R. P. Shaha University

- an institution of Kumudini Welfare Trust of Bengal (BD) Ltd.

Department: COMPUTER SCIENCE AND ENGINEERING
Semester: Spring 2024

Program: Bachelor of Computer Science and Engineering
Course Title: Software Engineering and Information System Design Lab
Course Code : CSE 325

PROJECT PROPOSAL

Stud_Name: Md. Tyibor Rahman

Stud_ID: 22100080

Stud_Batch: 24th

Submission Date: 18/9/2024

Course Teacher: Dr. Kingkar Prosad Ghosh (Associate Professor)

NARAYANGANJ 2024

1. Abstract

Ant_LIbrary is a cutting-edge digital library platform designed to offer free access to a wide array of books. With the goal of making literature universally accessible, this project will provide a mobile application where users can read, upload, and discover books. A separate admin application will facilitate the management of book content and user activities. By utilizing React Native for mobile development and Node.js for backend services, Ant_LIbrary aims to create an efficient, scalable, and user-friendly experience.

2. Functions to Include

- **User Authentication:**
  - Registration and login functionalities.
  - Password encryption and secure authentication.
- **Book Management:**
  - Users can upload books.
  - Admins can review and approve or reject book uploads.
  - Search and filter books by title, author, or genre.
- **Account Management:**
  - Users can update their profile information and passwords.
  - Admins can manage user accounts, including role assignments and permissions.
- **Responsive Design:**
  - Ensure the app functions seamlessly across various mobile devices and screen sizes.

3. Language and/or Platform

- **Front-end (User and Admin Apps):** React Native
- **Back-end:** Node.js, Express
- **Database:** MongoDB (or MySQL, based on requirements)
- **Authentication:** JWT (JSON Web Tokens)

4. Short Detail About the Project

Ant_LIbrary is a mobile application designed to democratize access to books by providing a free digital library. The platform will be implemented using React Native to ensure a smooth and responsive experience on both Android and iOS devices. Users will be able to upload and discover books, while a separate admin app will handle book approvals and user management. The backend, developed using Node.js and Express, will support a robust and scalable infrastructure. The use of MongoDB (or MySQL) will provide a reliable database solution for storing user and book data.

5. References

- **Navigation:** React Navigation (https://reactnavigation.org/)
- **UI Components:** React Native Elements (https://reactnativeelements.com/)
- **Data Management:** Redux (https://redux.js.org/)
- **Networking:** Axios (https://axios-http.com/)
- **Styling:** Styled Components (https://styled-components.com/)
- **Form Handling:** Formik (https://jaredpalmer.com/formik/)
- **Testing:** Jest (https://jestjs.io/)

Additional resources:

- React Native documentation: https://reactnative.dev/docs/getting-started
- Node.js documentation: https://nodejs.org/en/docs/
- Express.js documentation: https://expressjs.com/
- MongoDB documentation: https://www.mongodb.com/docs/
- JWT Authentication: https://jwt.io/introduction/