**SPRINT 1**

|  |  |
| --- | --- |
| Date | 29 October 2022 |
| Team ID | PNT2022TMID16797 |
| Project Name | Project – Smart Farmer-IoT Enabled smart Farming Application |

**Connecting Sensors with Arduino using C++ code**

#include "Arduino.h"

#include "dht.h"

#include "SoilMoisture.h"

#define dht\_apin A0 const int sensor\_pin = A1; //soil moisture int pin\_out = 9; dht DHT; int c=0; void setup() { pinMode(2, INPUT); //Pin 2 as INPUT pinMode(3, OUTPUT); //PIN 3 as OUTPUT pinMode(9, OUTPUT);//output for pump

} void loop()

{

if (digitalRead(2) == HIGH)

{

digitalWrite(3, HIGH); // turn the LED/Buzz ON delay(10000); // wait for 100 msecond digitalWrite(3, LOW); // turn the LED/Buzz OFF delay(100);

}

Serial.begin(9600); delay(1000);

DHT.read11(dht\_apin); //temprature float h=DHT.humidity; float t=DHT.temperature;

delay(5000); Serial.begin(9600); float moisture\_percentage;

int sensor\_analog; sensor\_analog = analogRead(sensor\_pin); moisture\_percentage = ( 100 - ( (sensor\_analog/1023.00) \*

100 ) ); float m=moisture\_percentage; delay(1000); if(m<40)//pump

{ while(m<40)

{

digitalWrite(pin\_out,HIGH); //open pump sensor\_analog = analogRead(sensor\_pin); moisture\_percentage = ( 100 - ( (sensor\_analog/1023.00) \*

100 ) ); m=moisture\_percentage; delay(1000);

} digitalWrite(pin\_out,LOW); //closepump

} if(c>=0) { mySerial.begin(9600); delay(15000); Serial.begin(9600); delay(1000);

Serial.print("\r"); delay(1000);

Serial.print((String)"update-

>"+(String)"Temprature="+t+(String)"Humidity="+h+(String

)"Moisture="+m); delay(1000);

}

}

**Circuit Diagram**

