

SRI SAIRAM ENGINEERING COLLEGE

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

SMART FARMER – IoT ENABLED SMART FARMING APPLICATION

IBM NALAIYATHIRAN

SPRINT-1

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|---------------------|---|
| TITLE | Smart Farmer – IoT enabled Smart Farming Application |
| DOMAIN NAME | Internet of Things |
| TEAM ID | PNT2022TMID04114 |
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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

