The River Project

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1. INTRODUCTION

Water plays an important role in the world economy. Approximately 70% of the freshwater used by humans goes to agriculture. Fishing in salt and fresh water bodies is a major source of food for many parts of the world.

Rivers are the main source of water. As the country becomes more developed, the awareness on the importance of protecting the river has been decreased among the people. Thus, the lack of clean water will affect the ecology of the river, as the main source of clean water that benefits all living things.

Our project is to help the community to protect the rivers thus its name is “The River Project”. We will use HTML, CSS, JavaScript, JQuery, Bootstrap, MySQL, PHP, and API to write the source code.

2. PROBLEM STATEMENT

In order for an open community to protect the river, we need a global campaign to increase awareness and ease the contributors. Currently there is no centralized website to address this issue on protecting the rivers. Second, it is hard to locate river and the water trail without any website assisting the users. The people can’t contribute more on protecting river when there is no platform to get information, review and post complaint about any information.

3. OBJECTIVE

The objectives of the project include following:

- To create a centralized website for rivers
- To monitor water quality in river by displaying the data interactively
- To create a platform for the community to review rivers and post complaints about them

4. FEATURES

4.1 Explore & Locate River

Users can explore and discover rivers that are available using Google Map API. The system will display the information of the river, comments, reviews and images.

4.2 Review River

Users can comment and post their review on selected river, especially tourism spot for other users to read. They also can upload pictures about the river to increase information.

4.3 Report Complaint

Users can report complaints about the river for any kind of information, mainly related to river’s

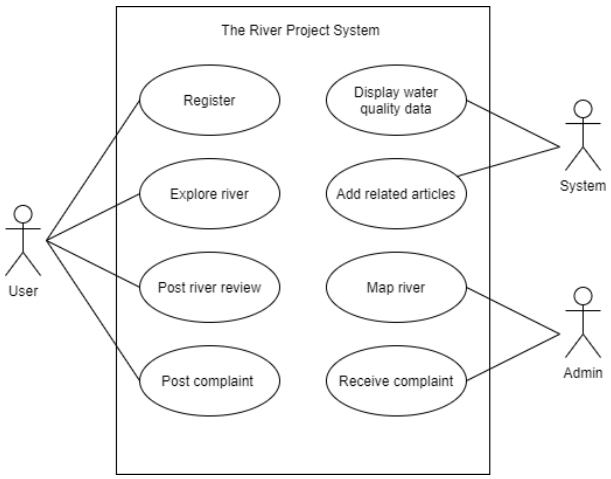
quality such as river pollution or any suspicious activity detected.

4.4 Water Quality Monitoring

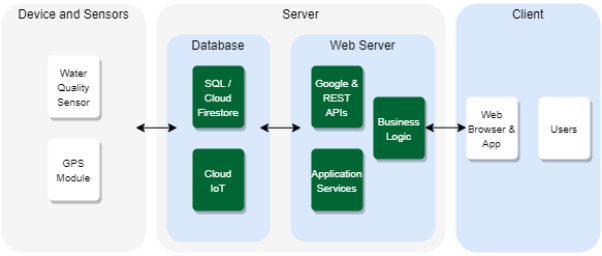
The system will monitor the quality of water and display the data, including water level, pH, dissolved oxygen, water temperature, electrical conductivity and turbidity of the water.

5. PROPOSED PROJECT

5.1 Use Case Diagram

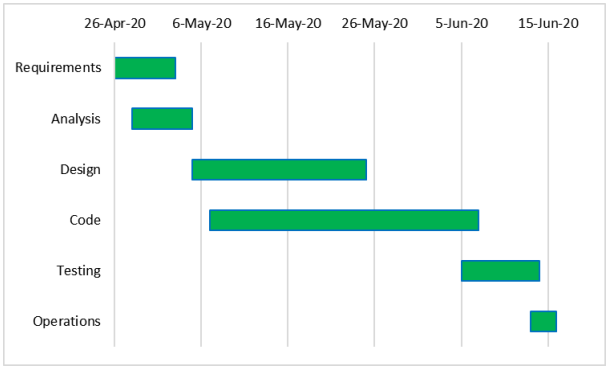


5.2 Project Architecture



6. PROJECT PLANNING

The techniques we are going to use in this project is a Plan-Driven Methodology called The Waterfall Model. The waterfall model emphasizes that a logical progression of steps be taken throughout the SDLC, much like the cascading steps down an incremental waterfall. There are six stages of falling water in waterfall model that we are going to use.



6.1 Requirements

During this initial phase, the potential requirements of the application are methodically analyzed and written down in a specification document that serves as the basis for all future development. The result is typically a requirements document that defines what the application should do, but not how it should do it.

6.2 Analysis

During this second stage, the system is analyzed in order to properly generate the models and business logic that will be used in the application.

6.3 Design

This stage covers technical design requirements, the programming language that our team will use like HTML, CSS, JavaScript, JQuery, Bootstrap, MySQL, PHP, etc. A design specification will typically be created that outlines how exactly the business logic covered in analysis will be technically implemented.

6.4 Coding

The actual source code is finally written in this fourth stage, implementing all models, business logic, and service integrations and APIs that were specified in the prior stages.

6.5 Testing

During this stage, our team will test the project systematically and report issues within the application that need to be resolved. It is not uncommon for this phase to cause a "necessary repeat" of the previous coding phase, in order for revealed bugs to be properly squashed.

6.6 Operation

Finally, the application is ready for deployment.

7. AUTHOR PROFILE

Ahmad Firdaus bin Abd Rashid
21 years old.
An active student that likes to watch movies to find inspiration in his work.

Ahmad Nuri bin Mohd Khalili
21 years old.
A software engineering student that does part-time trading and likes to play futsal.

Luqman Al-Hakim bin Ghani
21 years old.
Self-learner, his hobby is learning and acquiring new knowledge.