DELIVERY OF SPRINT-1

Team ID	PNT2022TMID43889
Project	Smart Farmer-IoT Enabled Smart Farming Application

C code for Arduino

```
//include libraries #include <dht.h>
#include <SoftwareSerial.h>

//define pins

#define dht_apin A0 // Analog Pin sensor is connected SoftwareSerial
mySerial(7,8);//serial port of gsm
const int sensor_pin = A1; // Soil moisture sensor O/P pin int pin_out
= 9;
//allocate variables 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;//moisture 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("AT+CMGF=1\r");
delay(1000);
```

```
Serial.print("AT+CMGS=\"+XXXXXXXXXX\"\r"); //replace X with 10 digit mobil e number
delay(1000); Serial.print((String)"update->"+(String)"Temprature="+t+(String)"Humidity="+h+(String)"Moisture ="+m); delay(1000);
Serial.write(0x1A); delay(1000);
mySerial.println("AT+CMGF=1");//Sets the GSM Module in Text Mode
delay(1000);

mySerial.println("AT+CMGS=\"+XXXXXXXXXX\"\r"); //replace X with 10 digit mobile number
delay(1000); mySerial.println((String)"update->"+(String)"Temprature="+t+(String)"Humidity="+h+(String)"Moisture ="+m);// message format


mySerial.println(); delay(100); Serial.write(0x1A); delay(1000);
c++;
}
}
```