Innovative Way of Reusing Old Books Digitally, Book-ऐ-Istan : Buy & Sell Used Books (Android App)

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ABSTRACT

Nowadays Android are the best and the most popular operating systems for Smartphones. We believe that books are our best friends and more importantly, friends for life. Our app believes that everyone who reads a particular book contributes something to the understanding of the book. It is all these contributions which we target to bring together on our platform where now people can buy and sell your used books, thus sharing and receiving a part of the love, memories, moments and happiness the book has brought it in their life. Most importantly there is a humanitarian approach, which aims the users to directly connect to the NGOs in the application, and thus request for a donation, Thus the people in need can easily get a digital platform for the same.

Keywords : Android Studio, Firebase, Facebook SignUp, Donation Approach.

I. INTRODUCTION

Mobile phones have significantly impact on consumers and their life-style because the phones can works as small computers, importantly are portable. Therefore, lot of applications and services have been developed and provided on mobile phones.

Our project's,

'Book- ऐ -Istan: Buy & Sell Used Books',

Objective is to provide a platform for all students and reader to buy and sell old books. This will help to save paper and trees and promote the reusability of books. Users can buy or sell all types of books such as secondhand, prelove books, textbooks, novels, comics and limited edition books reasoning, old papers , BA, Bsc., B.com., B.tech, BBA, MBA, BCA, MCA, B .ed., Med., entrance exam guide, 10th to 12th all books and passbooks etc. Secondly, the users who are willing to contribute something to the society, have an option of donating books to nearby NGOs. For this application, we have tied up with some NGOs. . In this Android application, data is stored using the GOOGLE's firebase [1] server technology. This paper describes how the users can buy/sell used books at much faster secured way.

The Android programs have an extension of .apk which is to be installed in the Smartphones. Android programs are built in C, C++, or Java programming languages but the UI is perpetually made using Java. Android operating system is a stack of software components which is roughly divided into five sections namely Linux Kernel, Libraries, Android Runtime, Application framework and finally Application layer through witch user will interact.

II. METHODS AND MATERIAL

OBJECTIVIES

"Books are our best friends and more importantly, friends for life."

App believes that everyone who reads a particular book or used books contributes something to the understanding of the book. It is these contributions which app aim to bring together on our platform where now you can buy and sell your used books, thus sharing and receiving a part of the love, memories, moments and happiness the book has brought it in our lives.

Hopefully in coming months, through this app can bring a difference in the society.

Currently there are numerous students perusing technical education across the country, considering contributing of the books, one step towards contributing in quality education can be done by providing people the used books conveniently at cheaper prices.

ANDROID ARCHITECTURE [2]

As all know the Android operating system architecture. It is a Linux-based system, Android operating system basically is a stack of s/w components which is mainly divided into five sections and four main layers. Each layer of the lower encapsulation, while providing call interface to the upper.
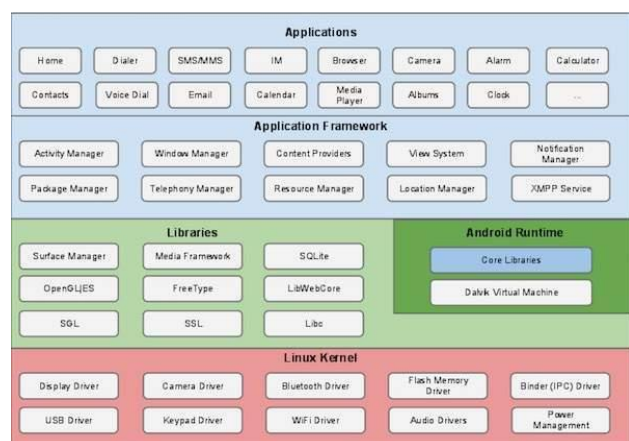

Figure 1. Android Architecture

Applications

At the top layer you will find all the Android application. If want to install your own application or if, want to write your own application code then we can do it only through this layer.

Application Framework

All the API framework of the core programs can be easily accessed by developers and they can also modify it according to their need. The application framework make easier to understand the reuse of its components. If want to access the functional components of other Android Application then we have to cross-check whether application has release it or not and then we must have to follow the security of the framework.

Libraries and Android Runtime

The library is divided in to two main elements: Android Runtime and Android Library.

Android Runtime is made up of a Core Java Libraries and Dalvik virtual format which is optimized for minimal memory footprint). Most functions of the core java *International Journal of Computer Applications (0975 – 8887) Recent Trends in Future Prospective in Engineering & Management Technology 2016,* 6 libraries is provided by Core library. DVM is register virtual machine and makes some specific developments for mobile devices. This system library is enlarged in C or C++ language. These libraries can also be used by the different elements in the Android system.

Android Advantages

1. Gradle build system is quick growing that is so integrated in Android studio.
2. User Interface (IDE) is very easy to implement in Android Studio.
3. Android Studio does not need higher amount of RAM space with a high CPU speed to function properly.
4. Android Studio has GUI (Graphical User Interface), developer can use the drag-and-drop feature.
5. Android Studio uses modules to manage and organize your code modules have their own Gradle build files which mean it can state their own dependencies.

MAIN ATTRACTIONS

No in app purchases.
Easy login through Gmail and Facebook

Hasel free book browsing.
List your used books in minutes.
Easy listing of books nearer to you
Book donation button in navigation bar
Mail notification for donation request.

DESIGN AND IMPLEMENTATION

Book-ing application is developed mainly using Android studio [3] with Android Development Tool (ADT) plug-in but before this, system must be installed with Java Development Kit [4]. Android Emulator is used to design, debug, and test the applications in an actual Android run-time environment for application development.
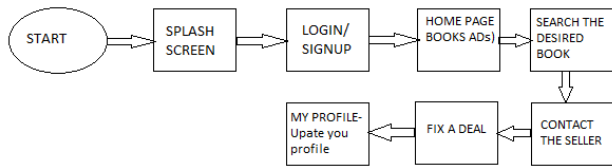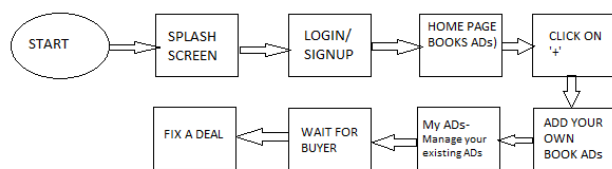

Fig 1: STEPS TO SELECT A BOOK ADD.

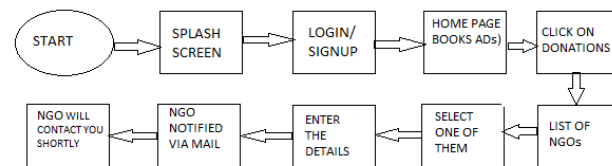Fig 2: STEPS TO UPLOAD A NEW BOOK ADVERTISEMENT.

Fig 3: STEPS TO DONATE A BOOK.

The **splash screen** is the very first screen of application. It has an activity named as splash activity that displays the app name with icon. After 3 seconds then comes the login page which offers three types of user login

1. Through Gmail[5]
2. Through Facebook[5][6]
3. In app sign up[5]

It contains the main (StartingActvity) which powers other two activity named as,

1. ResetPasswordActivity
2. SignupActivity,
   consists of two important methods,

1.private void
handleFacebookAccessToken(AccessToken accessToken)

2. private void handle SignIn Result (GoogleSignInResult result)

Now we come down to MAIN PAGE OF THE APPLICATION i.e. the StartingActvity that shows up all the advertisements uploaded by different users.

The StartingActvity consists of other important Activity

- MyAdds class
  It provides the GRID LAYOUTVIEW and shows add in Recycler.
- SellYourActivity
  It is used for uploading user Ads on the FIREBASE data server.
- NgoListActivity
  It further executes a Donate button which is then connected to NGOs, and provides a digital platform for donation.
  Under the NgoListActivity,
  It consists of two more activities named,
  NgoDetailsActivity which describes the all NGOs.
  And we have secondly, AddBooksDetailsActivity which helps in inputting values for donation.
- ProfileActivity
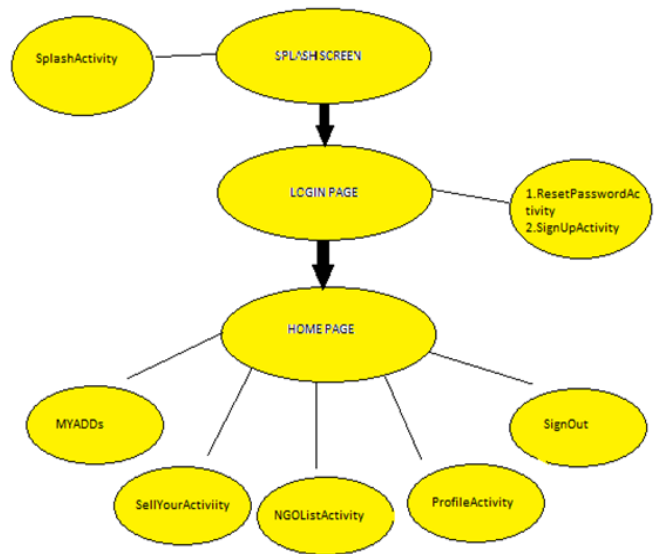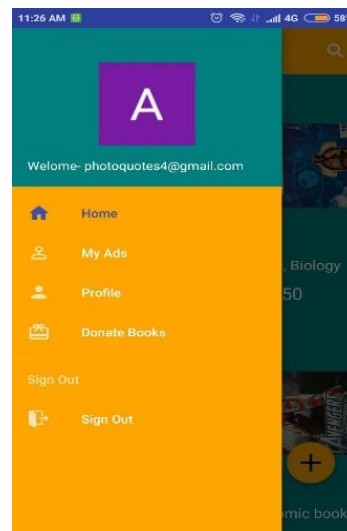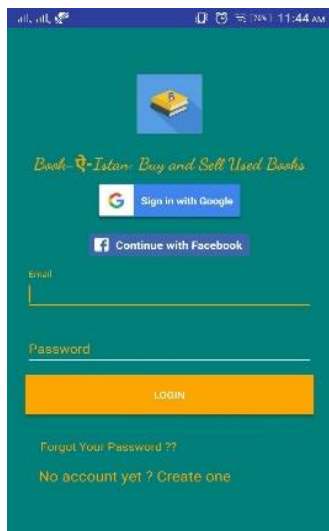 That helps in updating user profile timely.

Figure 2. App Activity hierarchy

III. RESULTS AND DISCUSSION

1.LOGIN PAGE

Through this page users get different ways of login ie. Gmail, Facebook, In-App SignUp.

2. HOMEPAGE

This page contains all the user uploaded advertisements. And by clicking in bottom-right corner ('+' sign), allow users to upload its own customized add.


3.NAVIGATION BAR PAGE

The navigation bar contains 5 buttons,

- ✓ Home - Takes you to the homepage.
- ✓ My Adds - Allow users to keep a track of all the self uploaded adds.
- ✓ Profile - Allows user to keep their details up to date.
- ✓ Donate Books - This button lists the NGOs, and further proceeds with donation page.
- ✓ SignOut - It helps user to sign out from application.

4. ADDBOOKDETAILS PAGE

Through this page, user can input their book details and upload their add on server.
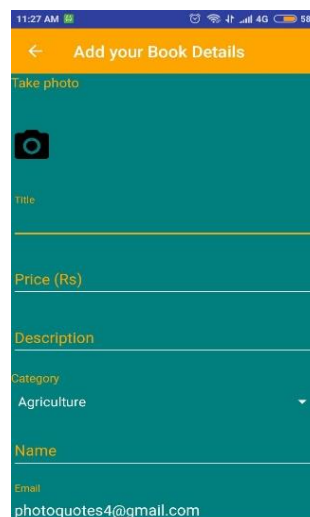
5. NGOList PAGE

This page lists the connected NGOS.

APP ADVANTAGES

- ✓ College students can easily resale reference books.
- ✓ Can connect through different NGOs and donates books for underprivileged children.
- ✓ Those looking to declutter their home or office and make some extra cash.
- ✓ Libraries and other book retailers needing move inventory to free up space.

IV.CONCLUSION

In this paper we have presented a Book Platform application, developed for Android using Firebase, mainly designed for reusing the book later on, change the way people buy the books.

> GPS enabled

> Payment gateway i.e. Paytm

> In app Chatbot

> Project assignment approach.

V. ACKNOWLEDGEMENT

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