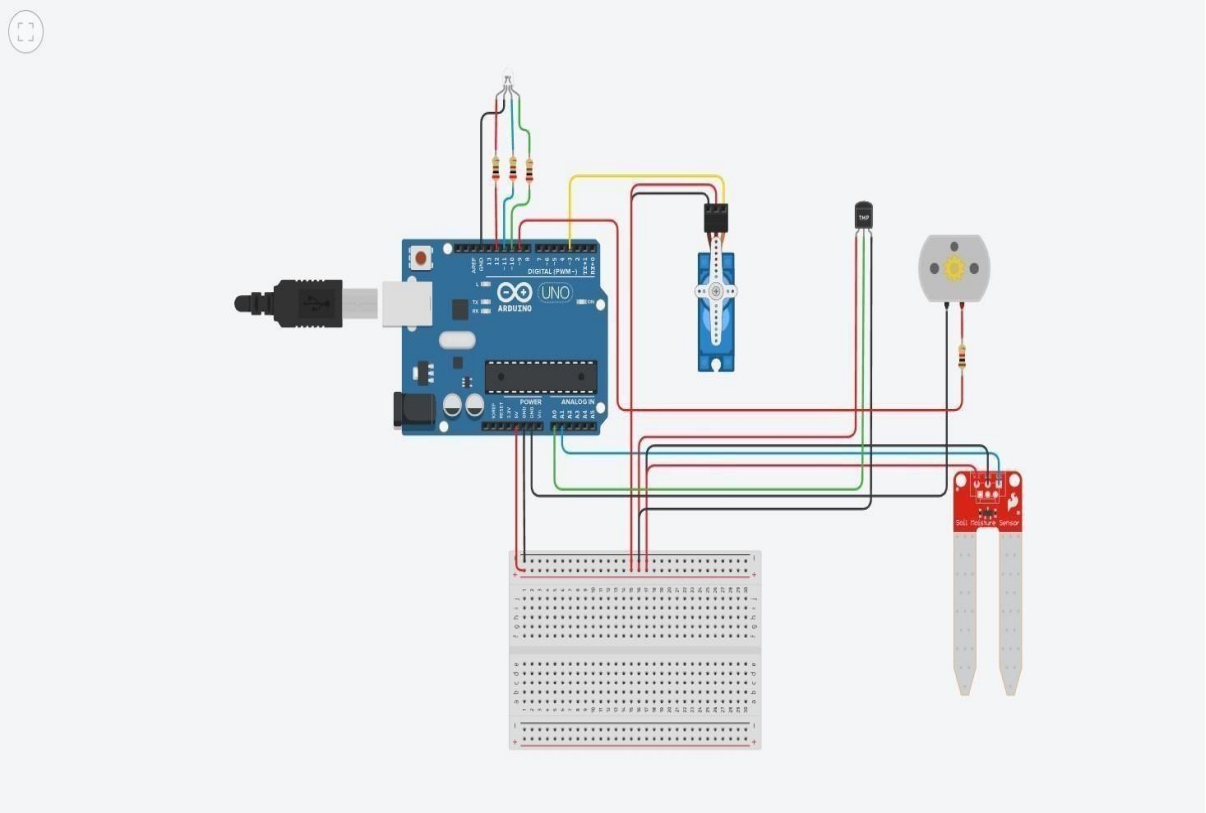
TEAM ID: PNT2022TMID14625

```
#include <Servo.h>
Servo s; int Sensor =
0; int data = 0; int
motorPin = 9;

void setup()
{
  Serial.begin(9600);   pinMode(A0,INPUT);
//Temperature Sensor    pinMode(A1,INPUT); //Soil
Moisture Sensor   pinMode(10,OUTPUT);
 //GREEN light for LED   pinMode(11,OUTPUT);
 //BLUE light for LED   pinMode(12,OUTPUT);
 //RED light for LED   s.attach(3);
 //Servo Motor    pinMode(motorPin,
OUTPUT); //DC motor
 } void loop(){
  Sensor = analogRead(A1);  //Reads data from Soil Moisture sensor   data =
map(Sensor,0, 1023, 0, 100);  //Low analog value indicates HIGH moisture
level and High analog value indicates LOW moisture level
  //data = map(analogValue,fromLOW,fromHIGH,toLOW,toHIGH)
  Serial.print("Soil Moisture value:");
  Serial.println(data);
  //'data = 0' indicates wet and 'data = 100' indicates dry
```

```
 double a = analogRead (A0); //Reads data from Temperature sensor
double t = (((a/1024)*5)-0.5)*100;     Serial.print("Temperature value:");
Serial.println(t);

 if (t>40 & t<50){     digitalWrite(10,0);
digitalWrite(11,1);     digitalWrite(12,0);
s.write(90);       digitalWrite(motorPin,
HIGH);      Serial.println("Water
Partially Flows");
   }

 else if (t>50){      digitalWrite(10,0);
digitalWrite(11,0);     digitalWrite(12,1);
s.write(180);       digitalWrite(motorPin,
HIGH);      Serial.println("Water Fully
Flows");     }

 else if (t>30 & data<30){      digitalWrite(10,1);
digitalWrite(11,1);     digitalWrite(12,0);
s.write(90);
digitalWrite(motorPin, HIGH);     Serial.println("Water
Partially Flows");
 }

 else if (data<50){     digitalWrite(10,0);
digitalWrite(11,1);     digitalWrite(12,1);
```

```
s.write(90);     digitalWrite(motorPin, HIGH);
Serial.println("Water Partially Flows");
  }


  else{     digitalWrite(10,1);      digitalWrite(11,0);
digitalWrite(12,0);     s.write(0);
digitalWrite(motorPin,
LOW);
Serial.println("Water Does Not Flow");
  }
  Serial.println("--------------------------------------------------");   delay(1000);
}
```

Circuit Diagram



Components Used

Name	Quantity	Component
UAU	1	Arduino Uno R3
SERVOMS	1	Positional Micro Servo
DLED	1	LED RGB
R2 R3 R4	3	200 Ω Resistor
SENSMS	1	Soil Moisture Sensor
MSmall 6V DC Motor	1	DC Motor
RR	1	1 kΩ Resistor
UTS	1	Temperature Sensor [TMP36]

Schematic View