EAST WEST UNIVERSITY

Department of Computer Science and Engineering

Course Title: Internet Of Things

Code: CSE406

Section: 2

LAB-02

Submitted To:

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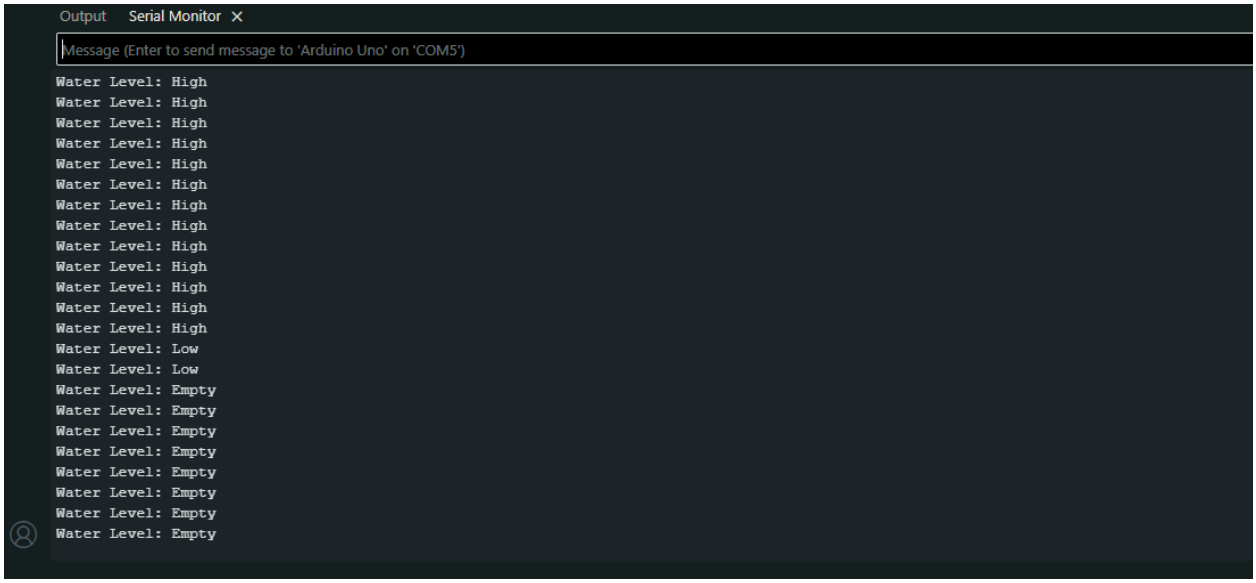
TASK:How Water Level Sensor Works and Interface it with Arduino

Arduino UNO Code:

```
// Sensor pins
#define sensorPower 7
#define sensorPin A0

// Value for storing water level
int val = 0;

/* Change these values based on your calibration values */
int lowerThreshold = 420;
int upperThreshold = 520;

// Declare pins to which LEDs are connected
int redLED = 2;
int yellowLED = 3;
int greenLED = 4;

void setup() {
  Serial.begin(9600);
  pinMode(sensorPower, OUTPUT);
  digitalWrite(sensorPower, LOW);

  // Set LED pins as an OUTPUT
  pinMode(redLED, OUTPUT);
  pinMode(yellowLED, OUTPUT);
  pinMode(greenLED, OUTPUT);

  // Initially turn off all LEDs
  digitalWrite(redLED, LOW);
  digitalWrite(yellowLED, LOW);
  digitalWrite(greenLED, LOW);
}

void loop() {
  int level = readSensor();

  if (level == 0) {
    Serial.println("Water Level: Empty");
    digitalWrite(redLED, LOW);
    digitalWrite(yellowLED, LOW);
    digitalWrite(greenLED, LOW);
  } else if (level > 0 && level <= lowerThreshold) {
    Serial.println("Water Level: Low");
```

```
    digitalWrite(redLED, HIGH);
    digitalWrite(yellowLED, LOW);
    digitalWrite(greenLED, LOW);
  } else if (level > lowerThreshold && level <= upperThreshold) {
    Serial.println("Water Level: Medium");
    digitalWrite(redLED, LOW);
    digitalWrite(yellowLED, HIGH);
    digitalWrite(greenLED, LOW);
  } else if (level > upperThreshold) {
    Serial.println("Water Level: High");
    digitalWrite(redLED, LOW);
    digitalWrite(yellowLED, LOW);
    digitalWrite(greenLED, HIGH);
  }
  delay(1000);
}

//This is a function used to get the reading
int readSensor() {
  digitalWrite(sensorPower, HIGH);
  delay(10);
  val = analogRead(sensorPin);
  digitalWrite(sensorPower, LOW);
  return val;
}
```

Output Image:



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