# Smart Farmer-IOT Enabled Smart Farming Application

**IBM NALAIYATHIRAN**

# SPRINT-1

| TITLE | Smart Farmer-IOT Enabled Smart Farming Application |
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| **DOMAIN NAME** | INTERNET OF THINGS |
| **TEAM ID** | PNT2022TMID51347 |
| **LEADER NAME** | JESTO C J |
| **TEAM MEMBER NAME** | SUJITH S G<br>AKHIL R<br>NISHANTH  P S |

# 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**