**Assignment -1**

Python Programming

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| Assignment Date | 19 September 2022 |
| Student Name | M. Karunanithi |
| Student Roll Number | 510119106701 |
| Maximum Marks | 2 Marks |

**Question:**

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| **Solution:** |
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| #include<Servo.h>  int us = 6;  int servo = 7;  Servo servo1;  void setup() {  Serial.begin(9600);  servo1.attach(servo);  pinMode(2,INPUT);  pinMode(4,OUTPUT);  pinMode(11,OUTPUT);  pinMode(12,OUTPUT);  pinMode(13,OUTPUT);  pinMode(A0,INPUT);  digitalWrite(2,LOW);  digitalWrite(11,HIGH);    }  void loop() {    long duration, inches, cm;  pinMode(us, OUTPUT);  digitalWrite(us, LOW);  delayMicroseconds(2);  digitalWrite(us, HIGH);  delayMicroseconds(5);  digitalWrite(us, LOW);    pinMode(us, INPUT);  duration = pulseIn(us, HIGH);    inches = microsecondsToInches(duration);  cm = microsecondsToCentimeters(duration);      servo1.write(0);    if(cm < 30)  {  servo1.write(120);  Serial.println("A Person Arrived, Door is Opening......");  delay(2000);  }  else  {  servo1.write(0);  Serial.println("Door is Closed.....");  }      int pir = digitalRead(2);    if(pir == HIGH)  {  digitalWrite(4,HIGH);  delay(3000);  }  else if(pir == LOW)  {  digitalWrite(4,LOW);  }    float value=analogRead(A0);  float temp=(((value/1024)\*5.0199)-0.5)\*100;      Serial.print("temp is ");  Serial.println(temp);  delay(3000);      if(temp > 20)  {  digitalWrite(12,HIGH);  digitalWrite(13,LOW);  }  else  {  digitalWrite(12,LOW);  digitalWrite(13,LOW);  }  }  long microsecondsToInches(long microseconds) {  return microseconds / 74 / 2;  }  long microsecondsToCentimeters(long microseconds) {  return microseconds / 29 / 2;  } |  |
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