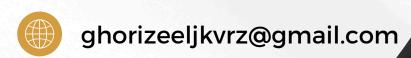
EXPLORATION PROJECT

PLANT MONITORING SYSTEM

GHORI ZEEL JIVRAJBHAI





ARDUINO CODE FOR PLANT MONITORING SYSTEM

```
#include <dht.h>
#include <BH1750.h>
#include <Wire.h>
#define PUMP PIN 10
#define RELAY 5
#define DHT11 PIN 2
int temp, humid;
dht DHT;
int moisture;
BH1750 lightMeter;
void setup(){
 Serial.begin(9600);
 pinMode(PUMP PIN, OUTPUT);
 pinMode(RELAY, OUTPUT);
 pinMode(soil pin, INPUT); //soil moisture
 Wire.begin();
 lightMeter.begin(); //bh1750
 delay(5000);
void loop() {
 int chk = DHT.read11(DHT11 PIN);
 Serial.print("Temperature = ");
 Serial.println(DHT.temperature);
 Serial.print("Humidity = ");
 Serial.println(DHT.humidity);
 Serial.print("%\n\n");
 humid = DHT.humidity;
 temp = DHT.temperature;
 if(humid <= 100) {
  delay(10000);
   digitalWrite(PUMP PIN, LOW);
  }/*else{
   digitalWrite(PUMP_PIN, LOW);
  } * /
 if(temp >= 40){
   digitalWrite(RELAY, HIGH); //GREEN SHIELD
   delay(5000);
   digitalWrite(RELAY, LOW);
 }/*else{
```

```
digitalWrite(RELAY, LOW);
} * /
moisture = analogRead(soil_pin);
moisture = map(moisture, 0, 1023, 0, 100);
Serial.print("Moisture Percentage = ");
Serial.print(moisture);
Serial.print("%\n\n");
if(moisture <= 10){</pre>
  digitalWrite(PUMP_PIN, HIGH);
                                 //WATER PUMP
  delay(10000);
  digitalWrite(PUMP PIN, LOW);
float lux = lightMeter.readLightLevel();
Serial.print("Light: ");
Serial.print(lux);
Serial.println(" lx");
if(lux >= 12000){
 digitalWrite(RELAY, HIGH);
  delay(5000);
  digitalWrite(RELAY, LOW);
}
delay(15000);
```