AIM:

To monitor the soil moisture level using Raspberry pi

PROCEDURE:

*connect the power of soil moisture sensor to the 3.3V unit of circuit board
*connect the signal of soil moisture sensor to the Anolog Input AO
*connect the ground of soil moisture sensor to the ground of the circuit board

COMPENTS USED:

| Name | Quantity | Component |
|---|---|---|
| U1 | 1 | Arduino Uno R3 |
| SEN1 | 1 | Soil Moisture Sensor |

## CODE:

```
int moistureValue;
float moisturePercentage;
void setup()
{
Serial.begin(9600);
pinMode(13, OUTPUT);
pinMode(12, OUTPUT);
pinMode(11, OUTPUT);
}
void loop()
{
moistureValue = analogRead(A0);
moisturePercentage = ((moistureValue/539.00) * 100);
Serial.print("Moisture Value: ");
Serial.print(moistureValue);
Serial.print("\nMoisture Percentage: ");
Serial.print(moisturePercentage);
if (moisturePercentage < 15.00)
{
  digitalWrite(13, HIGH);
  delay(1000);
  digitalWrite(13, LOW);
  delay(1000);
}
if ((moisturePercentage < 70.00) && (moisturePercentage >= 15.00))
```

```
{
  digitalWrite(12, HIGH);
  delay(1000);
  digitalWrite(12, LOW);
  delay(1000);
}
if ((moisturePercentage <= 100.00) && (moisturePercentage >= 70.00))
{
  digitalWrite(11, HIGH);
  delay(1000);
  digitalWrite(11, LOW);
  delay(1000);
}
Serial.print("\n*\n");
delay(1000);
}
```

OUTPUT:

Moisture Value:

324

Moisture Percentage:

60.11

RESULT:

Thus the expected Output is achieved successfully