ASSIGNMENT NO.3

Aim: Design and implement real time monitoring system using android phone (Blynk App.) such as ‘soil parameter monitoring'.

Code:

```
const int soilPin = A0;   // Soil sensor analog pin
const int tempPin = A1;   // LM35 output pin
void setup() {
  Serial.begin(9600);
  Serial.println("Soil and Temperature Monitoring System");
  Serial.println("-------------------------------------");
 }
void loop() {
  // Soil Moisture
  int soilValue = analogRead(soilPin);
  int soilPercent = map(soilValue, 1023, 200, 0, 100); // calibrate as needed
// Temperature (LM35 gives 10 mV per °C)
  int tempValue = analogRead(tempPin);
  float voltage = tempValue * (5.0 / 1023.0);
  float temperatureC = voltage * 100.0;  // Convert voltage to °C
  // Print readings
  Serial.print("Temperature: ");
  Serial.print(temperatureC);
  Serial.print(" °C  |  Soil Moisture: ");
  Serial.print(soilPercent);
  Serial.println(" %");

  delay(2000);
}
```

Output:

Serial Monitor

```
Soil and Temperature Monitoring System
---------------------------------------
Temperature: 74.78 Â°C  |  Soil Moisture: 124 %
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```