Sprint Delivery–1

Date	11 *November*2022
TeamID	PNT2022TMID41339
ProjectName	Smart *solutions for railways*

ConnectingSensorswithArduinousingC++code

```
#include
"Arduino.h"

#include"dht.h"

#include"SoilMoisture.h"

#definedht_apin A0
 const int sensor_pin = A1; //soil moisture
int pin_out =9;
```

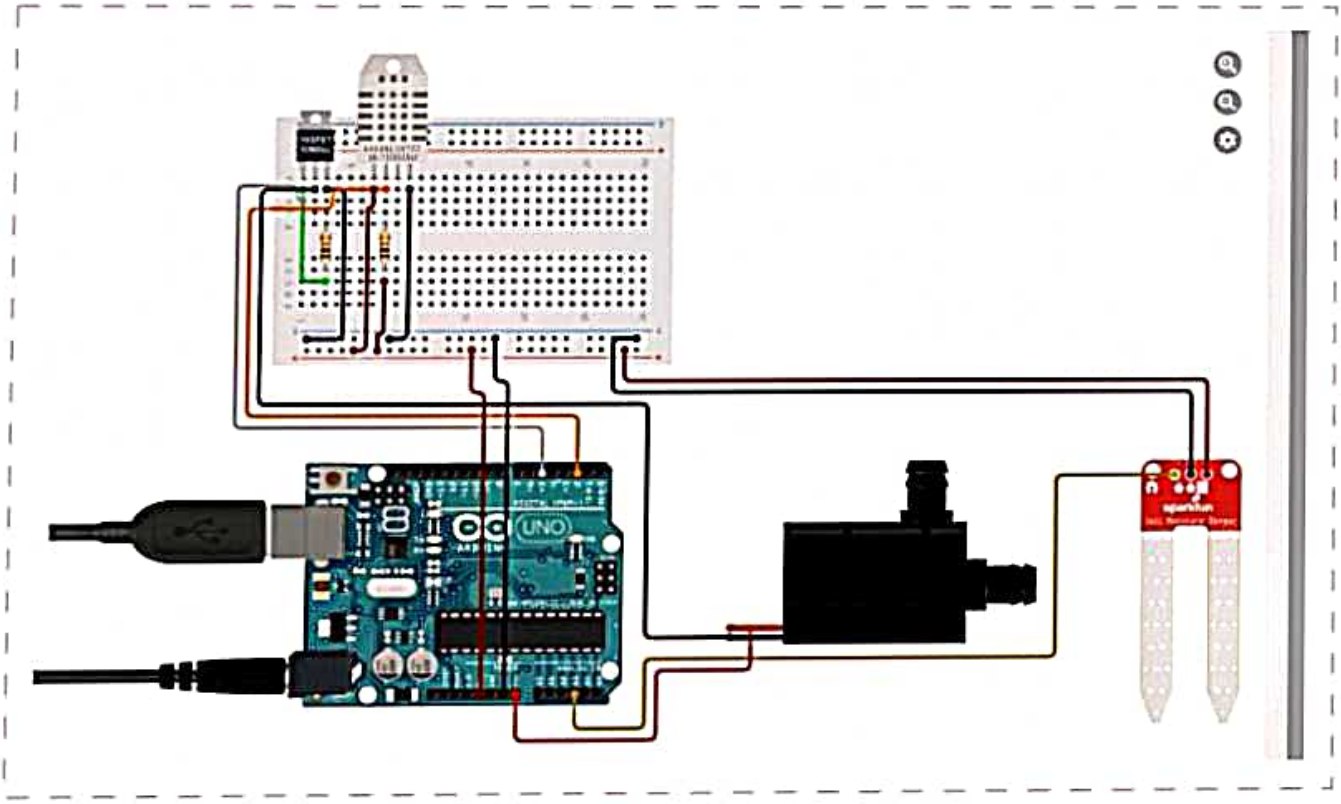
```
 dht DHT;
int
c=0;void
setup()

{
 pinMode(2, INPUT); //Pin 2 as
INPUTpinMode(3, OUTPUT); //PIN 3 as
OUTPUTpinMode(9,OUTPUT);//output
for pump

}
voidloop()
{

  if(digitalRead(2) == HIGH)
  {
   digitalWrite(3, HIGH); // turn the LED/Buzz
  ONdelay(10000); // wait for 100
  mseconddigitalWrite(3, LOW); // turn the
```

```
LED/Buzz OFFdelay(100);
}
 Serial.begin(9600
  );delay(1000);

  DHT.read11(dht_apin);
//tempraturefloat h=DHT.humidity;
 float
 t=DHT.temperature;del
 ay(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)
{
while(m<40)
{
 digitalWrite(pin_out,HIGH); //openpump
sensor_analog= analogRead(sensor_pin);
 moisture_percentage = ( 100 - (
(sensor_analog/1023.00) *100 ) );

m=moisture_percentag
e;delay(1000);
}
digitalWrite(pin_out,LOW); //closepump
}
if(c>=0)
{
mySerial.begin(9600);d
elay(15000);Serial.begi
```

```
n(9600);delay(1000);Se
rial.print("\r");delay(10
00);


Serial.print((String)"update-
>"+(String)"Temprature="+t+(String)"Humidity="+h+(String

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

  }

}
```

Circuit Diagram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