Project Proposal
on
"ReadRover"

Course Title: Mobile Application Development Laboratory

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Submitted To:-

Dr. Md. Ezharul Islam
Professor

Samsun Nahar Khandakar
Lecturer

Submitted By:-

Sovon Mallick (380)
Exam Roll : 202192

Mahfuz Anam (374)
Exam Roll : 202186

Department of Computer Science and Engineering
Jahangirnagar University
Savar, Dhaka-1342

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ReadRover: A Mobile Library for Browsing, Borrowing, and Locating Books

Introduction :

ReadRover is a mobile library application that allows users to browse a vast catalog of books, borrow them digitally, and locate a movable library using GPS. The app aims to provide convenient access to books and enhance the overall reading experience.

Problem Statement :

Many readers face difficulties in accessing books due to geographical constraints or limited library services. ReadRover aims to solve this problem by offering a digital platform for browsing books and tracking the physical location of a movable library.

Objectives :

1. Provide a user-friendly interface for browsing, borrowing, and returning books.
2. Enable users to locate a movable library in real-time

via GPS.

3. Facilitate notifications for book availability, library proximity, and due dates.
4. Offer offline access to downloaded books and personalized reading recommendations.

Features :

- **Catalog Browsing**: Users can search for books by author, title, or category.
- **Book Borrowing**: Users can digitally borrow and return books.
- **GPS Library Location**: Real-time tracking of the library's current location.
- **Notifications**: Alerts for due dates, new arrivals, and library proximity.
- **Offline Access**: Users can download books for offline reading.
- **Reading Lists**: Users can manage personal reading lists and bookmarks.
- **User Reviews and Ratings**: Allow users to leave reviews and ratings for books.

- **Book Recommendations**: Suggest books to users based on their reading history and preferences.
- **Multilingual Support**: Offer multiple languages for the app interface.
- **Social Sharing**: Enable users to share their favorite books or reading lists on social media.
- **Library Events**: Notify users about upcoming events, book signings, or discussions related to the library.

Technology Stack :

- **Programming Language**: Java or Kotlin (for Android development)
- **Database**: SQLite, Firebase Firestore (for real-time book management and user data)
- **Maps Integration**: Google Maps API (for GPS tracking)
- **Notifications**: Firebase Cloud Messaging (for notifications and alerts)

Timeline :

1. **Phase 1** (2 weeks): UI/UX Design and Wireframing.
2. **Phase 2** (3 weeks): Backend Setup, including Database and GPS integration.
3. **Phase 3** (2 weeks): Implement Core Features (Catalog, Borrowing, Location).
4. **Phase 4** (2 weeks): Testing, Bug Fixing, and Final Adjustments.

Expected Outcome :

The final version of ReadRover will provide users with easy access to a comprehensive library system, facilitate real-time tracking of a movable library, and offer digital borrowing with added features like notifications and offline reading. It will enhance the accessibility and usability of library services for readers, regardless of location.