Project Development Phase

Delivery Of Sprint-1

TITLE	Smart Farmer-IOT Enabled Smart Farming Application
DOMAIN NAME	INTERNET OF THINGS
TEAM ID	PNT2022TMID23830
Project Name	Smart Farmer - IoT Enabled Smart Farming Application
Leader Name	GOWSALYA L
Team Members Name	DEEPIKA B K MEGAVARSHINI G MONISHA N
MENTOR NAME	THIRUPPATHI M

Connecting Sensors with Arduino using C++ code:

```cpp
#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
```

```arduino
        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: