Software Requirements Specification (SRS)

for Khuje Nao App

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1 Introduction

1.1 Purpose

The purpose of the "Khuje Nao" app is to provide an efficient platform for users to report and find lost items through a streamlined, user-friendly mobile application. It allows users to report items they have lost or found, search for lost items based on various criteria, and communicate with others about the retrieval of these items. This app aims to reduce the stress and time associated with finding lost items by leveraging community reporting, notifications, and GPS location tracking.

1.2 Intended Audience

- **App developers and testers:** Responsible for creating, testing, and maintaining the application.

- **End users:** General public who need to report or find lost items.

- **Admins:** Individuals who will manage the platform, review reports, and handle inappropriate content.

1.3 Intended Use

The SRS is intended for development teams to implement the features of the app. It will be used by developers to understand functional and non-functional requirements. It will also be used by QA testers to ensure that all features work as intended.

1.4 Product Scope

The "Khuje Nao" app will allow users to report and search for lost items, view an activity feed of recently lost and found items, bookmark items, and communicate directly through phone numbers. It will include an admin system for overseeing content and blocking users when necessary.

1.5 Risk Definitions

Key risks include data privacy concerns, accuracy of GPS tracking, and ensuring proper admin oversight to prevent misuse of the platform.

2 Overall Description

2.1 User Classes and Characteristics

- **Regular Users:** People who lose or find items and need the app to report or search for them.

- **Admins:** Individuals responsible for managing the platform, approving or rejecting reports, and maintaining order.

- **Developers:** Responsible for building and maintaining the app.

2.2 User Needs

Users need a simple and intuitive interface to report or search for lost items. They need assurance that their personal data, including mobile numbers and location data, will be secure. Admins need a clear and efficient method to manage user reports.

2.3 Operating Environment

The app will run on Android and iOS platforms. The back-end will be managed on a server or cloud infrastructure capable of handling real-time data processing and storage.

2.4 Constraints

- The app will require internet connectivity to upload reports, view the feed, and interact with others.

- Privacy regulations must be adhered to for storing and sharing user information.

2.5 Assumptions

- Users will have GPS-enabled devices to provide location information.

- Admins will have the necessary tools and authority to manage reports effectively.

3 Requirements

3.1 Functional Requirements

- **Login/Signup System:**

  - Users must be able to sign up, log in, and log out. Optionally, an OTP (One-Time Password) system may be implemented for added security during signup or login.

    Sub-story 1.1: As a new user, I want to register with my email or phone number, So that I can create an account and use the app.
    Confirmation: A success message when a user registers, with an option for OTP. Failure messages for incorrect details.

    Sub-story 1.2: As a registered user, I want to log in using my credentials, So that I can access my account and report items.
    Confirmation: A valid login leads to the home page. "Remember me" functionality stores session details. Invalid login shows specific errors.

- **Lost Item Reporting:**

  - Users can report lost items by uploading images, adding a description, and providing the GPS location (displayed on a small map).

Sub-story 2.1: As a user, I want to report a lost item with an image and description, So that others can identify and help me find it.
Confirmation: Users can upload images and input detailed descriptions in a form. A success message confirms submission.

Sub-story 2.2: As a user, I want to tag my lost item's GPS location on a map, So that others know where it was last seen.
Confirmation: The system shows a small map where users can drop a location pin.

- **Found Item Reporting:**

  – Users who find items can report them, and the system will notify the user who reported the lost item when it is found.

    Sub-story 3.1: As a user, I want to submit a report when I find an item, So that the owner can be notified and claim it.
    Confirmation: A report form allows users to describe the found item with an image and location.

    Sub-story 3.2: As a user, I want to notify the person who reported the lost item when I find it, So that they can recover their belongings quickly.
    Confirmation: Notifications are sent to the original reporter when a found report matches their lost item.

- **Search Lost Item:**

  – Users can search for lost items based on location, name, or type. Items can be bookmarked for future reference.

    Sub-story 4.1: As a user, I want to search for lost items using filters like location, type, or name so that I can quickly find reports that match my search.
    Confirmation: Users can perform searches, and the results are displayed with relevant filters.

    Sub-story 4.2: As a user, I want to bookmark items of interest, So that I can track updates and revisit those items easily.
    Confirmation: A bookmarked item appears in a user's saved list.

- **Notifications:**

  – Users will receive notifications twice daily at 12 PM and 6 PM. Example notification: "2 items were lost today at NSU, check if you find them."

    Sub-story 5.1: As a user, I want to receive daily notifications about new lost and found items, So that I stay updated and can help recover lost items.
    Confirmation: Notifications are automatically pushed twice a day, with a message like "2 items were lost today at NSU."

- **Admin Management:**

  - Admins can review lost and found item reports, mark false information, and block users if necessary.

    <u>Sub-story 6.1</u>: As an admin, I want to review lost item reports and verify their authenticity, So that I can maintain a trustworthy platform.
    Confirmation: Admins can flag or remove reports marked as false and block users for repeated false information.

    <u>Sub-story 6.2</u>: As an admin, I want to block users who abuse the platform, So that I can ensure only legitimate reports are made.
    Confirmation: Blocked users are restricted from posting further reports.

- **Activity Feed:**

  - Users will see a real-time feed of recently reported lost and found items. Users can bookmark items from this feed.

    <u>Sub-story 7.1</u>: As a user, I want to view a feed of recent lost and found item reports, So that I can stay informed of the latest activity.
    Confirmation: The feed updates in real-time, showing the latest submissions and status updates.

    <u>Sub-story 7.2</u>: As a user, I want to bookmark items directly from the activity feed, So that I can quickly save any item that interests me.
    Confirmation: Users can bookmark items by tapping a button in the feed, saving it to their account.

- **Social Sharing:**

  - Users can share lost or found item reports on social media platforms for increased visibility.

    <u>Sub-story 8.1</u>: As a user, I want to share my lost or found report on social media, So that more people can help find or return the item.
    Confirmation: A shareable link is generated that users can post on platforms like Facebook or WhatsApp.

- **In-App Communication:**

  - Users can communicate directly via phone numbers about lost or found items.

    <u>Sub-story 9.1</u>: As a user who found an item, I want to contact the person who lost it through their mobile number, So that I can arrange the return of the item directly.
    Confirmation: Users can chat with each other within the app.

- **Language Support:**

  - The app will support both English and Bangla languages.

    Sub-story 10.1: As a user, I want to switch between English and Bangla languages in the app, So that I can comfortably use it in my preferred language. Confirmation: The app provides a toggle for switching languages, and the interface adjusts accordingly.

- **Server Management:**

  - All data will be processed and managed through a server, ensuring real-time updates and notifications.

    Sub-story 11.1: As an admin, I want a server to handle all data processing, So that the app can scale and manage real-time activity efficiently. Confirmation: All user data, reports, and notifications are processed and managed by the server in real-time.

3.2 Non-Functional Requirements

- **Performance:** The app must be responsive with minimal latency, especially for GPS-related tasks and notifications.

- **Security:** User data, particularly mobile numbers and GPS location, must be securely encrypted.

- **Usability:** The app should be intuitive, with a clean and simple user interface supporting both English and Bangla languages.

- **Scalability:** The system should be able to handle a large number of users and reports as the app gains popularity.

- **Privacy:** User data will be protected in compliance with data protection laws, including consent before sharing information publicly.