Smart Glass

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AGENDA

- Motivation
- What is Smart Glass ?
- Existing Results
- Proposed Solution
- Final Product
- Future Scope

MOTIVATION

Restaurant

- Saves human effort and time
- Enhance Quality of Service

MOTIVATION

Health

- Track daily water intake
- No manual tracking of water intake

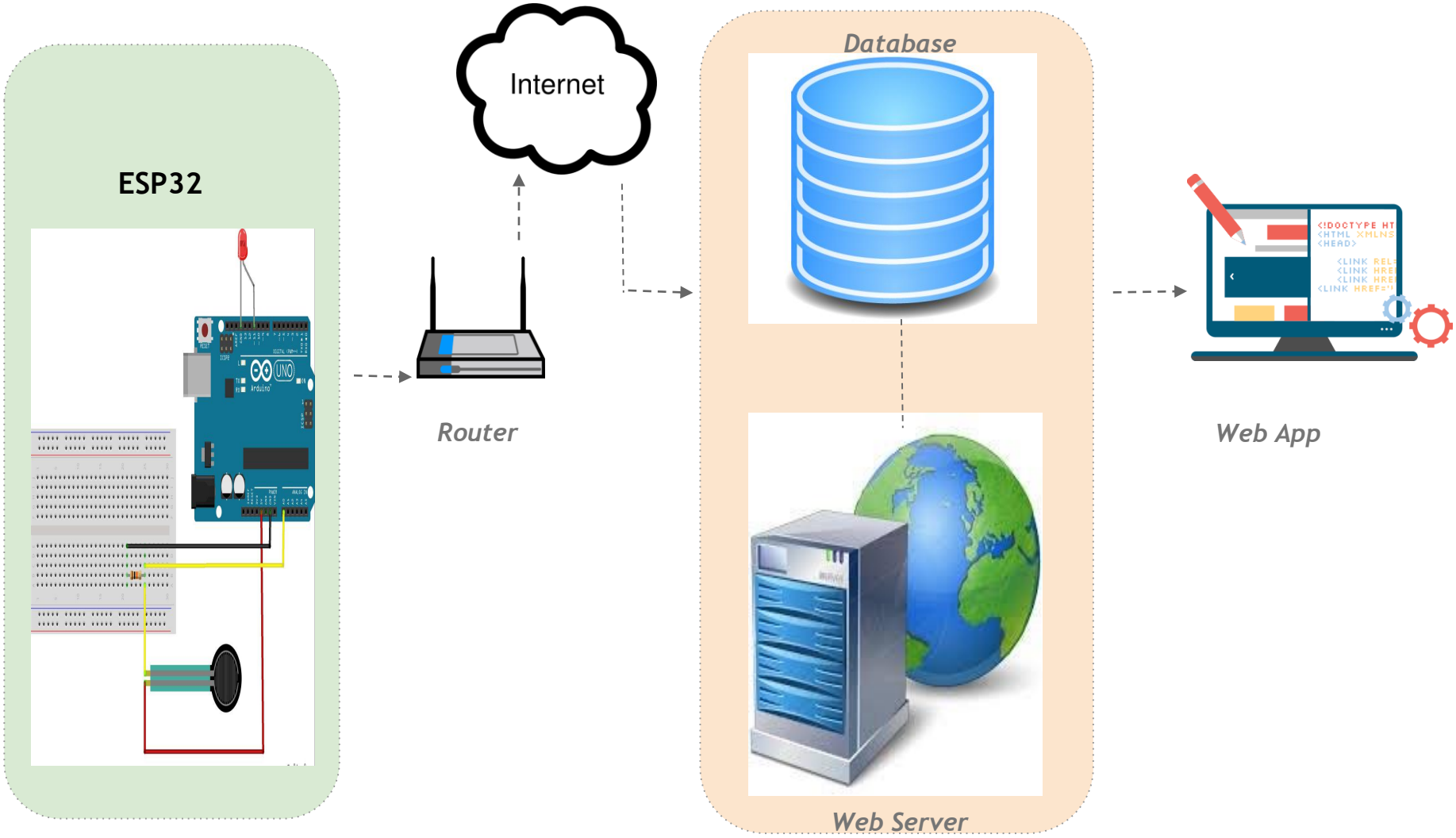
EXISTING SOLUTION

- Mobile Apps - manually enter data
- Expensive products to track water level
- New startups working on low cost solutions

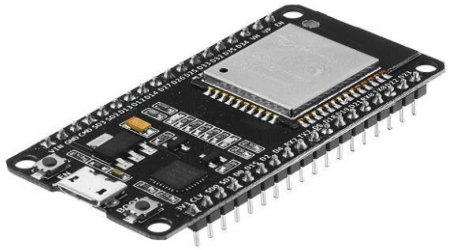
Proposed Solution

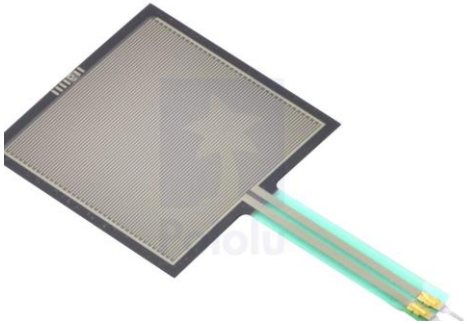
Smart Glass

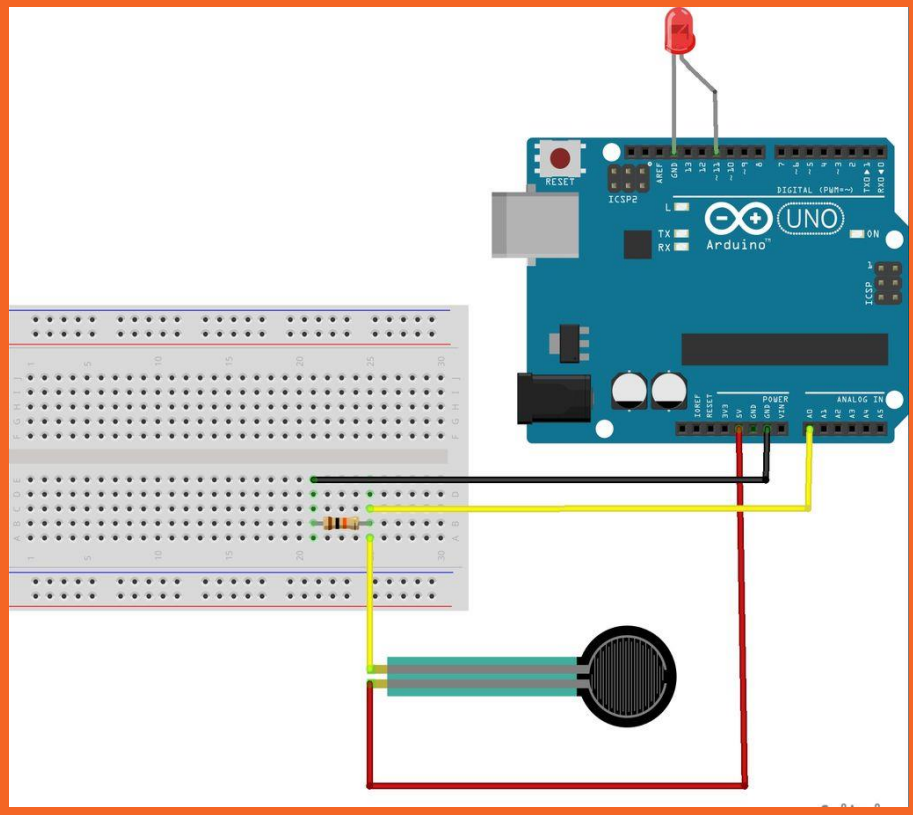
Architecture



Hardware






RESET
ICSP2
UNO
Arduino
ON
TX
RX
DIGITAL (PWM~)
POWER
ANALOG IN
ICSP

Web Application

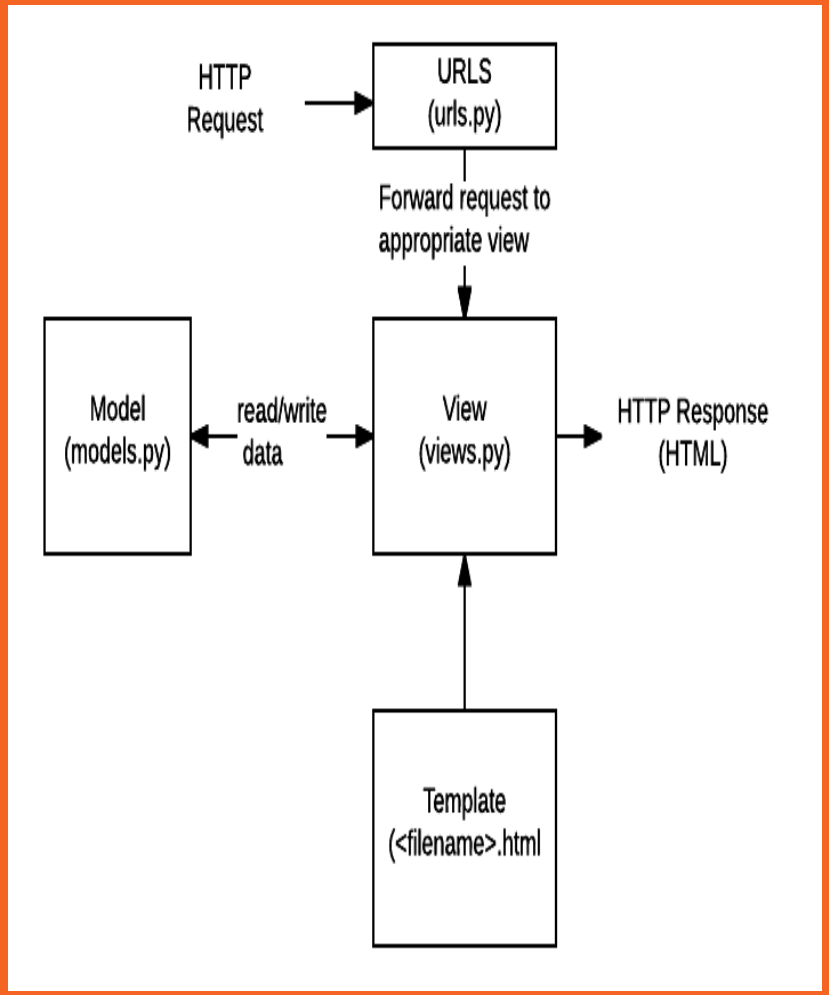
amazon web services™ | EC2

python

&

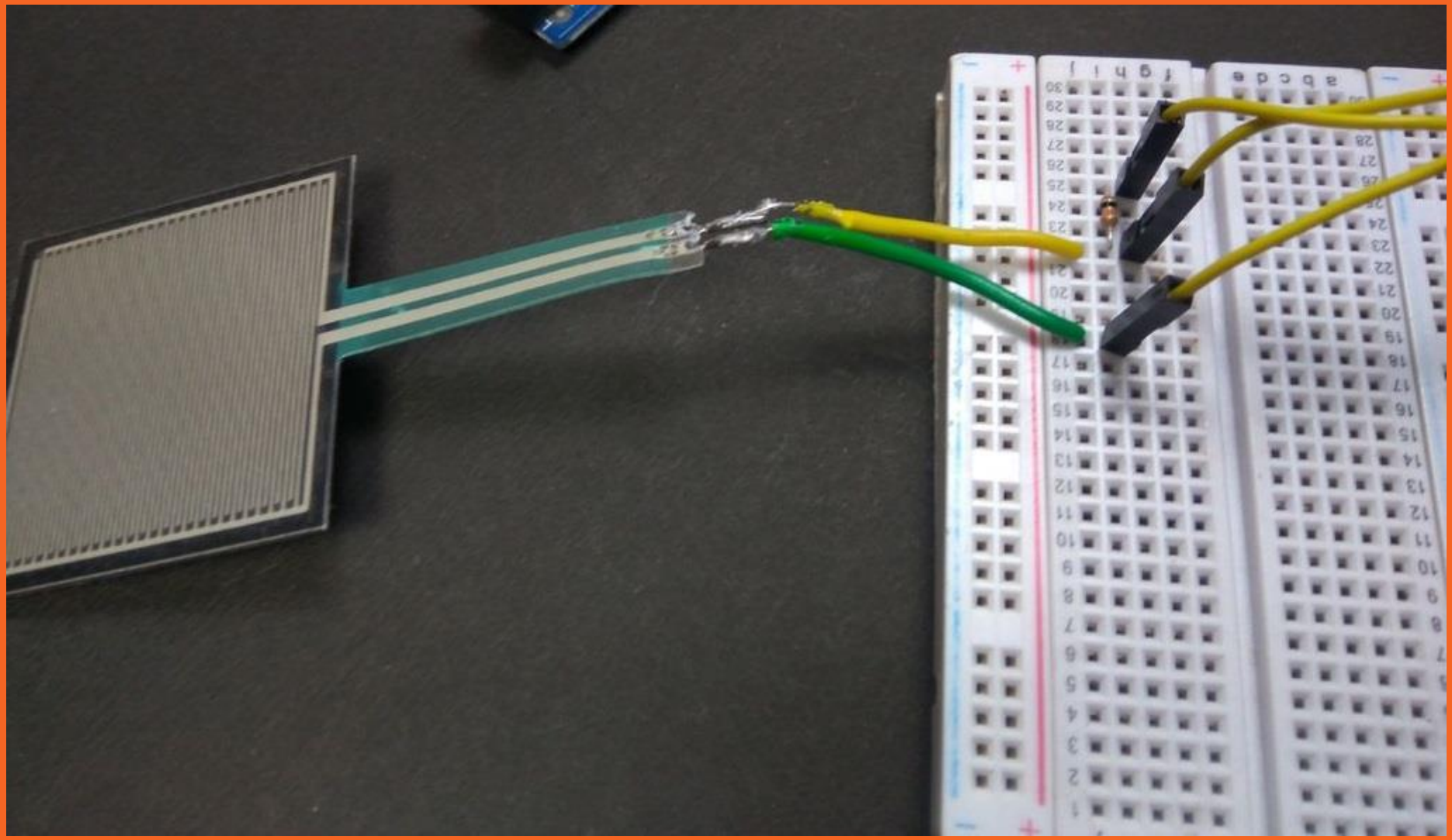
django

HTML 5 CSS 3 jQuery Bootstrap



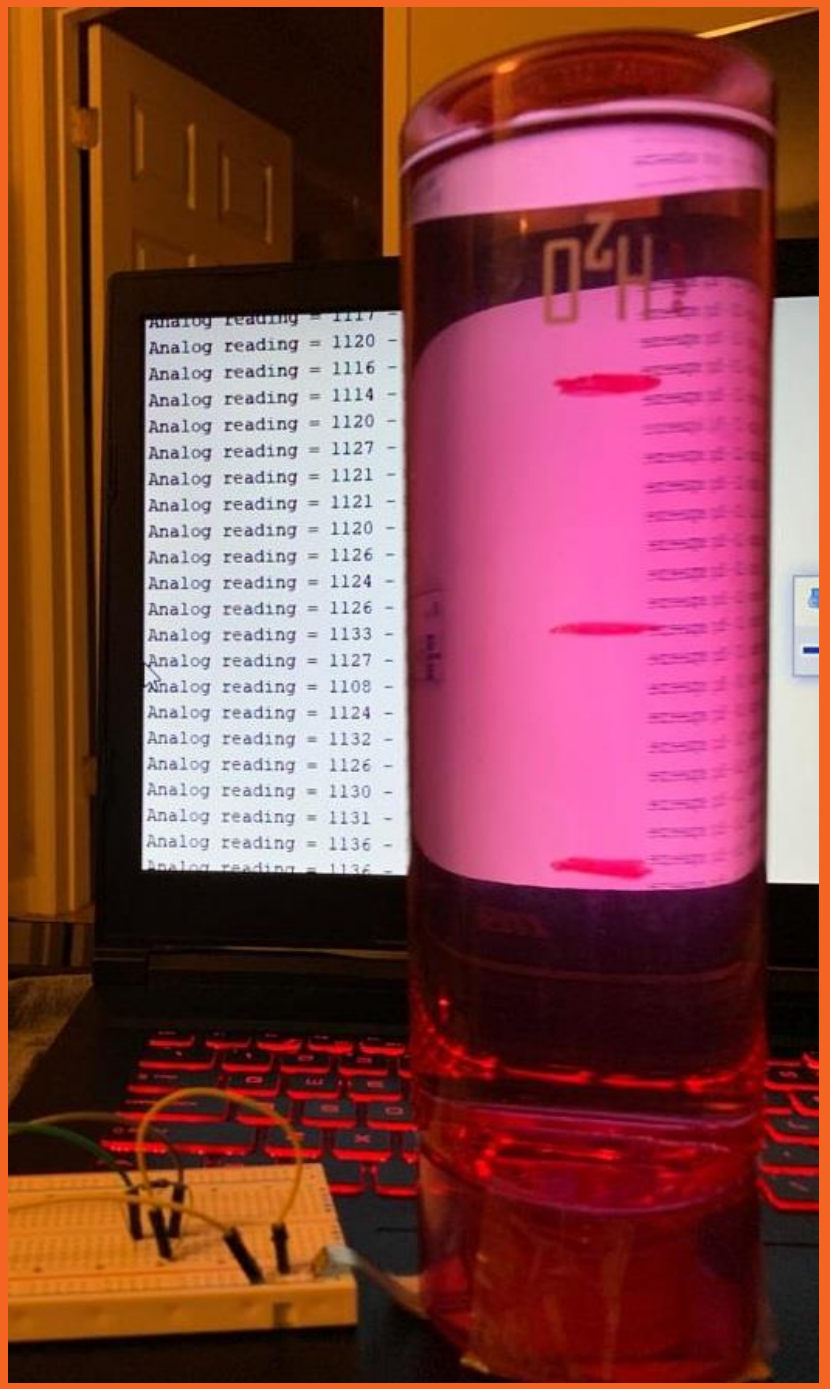
Final Product And Results

Hardware Connection

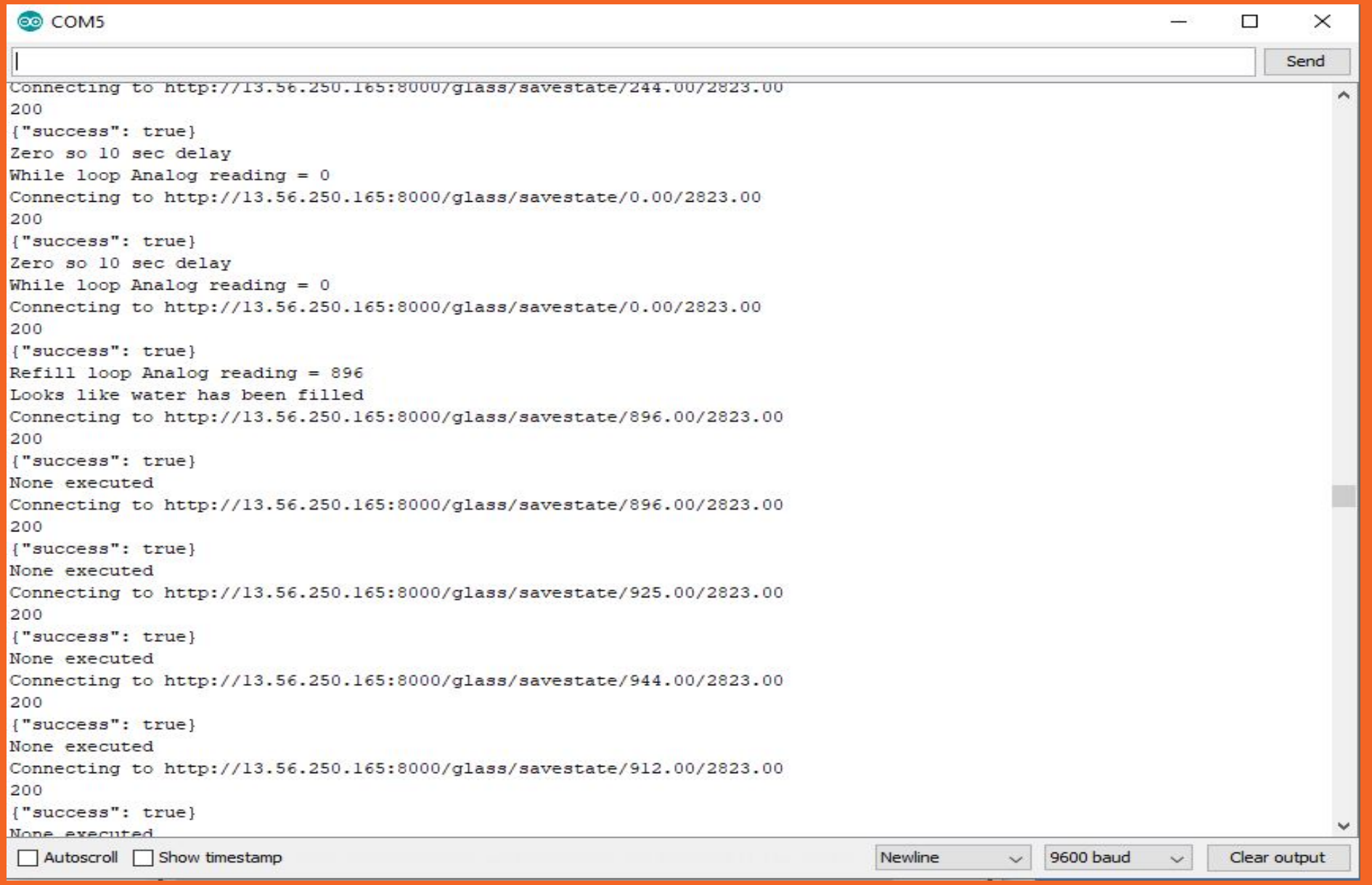


Sampling the values

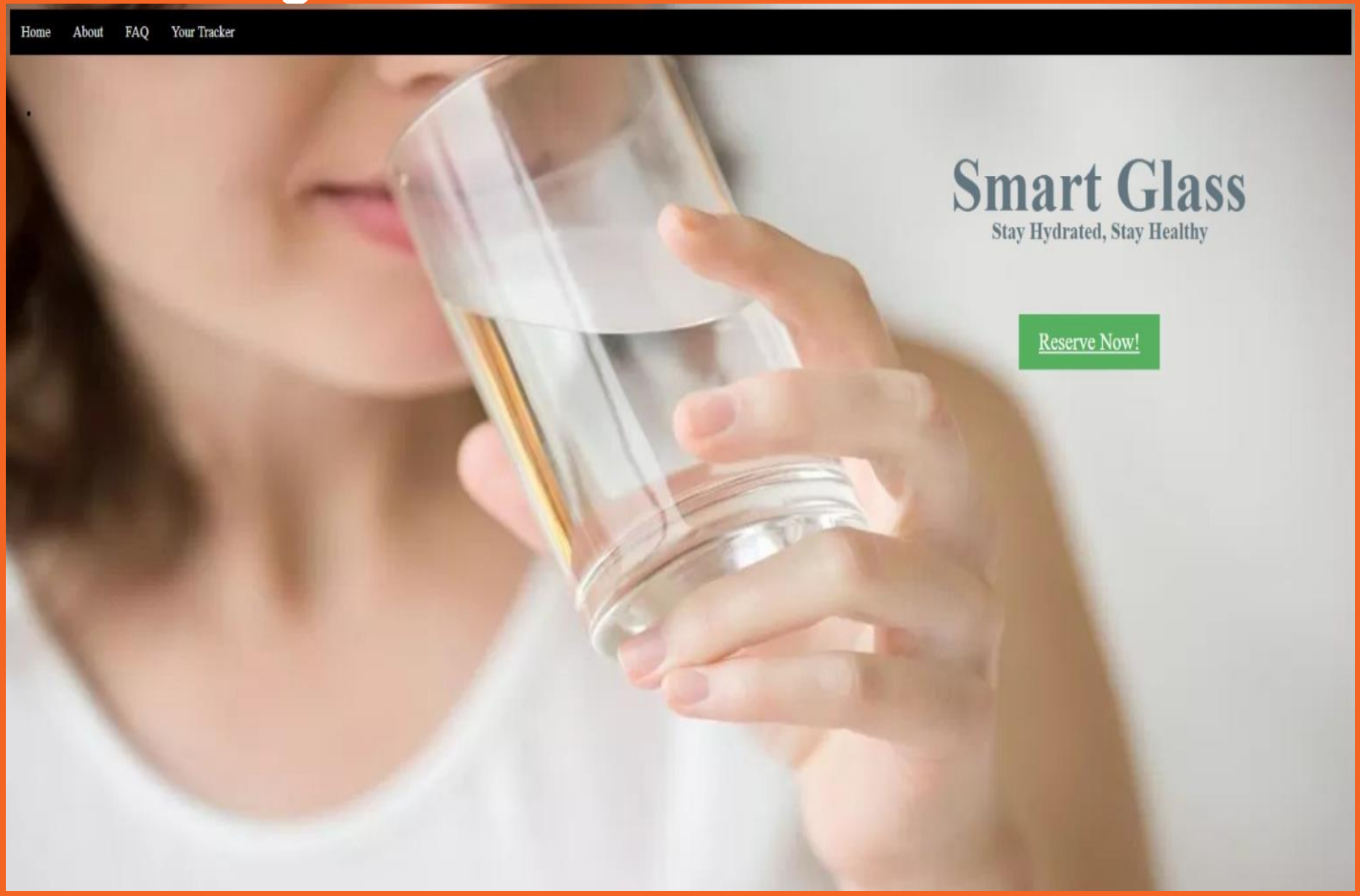
- Calibrated bottle to 4 main levels; 25%, 50%, 75%, 100%.
- Ran tests to detect refill level
- Ran tests to detect volume of water consumed
- Calculated optimal value to get percentage



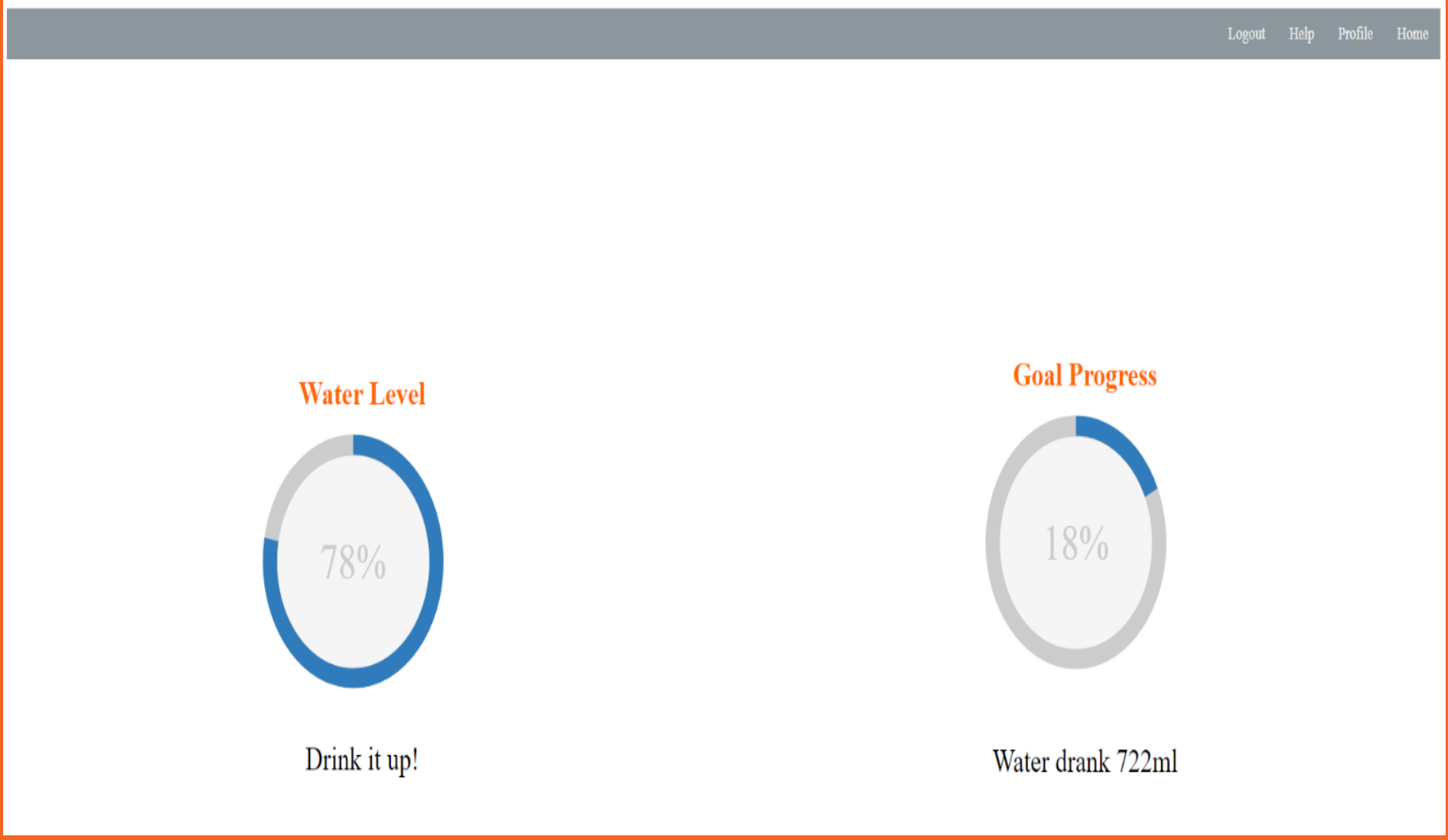
Arduino Output



Home Page


Home
About
FAQ
Your Tracker
Smart Glass
Stay Hydrated, Stay Healthy
Reserve Now!

Dashboard


Logout
Help
Profile
Home
Water Level
78%
Drink it up!
Goal Progress
18%
Water drank 722ml

Applications

- Track the daily water intake and display the progress to user through a graphical web interface.

- Remind users to refill the bottle when water level is low and stay hydrated.

- Usable in restaurants to fill almost empty glasses without customer interference to provide better service.

FUTURE SCOPE

- Detect water spill using accelerometer and gyrometer readings.

- Track water intake during outdoor activities like running and hiking.

- Machine learning to label water level

Thank You