Libraro Requirement Specification:

1. Introduction:

Purpose of Document:

This document outlines in a very detailed manner the requirements for the Libraro Library App, this document can be used as a reference for developers throughout the development process.

Overview of the App:

Libraro is an Android Library App designed to provide users with a very appealing book reading experience, it allows users to buy/read/upload books, it also provides customers with a very detailed report on their reading progress. This app is perfect for book lovers and light readers as it is easy to use and has an offline feature for pre-downloaded books.

2. Functional Requirements:

User Actions:

- Buying books available on the Libraro Library App.
- Upload PDF Documents to read as books.
- Search through the library to find a specific book.
- Display reading progress on a specific book.
- Basic Analytics regarding user interactions on the app.
- Rate books.
- Save books to a Wishlist.
- Preview books before having to buy them.
- Set reminders for when a user wants to read a book.

System Behaviours:
- Save bought books to the user's account.
- Sync user's details into their account.
- Display suggested books on the homepage.
- Provide offline access to all bought books and uploaded files.
- Authenticate users before logging into the app.
- Track the reading progress of the user.
- Push notifications regarding any reminders set by the user.
- Generate preview of the books before buying them.

3. <u>Non-Functional Requirements:</u>

Performance:

- App launch time should be under 3 seconds on average devices.
- When books are searched, results should be displayed within one second.
- Scrolling through searched books should be smooth on minimum devices.
- Maximum app size at installation should be no more than 50MB.

Usability:
- Clear visual typography.
- Multiple themes support.
- Material Design 3 compliant UI.

Reliability:
- Crash-free rate of at least 99%.
- Automatic crash reporting.
- Automatic backup when users purchase a new book.
- Regular automatic backup to time spent reading books to add to the analytics.

Security:
- End-to-end encryption to all users' sensitive information.
- Secure payment processing through Stripe.
- Secure login process through a Google account.
- 2-factor-authentication login option if required.

4. <u>Technical Requirements:</u>

Development Tools:

- Android Studio Koala.
- Kotlin 1.5 or higher.
- Minimum SDK: API 24 (Android 7.0).
- Preferred SDK: API 33 (Android 13).
- Github for version control.

Frameworks and Libraries:

- AndroidX libraries.
- Firebase for database storage.

- ViewModel and LiveData.
- Retrofit for network operations.
- Firebase for storing book covers and books.

Testing Requirements:

- Unit test for all the app's logic.
- UI testing using Espresso.
- Performance testing using Android Profiler.

5. <u>Constraints:</u>

Platform Limitations:

- Only works on Android.
- Supports Android 7.0 and above.
- Maximum upload size for a book should be 20MB.
- Offline storage is limited by the device's storage amount.

Network Constraints:

- Login, book purchases, book search, and sync requires internet connection.

Development Constraints:

- The app must comply with the polices provided by Google Play Store.
- When using third-party libraries, they have to be widely adopted and well maintained.