

**Team 1**

# **Regional Water Quality Monitoring and Alert System**

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**LGSI Project**

03/Jan /2023 ~ 25/Jan/2023

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**Our mentor**

Vibanshu

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**Introduction**

**Service  
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# Introduction & Background

## **Introduction of team1**

We have superior teamwork skills.

## **Service proposal background**

What makes us to choose this topic

## 02

# Introduction



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Backend

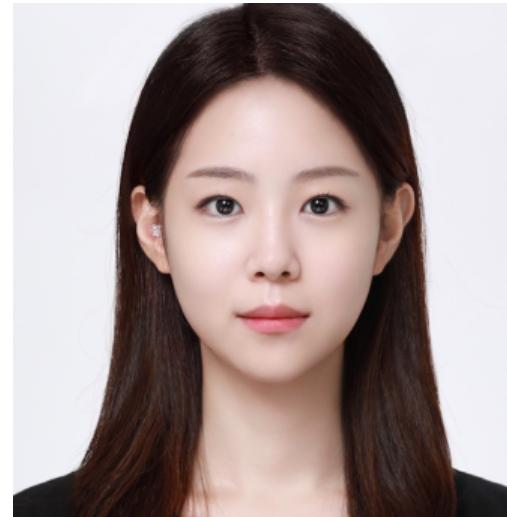
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## Service Proposal Background



water pollution



shortage of clean water

Water pollution is one of the biggest issues facing India right now. As may be evident, untreated sewage is the biggest source of such form of pollution in India. The single biggest reason for water pollution in India is urbanization at an uncontrolled rate.

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## Service Proposal Background

On average **200,000** people die every year

**75%** of India's total population is affected by contaminated water.

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## Service Proposal Background

How about monitoring the water quality in India  
in real-time?

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## **What is 'PURESOME'?**

Regional Water Quality Monitoring  
and System

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## **Functions**

4 Sensors to monitor status of  
water and give the aram to users



# **Service Overview**

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## Service Overview

# What is 'PURESOME'?



**to promote better water management  
in India.**

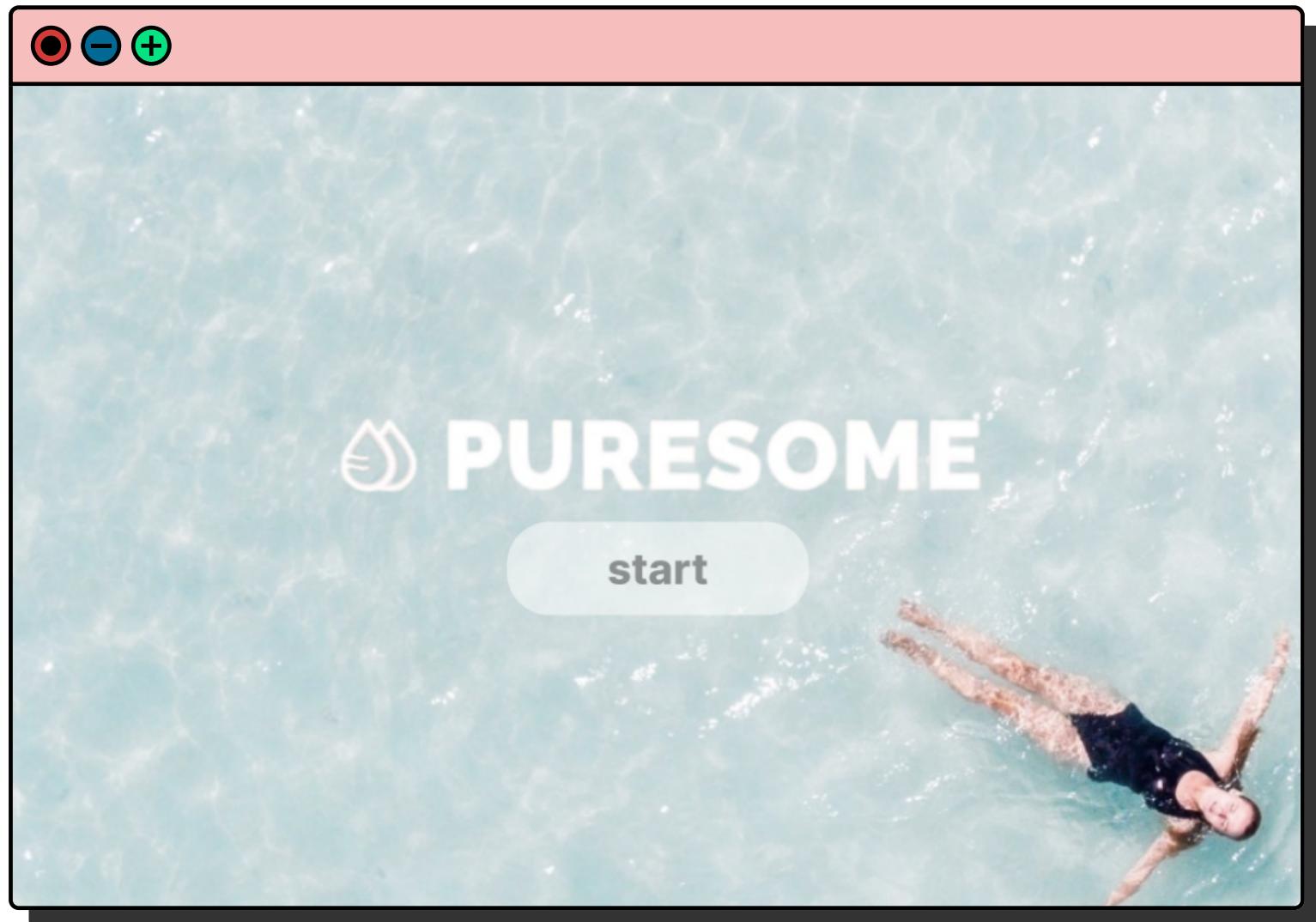
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**to accumulate data on water quality  
and flow monitoring.**



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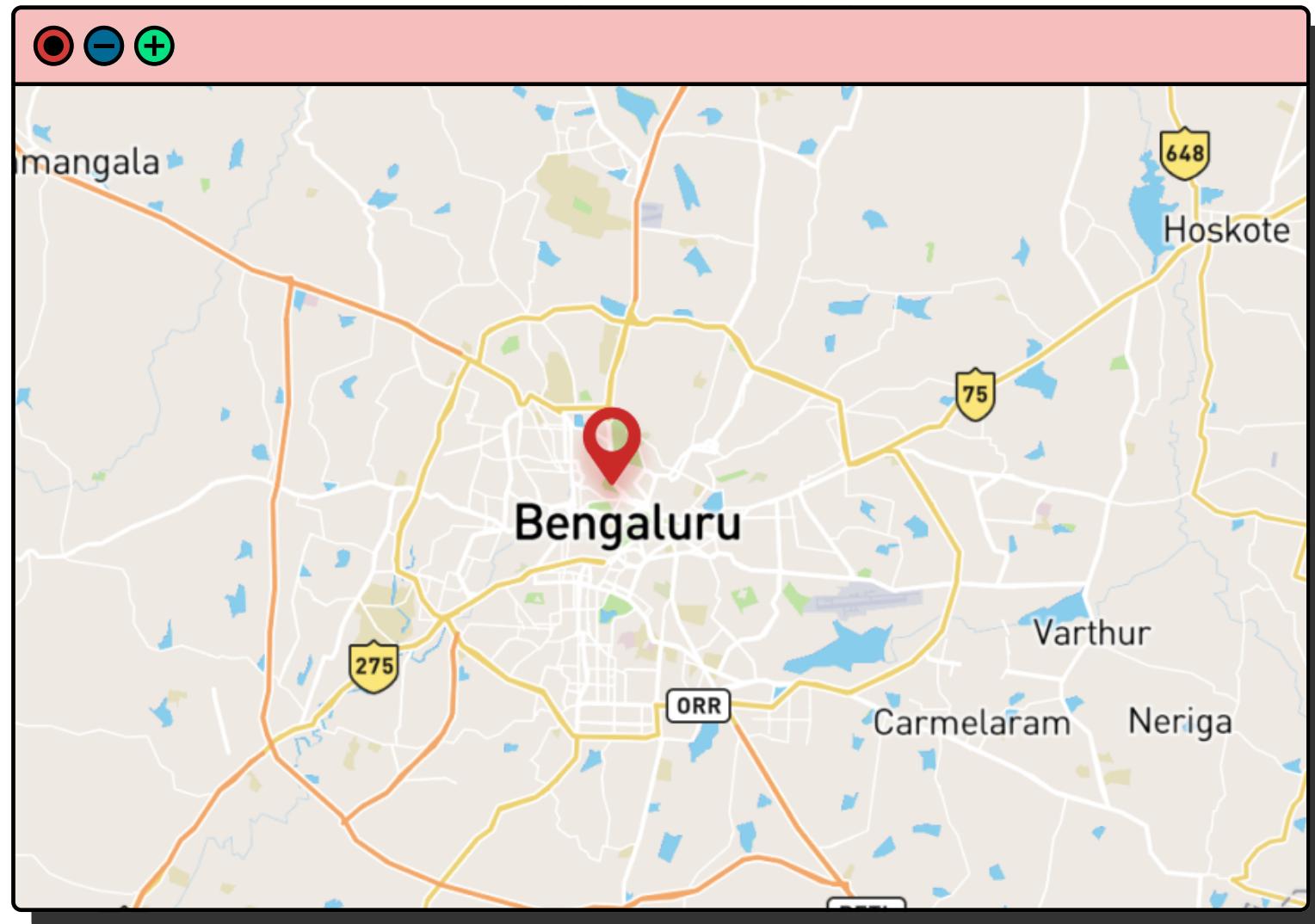
## Service Overview



a user-friendly web application that allows users to access real-time data and analytics related to water quality.

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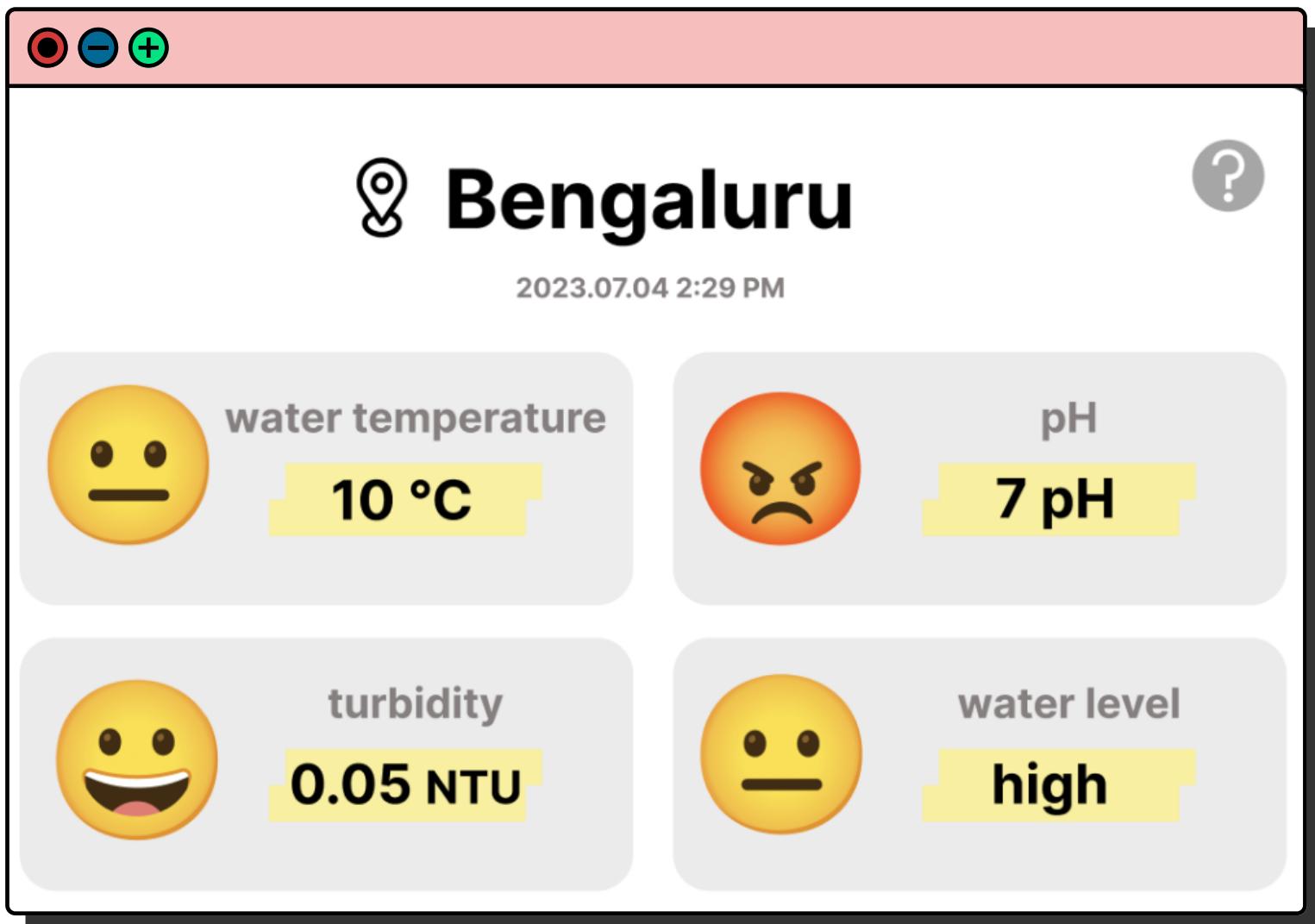
## func1) region selection



Users select the region where they live currently

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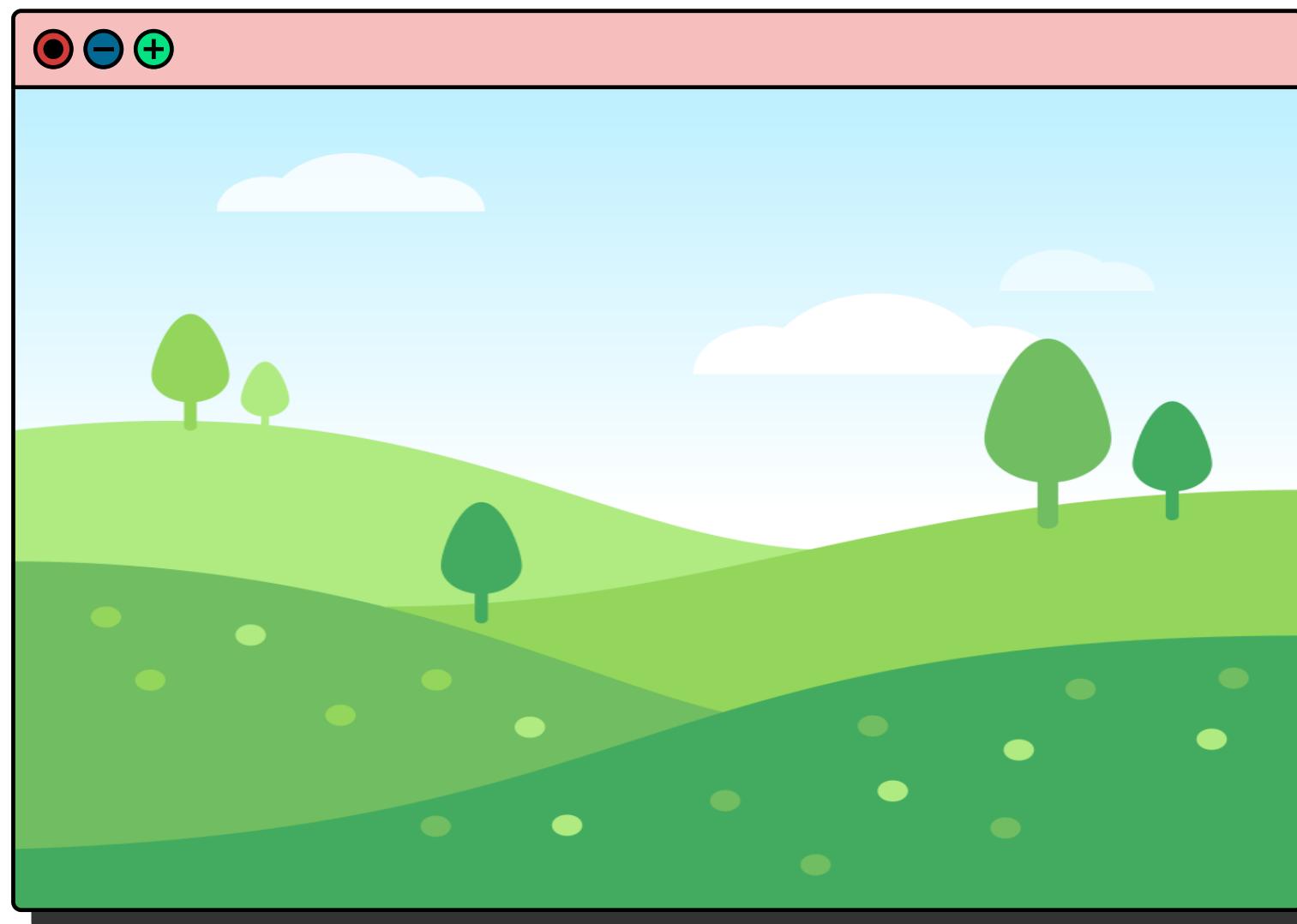
## func2) Monitoring



It displays the water quality status of the region set by the user.

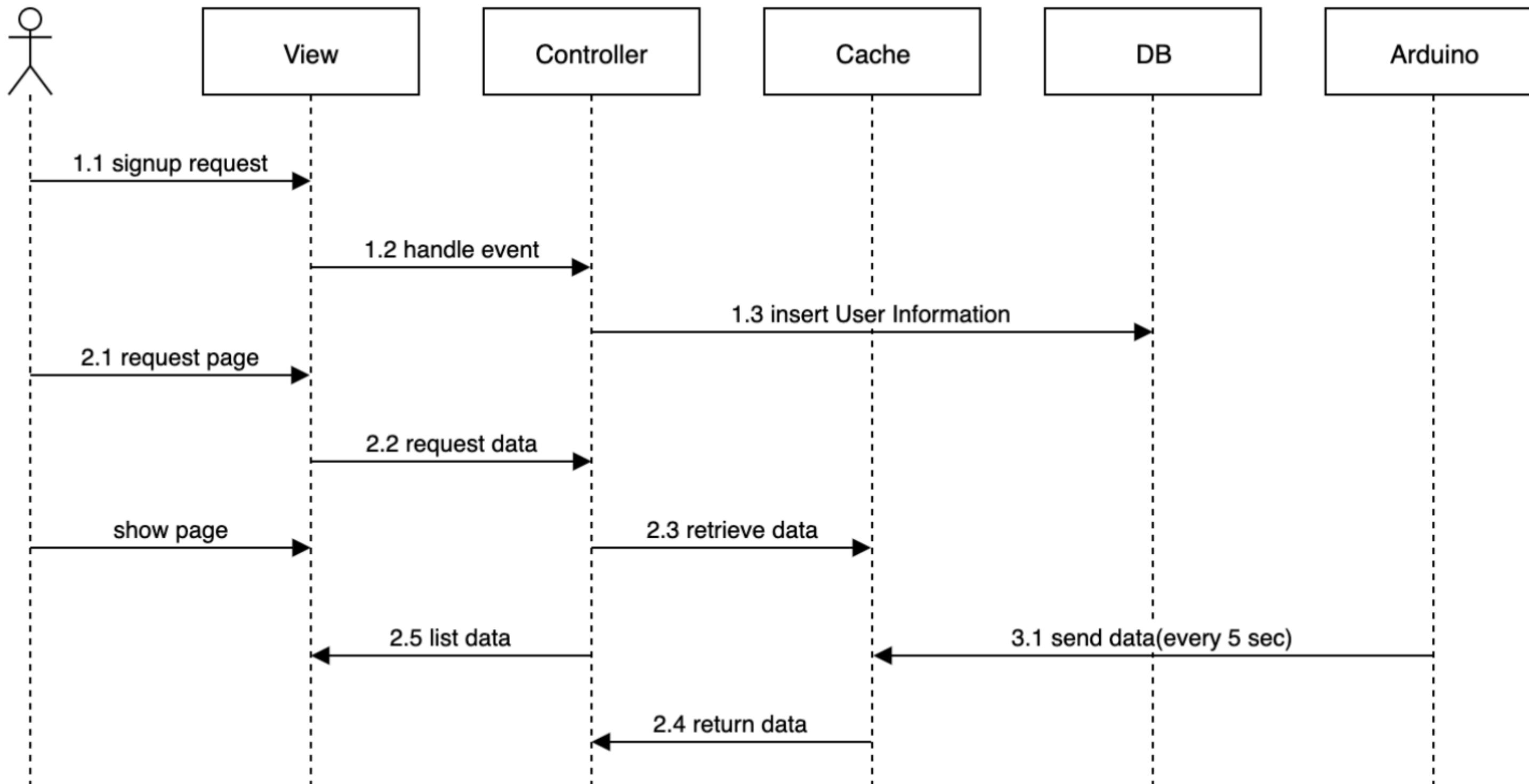
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## func3) Alarm



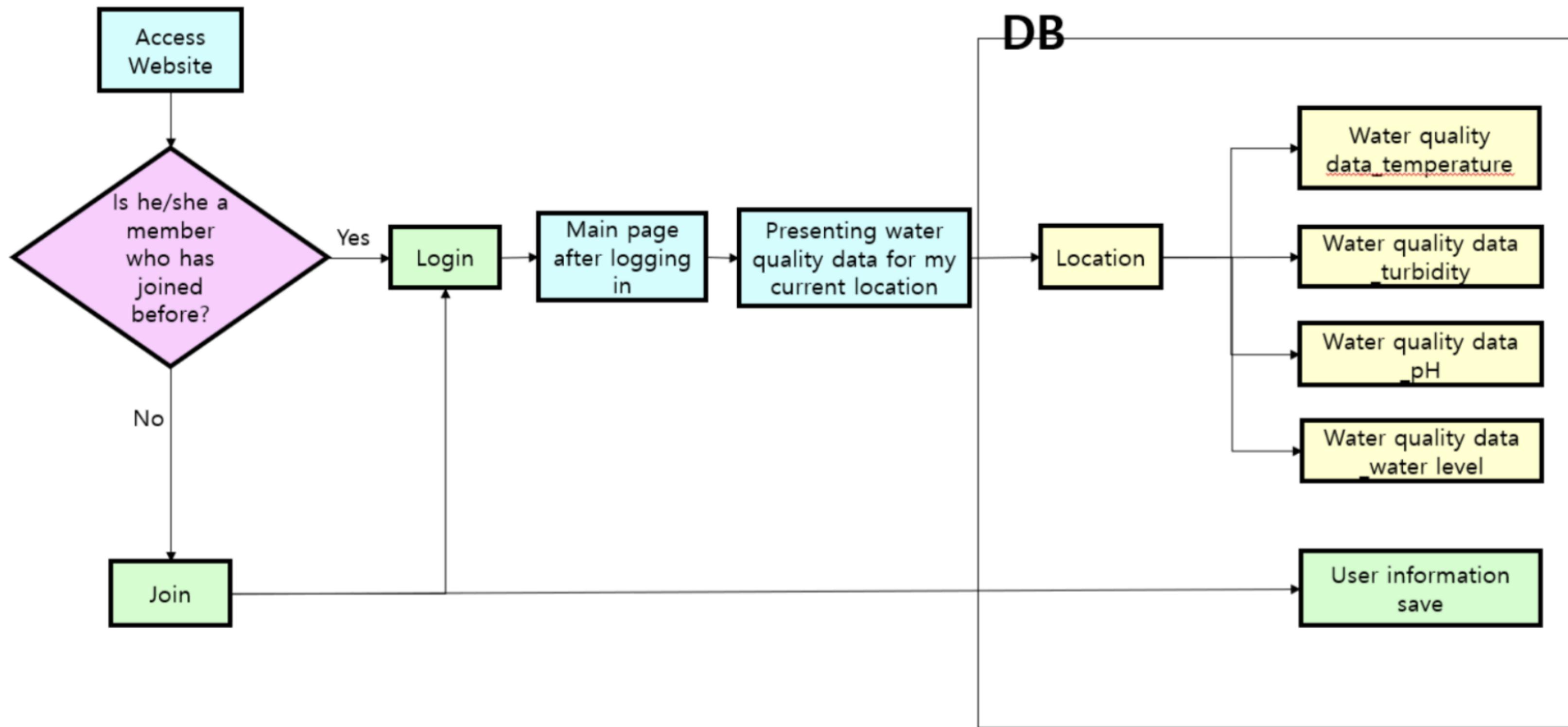
It sends an email alert to the user if the measured values exceed the normal range.

# Sequence Diagram

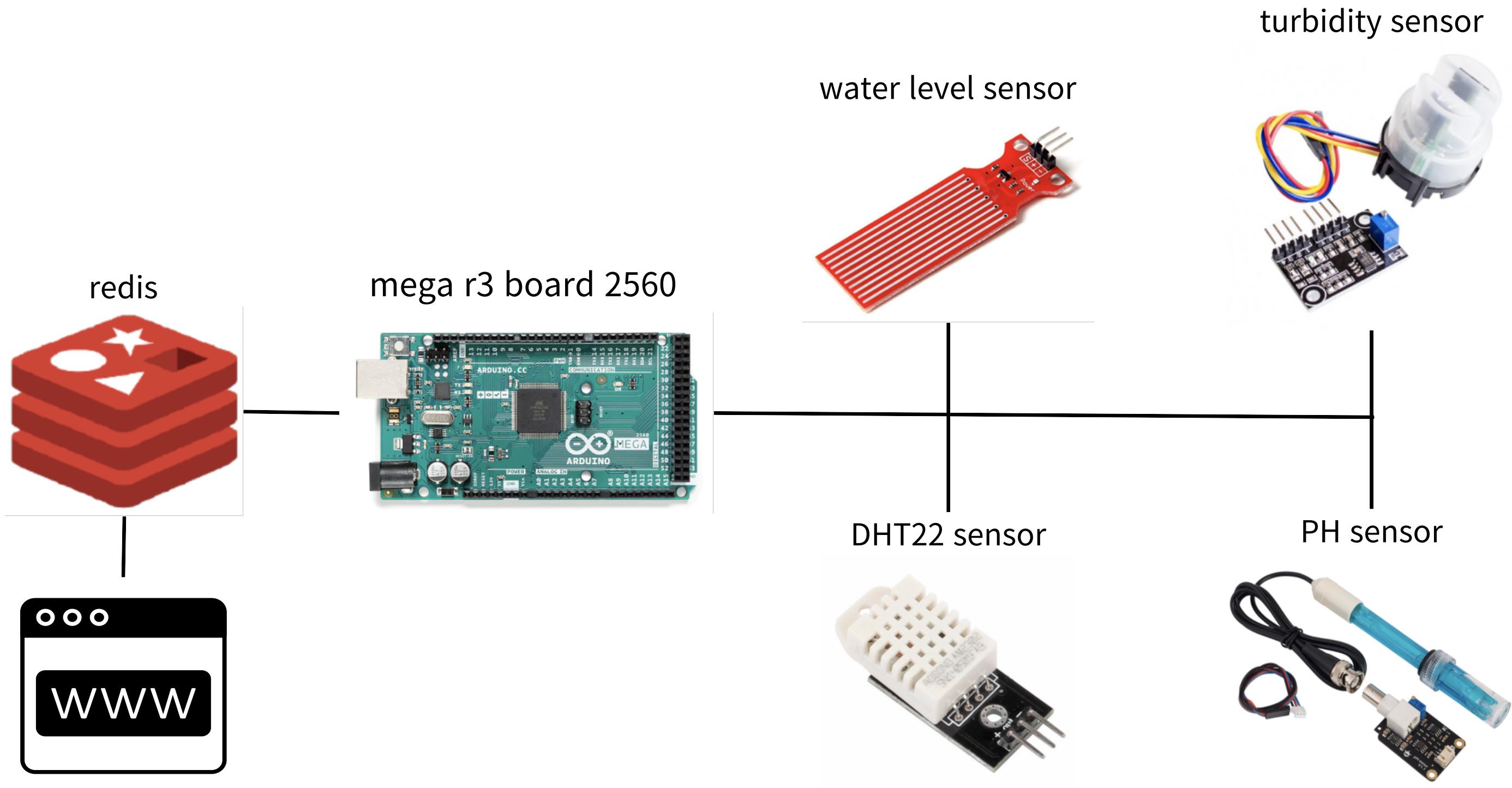


# 12 \_\_\_\_\_

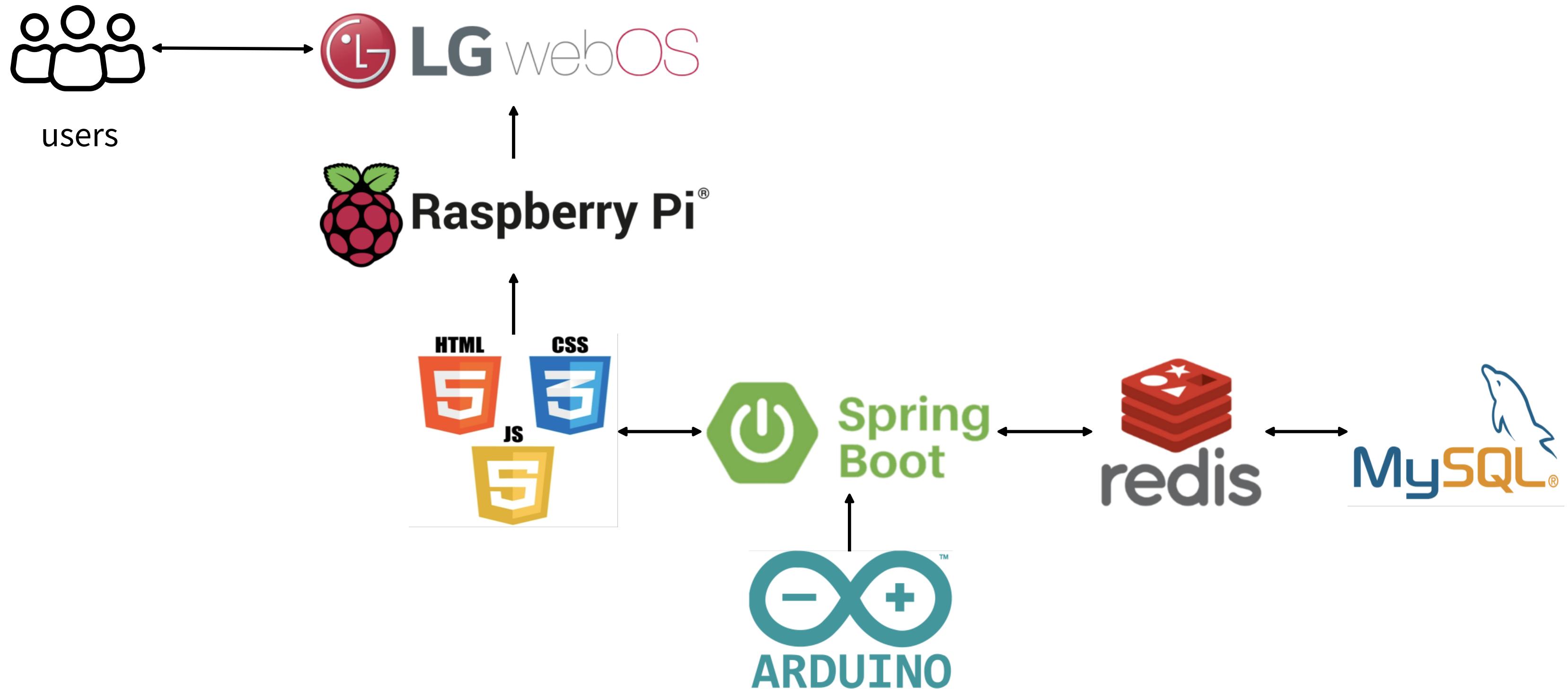
## Flow Chart

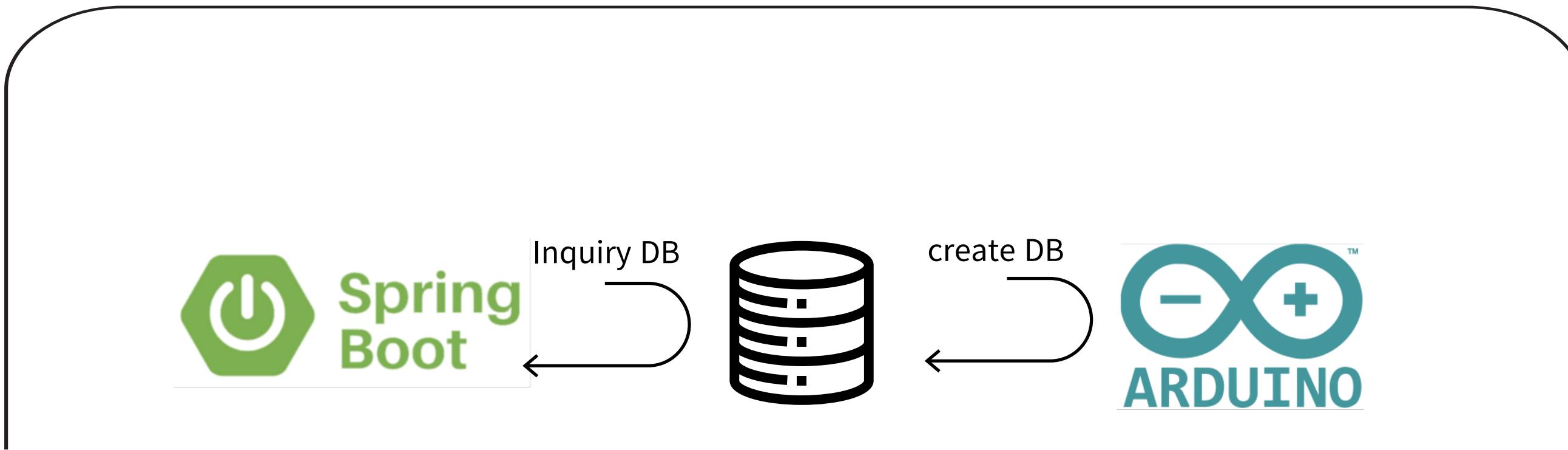


# Water Quality Management System

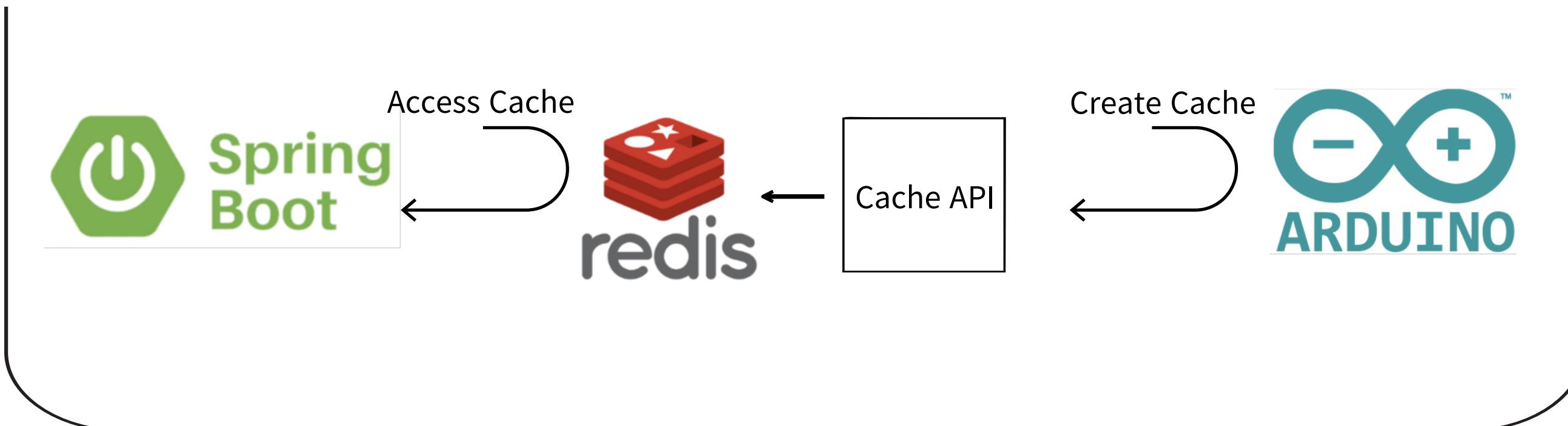


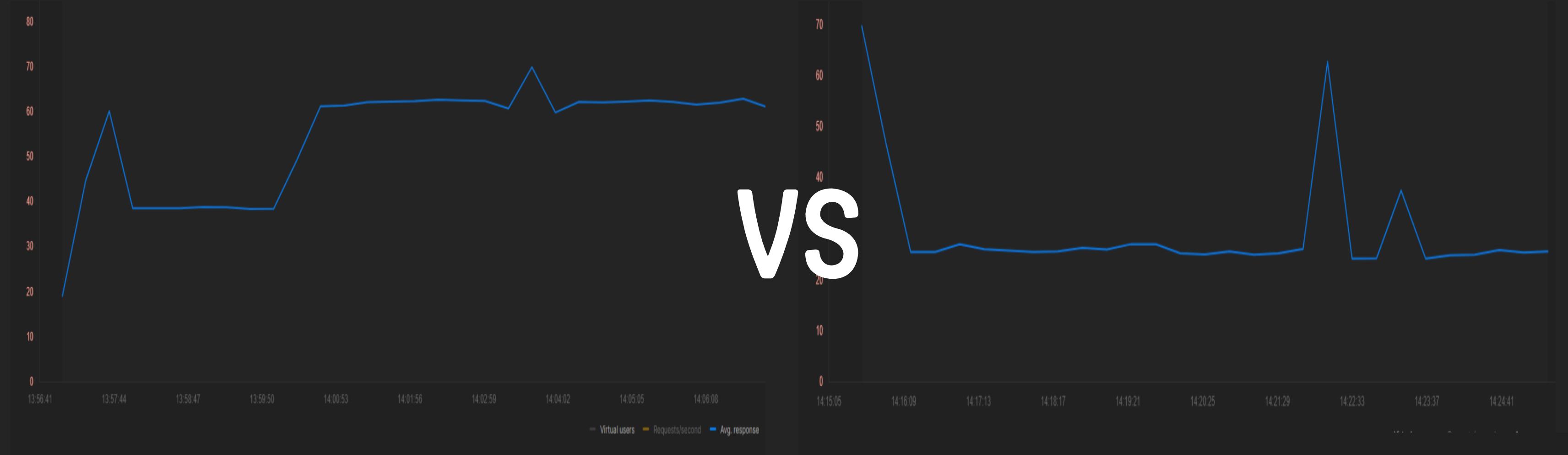
# System Architecture





VS





27 s  
DB

X 13.5

→

2 s  
Redis

# Tech Stack

## Front-end



## Back-end



{ REST : API }



## Tools



**GitHub**



**Notion**

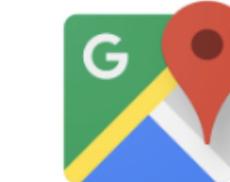


**IntelliJ IDEA**



**CODE**  
Visual Studio Code

## Etc



Google Maps API



# Outcomes

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## Outcomes

We will show you a demonstration video  
of sensors implemented using Arduino.

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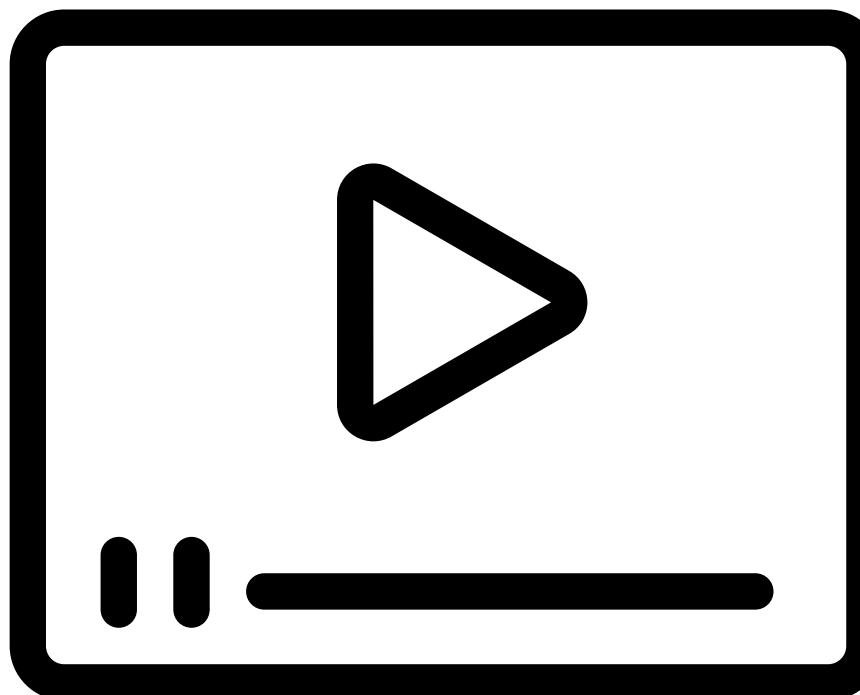
## Implementation

We will show you how to provide an  
alarm based on direct sensor  
measurements

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## Page Title

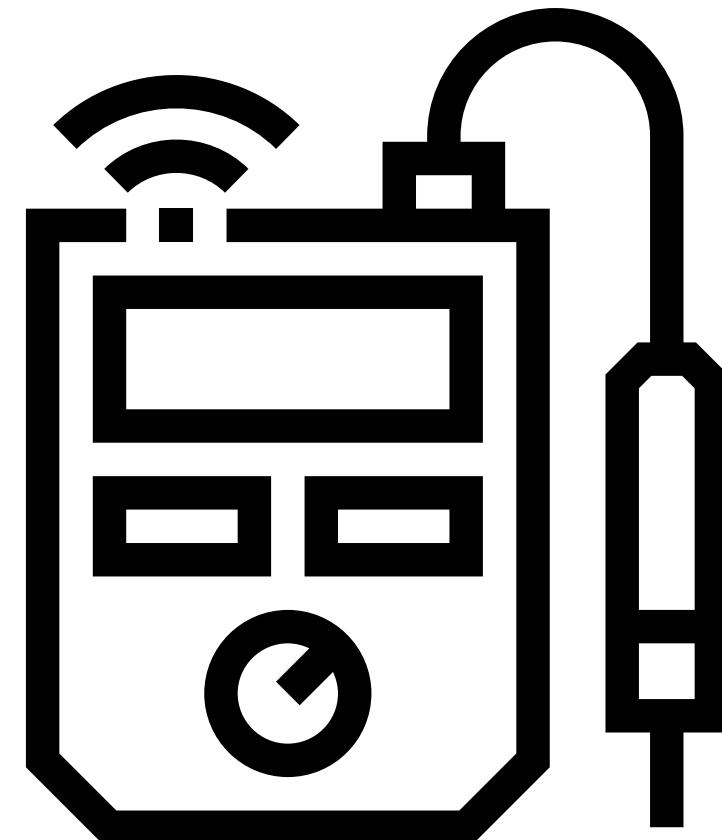


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# Page Title



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## Expected Benefits

### Benefits

I will explain the potential applications of this service.

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## Expected benefits



**PURE SOME**

Timely Response to Water Contamination

Improved Water Quality Management

Sustainable Water Resource Utilization

Public Health Protection

Regulatory Compliance

**team1**

# Thank You

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**LGSI\_Project**

03/Jan/2023 ~ 25/Jan/2023

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**team1**

Presenter : Seonju Hong, Heonjae Kim