Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation:
Ministry of Jal Shakti

PS Code: SIH-1291

Problem Statement Title:

A mobile app that crowd sources water related problems from around a community, open sources data, etc and display them on a map.

Team Name: BLUE MOONS

Team Leader Name: Gowtham Rajasekaran

Institute Code (AISHE): C-25070
Institute Name: Madras Institute of Technology Campus, Anna University.

Theme Name: Disaster Management

Idea/Approach Details

DESCRIPTION OF IDEA:

Mobile App Concept:
- A user-friendly mobile application for reporting water-related issues within communities.

Data Aggregation and Analysis:
- User-generated reports are collected and organized into a comprehensive database.

Satellite Data Integration:
- In addition to user-generated reports, the app integrates high-quality satellite data to provide an initial dataset of water-related information. This satellite data offers users a baseline understanding of their local water bodies and infrastructure.

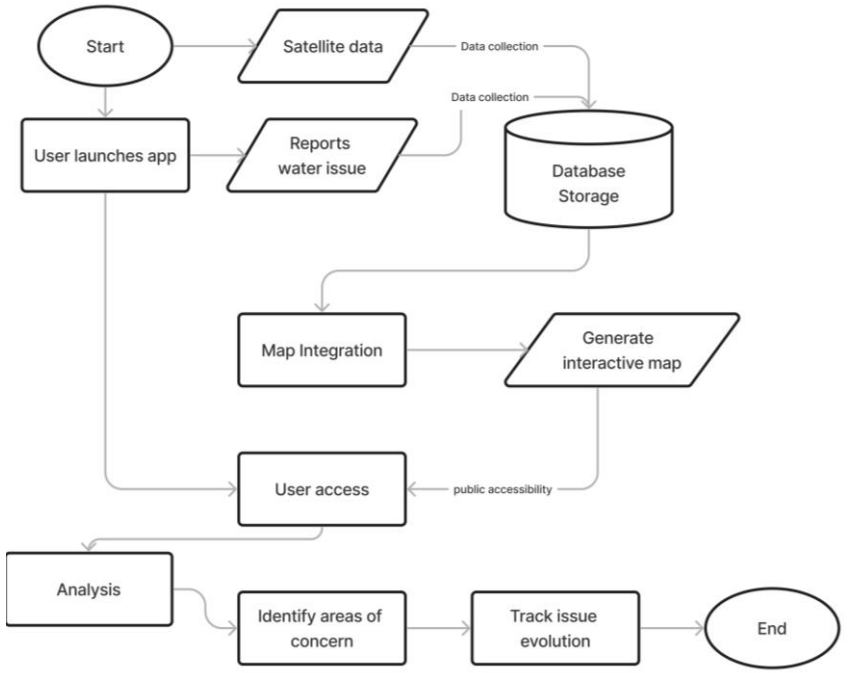
Public Accessibility:
- The aggregated data is made public, providing valuable insights for individuals, non-profits, and government entities.

Mapping Integration:
- Utilizes mapping technology to visually display reported water issues, offering an intuitive way for users to identify concerns and track their progression.

Unique Selling Point:
- Stands out with its interactive map feature, enabling swift identification of areas of concern and tracking the evolution of reported issues over time.

Business Potential:
- The app's unique features and focus on community-driven data could present significant business potential, especially in collaboration with local governments, NGOs, and environmental organizations.

Flowchart:



Technology stack here:

Front-end (Mobile App):
Flutter, Kotlin, Flutter Widgets,Google Maps Flutter.

Back-end (Server):
Node.js with Express.js,Firebase Authentication.

Database and Data Storage:
MongoDB for storing water-related data, especially locations.

Cloud Services:
Google Cloud Services.

Idea/Approach Details

Use Cases here:

Problem Reporting by Users:

- Users can report water-related problems they encounter, such as leaks, pollution, or water shortages and use the app to capture and submit problem details, including photos and descriptions.

Problem Verification and Resolution:

- Local authorities or community members can use the app to verify reported problems and take action to resolve them.

Map Visualization:

- The app displays water-related problems on a map, making it easy for users to see the location and distribution of issues in their community.

Data Open Sourcing:

- Users can access open-sourced data related to water quality, water sources, or historical water-related incidents.

Public Awareness Campaigns:

- Non-profit organizations can utilize the aggregated data to launch public awareness campaigns about prevalent water issues. This could include educational materials, workshops, and initiatives aimed at fostering sustainable water practices.

Dependencies :

Initial Dataset:

Depends entirely on satellite data till there is enough user engagement.

Data Accuracy and Reliability:

Relies on accurate and reliable user-generated data.

Mobile Network Connectivity:

Functionality depends on users having access to mobile networks.

Integration with Mapping Services:

Successful integration with mapping technology is crucial.

Government and NGO Collaboration:

Collaboration with government agencies and NGOs is necessary.

Show Stoppers:

Data Privacy and Security Issues:

Any major concerns or breaches could be a showstopper.

Legal and Regulatory Compliance:

Failure to comply with regulations could lead to shutdown.

Lack of User Trust:

Loss of user trust can render the app ineffective.

Technical Issues with Mapping Integration:

Significant technical problems could be a showstopper.

Insufficient Funding and Support:

Adequate funding and support are essential for sustainability.

Resistance from Local Authorities:

Lack of cooperation from local authorities may hinder effectiveness.

Natural Disasters or External Events:

Unforeseen events can disrupt normal app functioning.

Team Member Details

Team Leader Name: Gowtham Rajasekaran

Branch (Btech/Mtech/PhD etc):	B.Tech	Stream (ECE, CSE etc):	IT	Year (I,II,III,IV):	II

Team Member 1 Name: Vijay G K

Branch (Btech/Mtech/PhD etc):	B.E	Stream (ECE, CSE etc):	CSE	Year (I,II,III,IV):	II

Team Member 2 Name: Vigna Saktheeshwaran

Branch (Btech/Mtech/PhD etc):	B.Tech	Stream (ECE, CSE etc):	IT	Year (I,II,III,IV):	II

Team Member 3 Name: Shivaram M

Branch (Btech/Mtech/PhD etc):	B.E	Stream (ECE, CSE etc):	CSE	Year (I,II,III,IV):	II

Team Member 4 Name: Abinaya T

Branch (Btech/Mtech/PhD etc):	B.Tech	Stream (ECE, CSE etc):	IT	Year (I,II,III,IV):	II

Team Member 5 Name: Bharadhwaj Manikandan

Branch (Btech/Mtech/PhD etc):	B.E	Stream (ECE, CSE etc):	CSE	Year (I,II,III,IV):	II

Team Mentor Name: Dr M Hemalatha

Category (Academic/Industry):	Academic	Expertise (AI/ML/Blockchain etc): Pattern Recognition, Image Processing and Networking
Domain Experience (in years):	2014- Present	