Water Management System

Software Installations:

- 1. Update your Raspberry Pi sudo apt-get update sudo apt-get upgrade
- 2. Install Python and pip if not already installed sudo apt-get install python3 python3-pip

3. Install required Python packages pip3 install RPi.GPIO pip3 install pad4pi pip3 install flask pip3 install flask-cors pip3 install requests

4. Create a project directory mkdir water_management_system cd water_management_system

5. Create a static directory for web files mkdir static

Project Setup:

- 1. Create the main Python file: nano water management system.py
- 2. Copy the code into this file.
- **3. Make the script executable:** mod + water management system.py

Running the Project:

- 1. Start the system: python3 water management system.py
- 2. Access the web interface:
- **3. From the same Raspberry Pi:** http://localhost:5000
- 4. From other devices on the network: http://[raspberry pi ip]:5000

To find your Raspberry Pi IP: hostname -I

Screenshots:

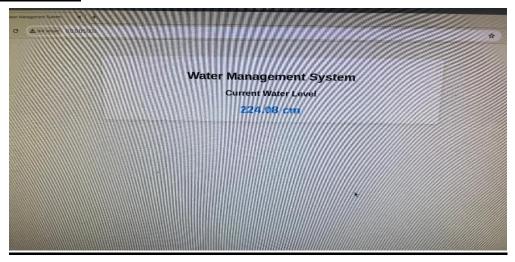


Fig. The Webpage of the Project

```
File Edit Tabs Help

* Environment: production

**ARXING: This a development arror do not use it in a production deployme

**Production Wasi server intend

* Debug mode: on

**Running on http://0.0.0,0:5000/ (Press CTRL+C to quit)

* Restarting with stat

Water Level: 224,96 cm

* Debugger is active!

* Debugger is active!

* Debugger PIN: 344-457-418

Water Level: 224,14 cm

192,168,14,137 - [10/Dec/2024 12:17:23] "GET /Sensor-data HTTP/L.1" 404 -

Water Level: 200.93 cm

Water Level: 201.21 cm

Water Level: 201.21 cm

Error in measure_distance: Distance out of range.

Water Level: 224,12 cm

Water Level: 225,09 cm

Water Level: 223,64 cm

Water Level: 223,69 cm

Water Level: 223,69 cm

Water Level: 223,69 cm

Water Level: 223,90 cm

Water Level: 223,90 cm

Water Level: 223,90 cm

Water Level: 224,13 cm
```

Fig. The Terminal Page of the Project