Lab 1

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Objective:

To understand the basics of the Arduino IDE and how to interface and retrieve data from the **DHT11 Temperature and Humidity Sensor** and the **Water Level Sensor**.

Apparatus/Components Required:

- Arduino Uno board
- USB cable
- DHT11 sensor module
- Water level sensor
- Breadboard
- Computer with Arduino IDE installed

Circuit Diagram/Connections:

DHT11:

- **VCC** → 5V
- **GND** → GND
- **Data** → Digital Pin 2

Water Level Sensor:

- **VCC** → 5V
- **GND** → GND
- **A0** → Analog Pin A0

Procedure:

1. Connect the DHT11 and water level sensor to the Arduino as per the circuit diagram.
2. Open Arduino IDE on your computer.
3. Install the **DHT sensor library** (e.g., "DHT sensor library by Adafruit").
4. Write or upload the sample code to read temperature, humidity, and water level.

5. Compile and upload the code to the Arduino board.
6. Open the **Serial Monitor** to observe the output readings.