



# Personal Media Library for Android

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Advised by

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Amazon



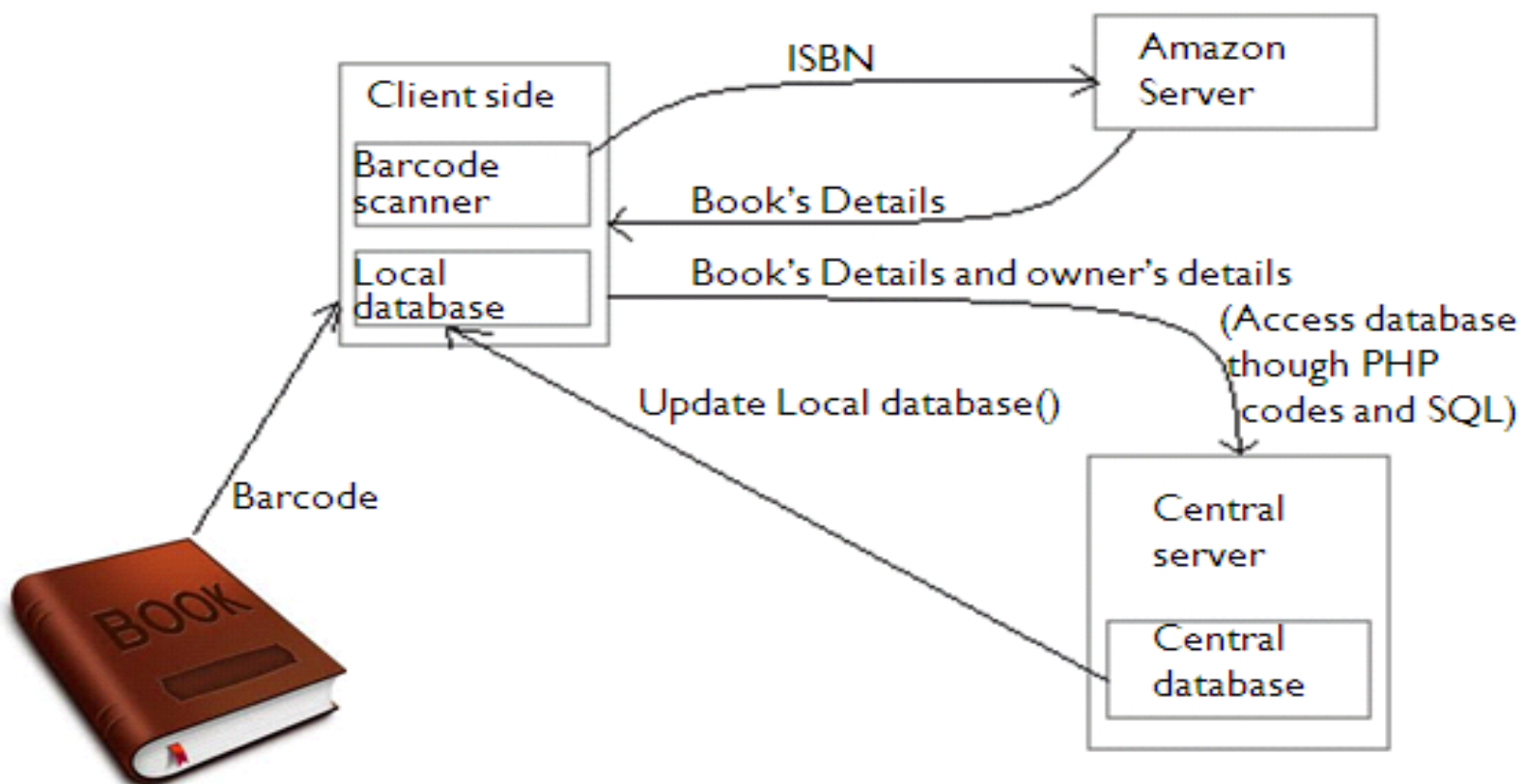
## Introduction

The project aims to develop a Personal Media Library “iShare”. This multiuser application is developed on Android platform. Users can customize and manage their media items and media loan records, such as categorizing and sharing media resources, getting reviews and ratings from other readers, tracking loan records and providing media return notification.

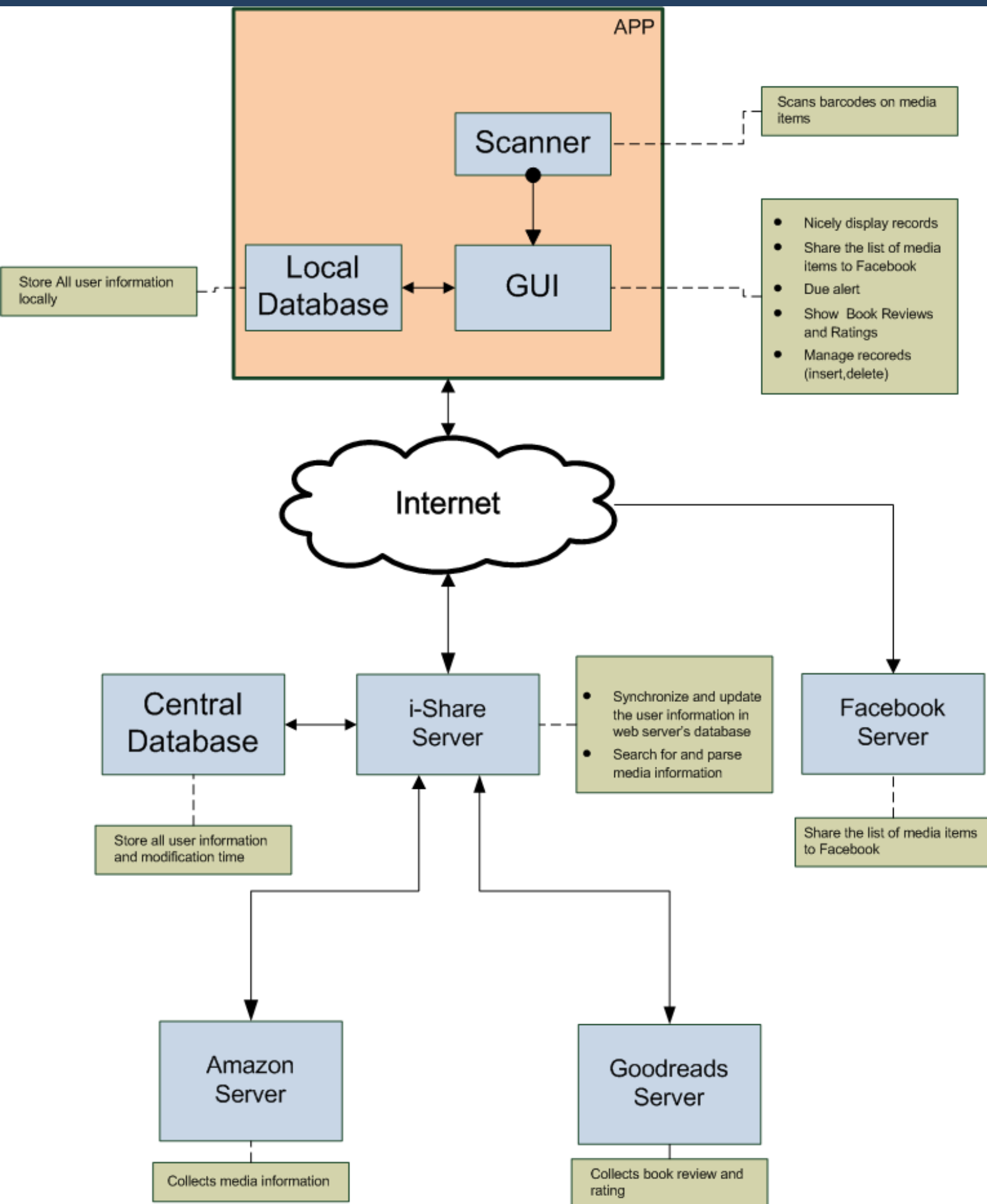
## Objective

- Scanning Book, CD, DVD barcodes
- Using Amazon and other online store APIs to collect the media information
- Creating loan records and deleting records on loan returns
- Updating a central server database (MySQL) from multiple Android devices
- Sharing media items to Facebook by using Feed Dialog provided in Facebook API
- Showing book reviews to users from Goodreads

## Data Flow

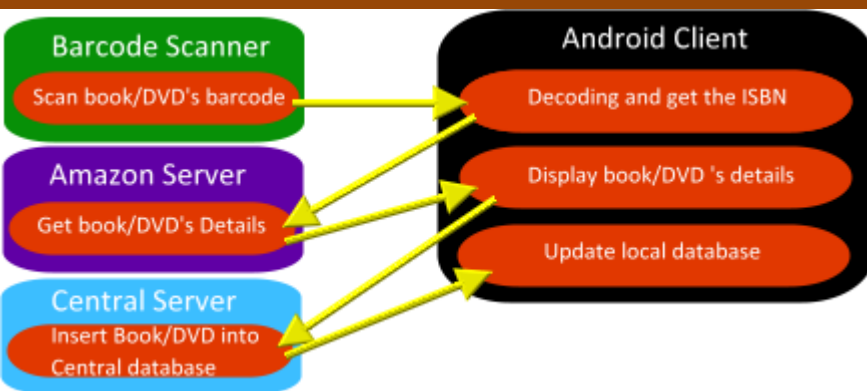


# Design



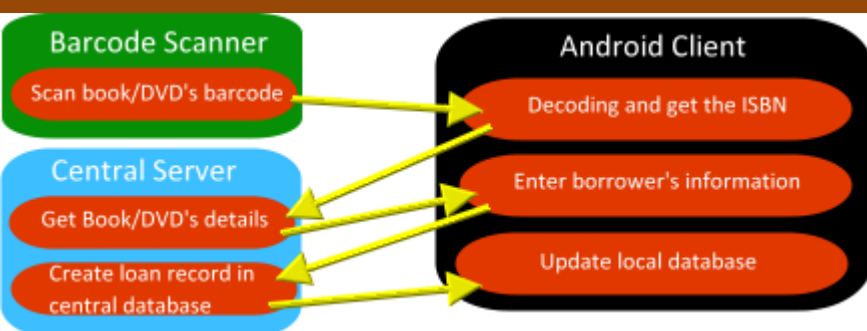
# Implementation

## Store a Book, CD or DVD



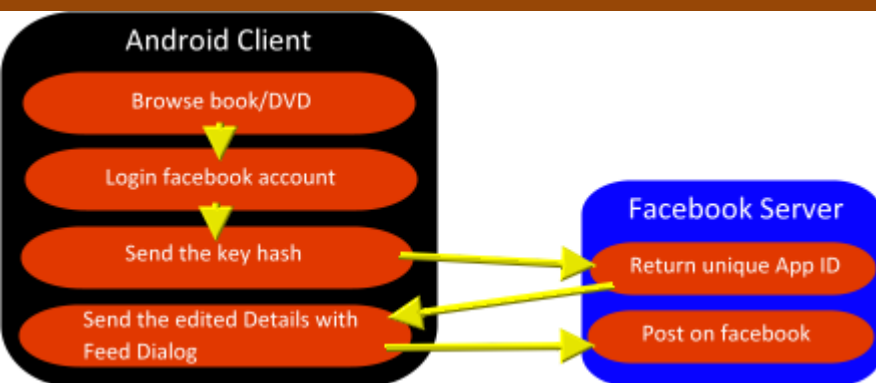
The figure shows how users store a book in their shelves. Users first scan the barcode by scanner. Next, Android client decodes and gets the ISBN/ EAN. The ISBN/ EAN will then be sent to Amazon server to get the book's details. After that, users can see the details on the screen and they can add the book into database.

## Borrow a Book, CD or DVD



Android client gets the book's details from central server instead of Amazon server. If users enter the borrower's information (name, contact, email, etc), a loan record will be created in database.

## Share a Book, CD or DVD on facebook



If users already login Facebook, they do not need to login Facebook again. Android client needs to send a key hash to Facebook for authentication and get the App ID which is used to call the function on Facebook server. Then, users can edit the details or messages in the feed dialog.

## Synchronization

To implement synchronization on multiple Android devices, Android client keeps on checking whether the data has been modified or deleted before modifying or browsing it on central database. If it has been changed, the data in local database will also be updated.

## Conclusion

In the project, the major functions are barcode scanner implementation, APIs integration, database and server implementation. Although there are accomplishments from the project, it is not the most perfect one. Nowadays many people always spend lots of time on communicating with their friends by using social mobile application, like Facebook and Twitter. Therefore, chat room, group message board and a web site will also be the main extensions in the future.