  | pinMode(11,OUTPUT); |
|  |  |
|  | } |
|  |  |
|  | void loop() |
|  | { |
|  | //ultrasonic sensor |
|  | digitalWrite(t,LOW); |
|  | digitalWrite(t,HIGH); |
|  | delayMicroseconds(10); |
|  | digitalWrite(t,LOW); |
|  | float dur=pulseIn(e,HIGH); |
|  | float dis=(dur\*0.0456)/2; |
|  | Serial.print("distance is: "); |
|  | Serial.println(dis); |
|  |  |
|  | //LED ON |
|  | if(dis>=100) |
|  | { |
|  | digitalWrite(8,HIGH); |
|  | digitalWrite(7,HIGH); |
|  | } |
|  | //Buzzer For ultrasonic Sensor if(dis>-100) |
|  | if(dis>=100) |
|  | { |
|  | for(int i=0; i<=30000; i=i+10) |
|  | { |
|  | tone(12,i); |
|  | delay(1000); |
|  | noTone(12); |
|  | delay(1000); |
|  | } |
|  | } |
|  | //Temperate Sensor |
|  | double a= analogRead(A0); |
|  | double t=(((a/1024)\*5)-0.5)\*100; |
|  | Serial.print("Temp Value: "); |
|  | Serial.println(t); |
|  | delay(1000); |
|  |  |
|  | //LED ON |
|  | if(t>=100) |
|  | { |
|  | digitalWrite(8,HIGH); |
|  | digitalWrite(7,HIGH); |
|  | } |
|  | //Buzzer For temperature Sensor |
|  | if(t>=100) |
|  | { |
|  | for(int i=0; i<=30000; i=i+10) |
|  | { |
|  | tone(11,i); |
|  | delay(1000); |
|  | noTone(11); |
|  | delay(1000); |
|  | } |
|  | } |
|  | //LED OFF |
|  | if(t<=100) |
|  | { |
|  |  |
|  | digitalWrite(8,LOW); |
|  | digitalWrite(7,LOW); |
|  | } |
|  | } |

**Circuit:**

