Jonathan Brashears

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Software Requirements Specifications

Fishing Hole

Fish Tracking Android Application

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2.0 Introduction

2.1 Purpose:

The purpose of "Fishing Hole" is to provide fisherman a way to pin their fishing spots to GPS coordinates, enter pertinent information about those locations, and offer the option to share this information with other users.

2.2 Definitions:

User: someone using "Fishing Hole". Average fisherman.

Global Positioning System (GPS): Network of satellites used for positioning tracking

Java: Object-oriented programming language

Application programming interface (API): A set of tools and protocols for creating software.

2.3 Scope:

"Fishing Hole" is an Android applications written in Java. This application is GPS-based and allows users to create and share fishing spots using Google Map API. These spots are pinned to GPS coordinates and help the user navigate back to their favorite spots. This information is stored in a database on a web-server. These fishing spots can be filtered based on fish species, fish size, distance from user, and ocean temperature.

3.0 Overall Description

3.1 Product Features:

Account Registration:

After downloading the application the user must register an account through the application with an email address, username, and password.

Log In:

After registering the user must log in using his or her username and password. This information will be stored on the device, so the user can be logged in automatically on subsequent app use.

Pin Creation:

After logging in the user can create fishing spot pins on a map based on GPS coordinates.

3.1 Product Features continued:

Data Entry:

Once the user creates a pin he or she can enter information pertinent to the location. This includes fish species, fish size, sea temperature, and 180 characters for a comment section. Stored in database on web-server.

Filtering:

User can filter his or her pins by fish species, fish size, sea temperature, and distance from the user.

Shareable:

The user can choose to share a created pin with other users. To do this, the pin creator must know the other's username.

Password Retrieval:

Password retrieval. The user can use his or her email address to retrieve a forgotten password

3.2 Operating Environment:

"Fishing Hole" will operate on Android operating system. The application will run on Android mobile devices such as smartphones and tablets. "Fishing Hole" requires internet and GPS connectivity.

3.3 Assumptions and Dependencies:

The first assumption for "Fishing Hole" is that all devices running the application meet the minimum system requirements for the application to perform.

The second assumption is that Google Maps API will remain publically available for use.

3.4 Constraints:

"Fishing Hole" is under the constraint that the device running the application is able to access mobile data. The application must be able to access the database to fetch information.

The application is also under the constraints of the database. A large number of requests from multiple users could cause slower retrieval times from the database.

"Fishing Hole" is also constrained by GPS access. The application will not be able to show a user's location on a map accurately without GPS access.

3.6 Risks:

One risk of this project is lack of needed man hours to complete the software in a timely manner.

Another risk is that Google privatizes its map API that this software uses.

3.7 Quality Requirements:

- “Fishing Hole” application must be easily accessible while at sea.
- “Fishing Hole” must be energy efficient so it does not drain batteries unnecessarily
- “Fishing Hole” should be easy to use for the average smartphone user.
- “Fishing Hole” must have quick search times.

4.0 Nonfunctional Requirements

Password Encryption: Encrypted password storage for security

Incorrect Login Attempts: Limited incorrect login attempts for security

User Privacy: Users have the ability to block other users from contacting them and sharing pins