# Project Development Delivery Of Sprint-1

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| --- | --- |
| Date | 09 Nov. 22 |
| Team Id | PNT2022TMID14185 |
| Project Name | Smart Farmer - IoT Enabled Smart Farming Application |

**PROGRAM**

#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(" "); delay(1000);

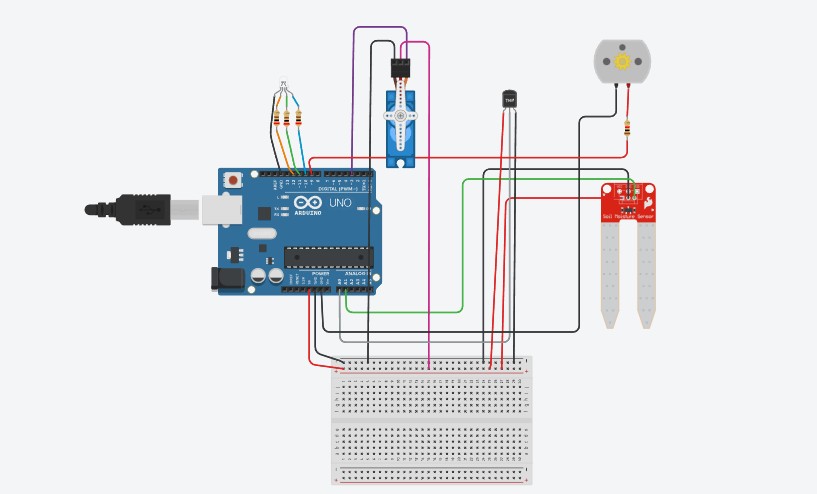
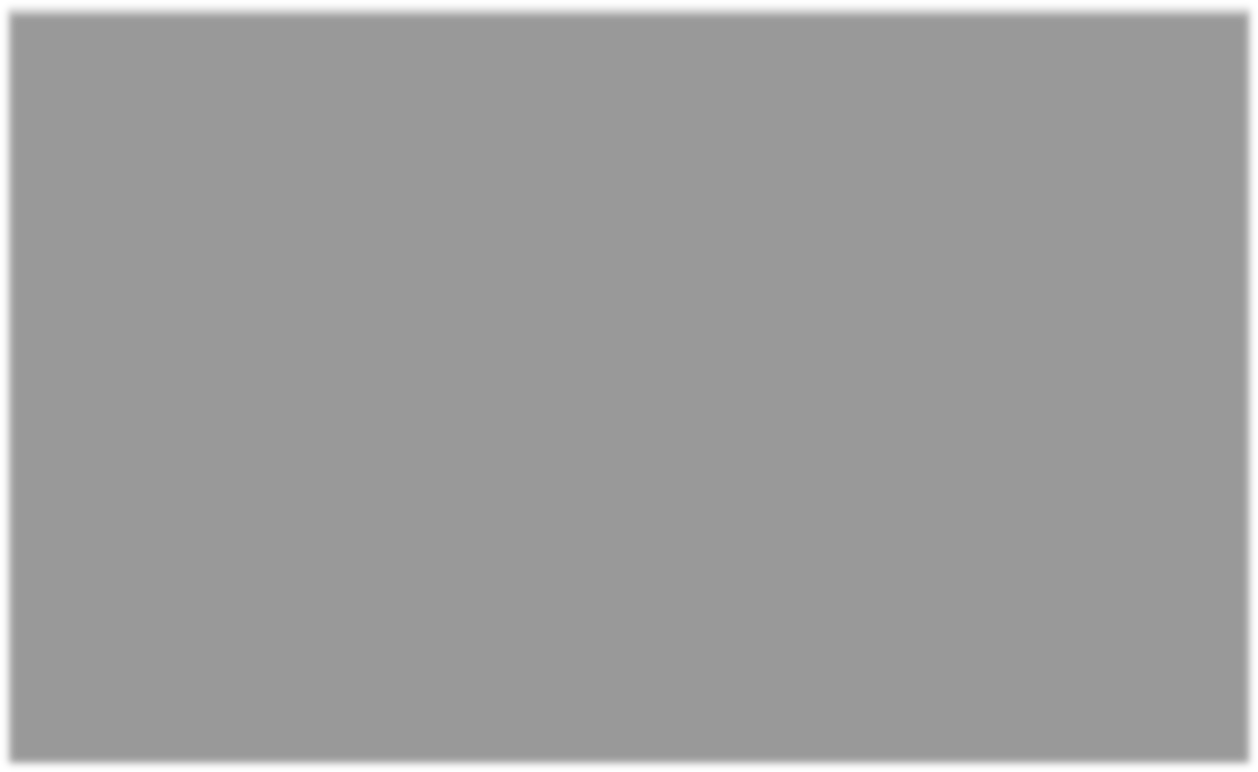
}

}

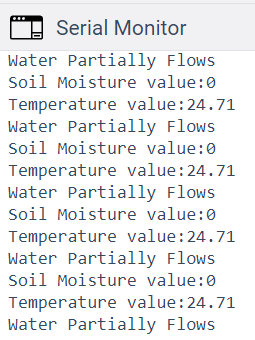
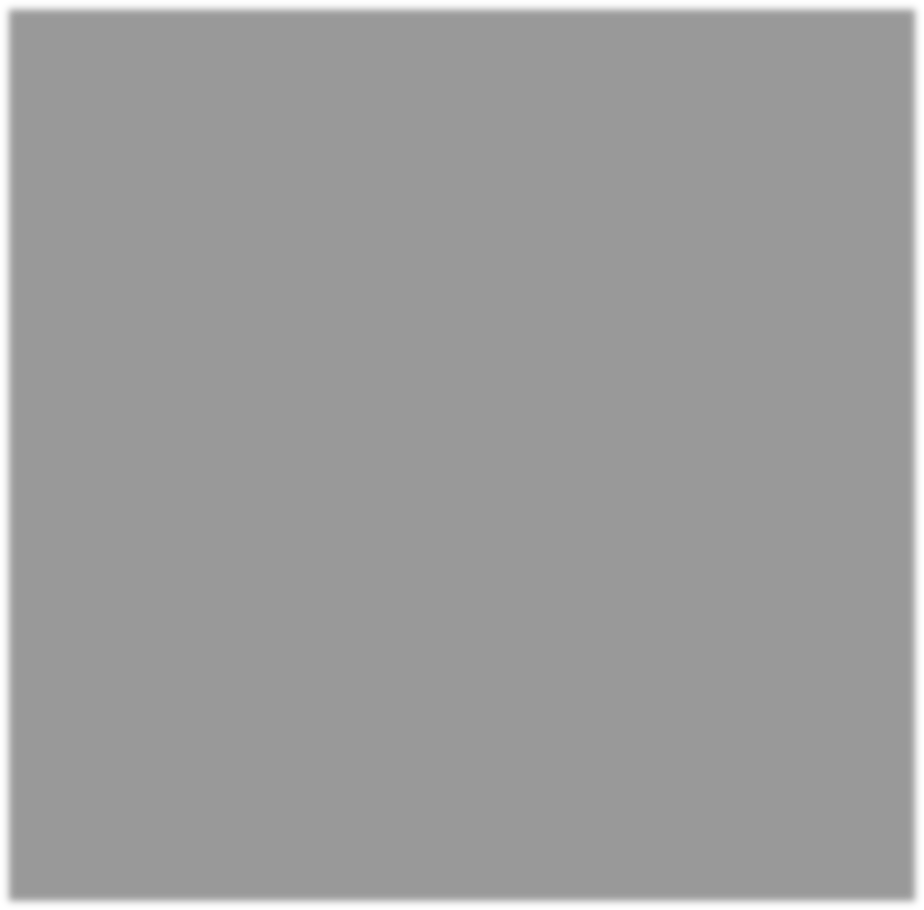
# COMPONENTS

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| --- | --- | --- |
| **S.NO** | **COMPONENTS** | **QUANTITY** |
| 1 | Arduino uno r3 | 1 |
| 2 | Micro servo | 1 |
| 3 | Led rgb | 1 |
| 4 | 200 Ω Resistor | 3 |
| 5 | Soil Moisture Sensor | 1 |
| 6 | DC Motor | 1 |
| 7 | 1KΩ Resistor | 1 |
| 8 | Temperature sensor(TMP36) | 1 |

**CIRCUIT DIAGRAM**



# OUTPUT



**SIMULATION LINK**

[https://www.tinkercad.com/things/9T64ABJ1hL6-brilliant-](https://www.tinkercad.com/things/9T64ABJ1hL6-brilliant-jofo/editel?tenant=circuits) [jofo/editel?tenant=circuits](https://www.tinkercad.com/things/9T64ABJ1hL6-brilliant-jofo/editel?tenant=circuits)