Final Project Proposal

HDip in Computer Science

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Project Title: SeaSplash - A Community-driven Sea Swimming Mobile Application

1. Introduction

I propose to develop a mobile application named SeaSplash using the Flutter framework. Sea swimming has become increasingly popular around Ireland in recent years. The primary aim of SeaSplash is to provide users, especially those new to an area or on holidays, with a convenient tool to discover and share the best sea swimming spots. The application will enable users to log their favorite sea swimming locations, incorporating detailed descriptions, images, and map coordinates. Additionally, real-time sea conditions will be displayed through integration with weather APIs.

2. Features

- User Profiles: Users can create profiles to log and manage their favorite sea swimming locations.
- Location Logging: Users can add new sea swimming locations, complete with detailed descriptions, images, and precise map coordinates.
- Weather Integration: The application will pull in weather data through APIs to provide current sea conditions for each location.
- Privacy Settings: Users can choose to make their swimming locations either public or private based on their preferences.
- Favorites: Users can save and organize their favorite sea swimming spots for quick and easy access.
- Community Feature: A community-driven feature will allow users to share their public sea swimming locations, fostering a sense of community and facilitating the organization of swim meetups.

3. Technologies

The project will be implemented using Google's Open-Source framework Flutter which allows cross-platform compatibility from a single codebase. For my project I will be concentrating my efforts on a mobile application. Integration with weather APIs stormglass and openweather will provide real-time sea conditions, such as wave height and water temperature enhancing the user overall experience.

4. Milestones

Project Setup (Week 1-2):

- Set up the development environment.
- Create basic project structure.

User Profiles and Location Logging (Week 3-4):

- Implement user profile creation and management.
- Enable users to log new sea swimming locations.

Weather Integration (Week 5-6):

- Integrate weather APIs to display real-time sea conditions.

Privacy Settings and Favorites (Week 7-8):

- Implement privacy settings for swimming locations.
- Enable users to save and organize their favorite locations.

Community Feature (Week 9-10):

- Implement the community-driven feature for sharing public sea swimming locations.
- Facilitate the organization of swim meetups.

Testing and Debugging (Week 11):

- Conduct thorough testing to ensure the application's functionality and reliability.
- Address any identified bugs or issues.

Documentation and Submission (Week 12):

- Compile comprehensive documentation for the project.
- Prepare for the final submission.

5. Conclusion

SeaSplash aims to provide a user-friendly and community-driven platform for sea swimming enthusiasts. By the end of this project, I anticipate delivering a fully functional mobile application that meets the outlined specifications, enhancing the sea swimming experience for users.