

Assignment -1
Circuit

Assignment Date	27 September 2022
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Student Roll Number	922519205074
Maximum Marks	2 Marks

Question-1:

Create circuit with Piezo alarm, PIR sensor, Temperature sensor with along sound in one manner if the temperature is above 60 C. Alarm should sound with another frequency if motion is detected in PIR sensor

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:

