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JB Thrift Store

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Abstract: *Sharing is a behaviour that reflects kindness. This is particularly true of the way individuals construct and carry out their social connections. Sharing what one has with others demonstrates humility and empathy for those who are less fortunate. People have things in their daily life that they no longer require and can appropriately give with someone in need. JB Campus Cart is a customized android application for JB campus. Customers who are JB students can connect with one another through this project and trade the merchandise. The user of this application must first list an item they intend to share, which can be anything, for free or at a cost. The user must then submit numerous images of the object. The list of all the goods available for sharing is accessible to all other users of this programme. After that, the users contact each other to pick up the item. The chat and payment modules also make it possible for customers to send messages to one another and accept payments through a secure channel. With the help of the suggested approach, a community is created that promotes lowering product waste and enhancing resource use.*

I. INTRODUCTION

More and more individuals are starting to utilise mobile devices for working and living because to the advancement of hardware technologies and falling costs of these gadgets. Many people may have unneeded stuff, particularly college students who may be graduating and leaving behind textbooks or stationery that can still be used by those who are still working towards their degree.

It is unreasonable to attempt to use these unused things. The second-hand market is a rather decent alternative to put the idle products to better use in order to change this scenario. It might not only encourage the reuse of unused products, but the owner could also reap some financial rewards. It might result in a situation where both the seller and the buyer "win." One of the most widely used mobile device platforms for smartphones, tablet PCs, and other devices is Android. As Android is an open source platform, other businesses or individuals are free to create applications using its source codes. As a result, more and more manufacturers and technical staff are involved in the development and promotion of Android. Android currently holds a market share of 80.7 percent, according to the most recent data from Google I/O 2016, whereas iOS currently holds a share of 17.7 percent.

In order to build and implement a second-hand things trading platform based on the Android platform, we took inspiration from the actual demands of idle item treatment. We then used the practical technologies of the expanding mobile Internet.

An Android application called JB Campus Cart enables college instructors and students to communicate, assist one another, and share resources. Users of this programme can list the products they want to share so that those in need can find them and obtain them. Every person should take personal responsibility for the growing global problem of resource waste. The only existing answer is resource utilization. JB Campus Cart is a one-stop shop for people who need something and for people who are prepared to share what they have with one another in order to cut down on waste. React Native was utilized to construct the application. It is simple to create mobile applications that work on both iOS and Android thanks to React Native. You can employ the same tools and coding languages used for web development with React Native. It functions as a JavaScript framework that enables programmers to create mobile apps that operate on both iOS and Android platforms using a single JavaScript codebase. Apps built with React Native behave exactly like those created with native code specifically for each device. Similar to their native equivalents, these apps can also be purchased through the iTunes Store or Google Play. They immediately interact with native devices and are equally quick and effective as native apps. React Native had a significant impact on the mobile developer community when it was originally released. It was revolutionary. You no longer required specialized iPhone and Android developers.

With one codebase, a web developer can now create a whole mobile application.

React Native was quickly adopted by corporations and mobile developers as it became clear how much easier it made developing mobile apps. The entry hurdle was also lessened because web development teams could now create mobile apps with little additional training.

A core team of Facebook developers continue to oversee React Native's upkeep today, but the open-source development community that supports it heavily influences its path. It is entirely free to use, has a development community with millions of members, and is currently one of the most well-liked open-source projects of any kind on Github.

The popularity of React Native is evidence of how quick and simple it makes developing mobile apps for both Android and iOS.

Google's FireBase is an accessible online database that makes it simple for developers to create, maintain, and expand their apps. It makes it easier for developers to create apps more quickly and securely. Because there is no programming required on the firebase side, it is simple to use the features more effectively. It offers services to web, unity, android, and ios. It offers online storage. The database used for data storage makes use of No SQL. Initially, Firebase operated as Envolv and offered an online chat service via API to a variety of websites. It gained popularity as programmers began using it to communicate application information, such as the current state of a game, with players in real time rather than only through conversations. As a result, the chat system and Envolv's architecture were split apart. James Tamplin and Andrew Lee, the creators of Envolv, continued to develop the architecture until it became what is now Firebase in 2012. Mainly there are 3 categories in which firebase provides its services. This feature mainly includes backend services that help developers to build and manage their applications in a better way.

Services included under this feature are :

- 1) *Realtime Database*: The Firebase Realtime Database is a cloud-based NoSQL database that manages your data at the blazing speed of milliseconds. In simplest term, it can be considered as a big JSON file.
- 2) *Cloud Firestore*: The cloud Firestore is a NoSQL document database that provides services like store, sync, and query through the application on a global scale. It stores data in the form of objects also known as Documents. It has a key-value pair and can store all kinds of data like, strings, binary data, and even JSON trees.
- 3) *Authentication*: Firebase Authentication service provides easy to use UI libraries and SDKs to authenticate users to your app. It reduces the manpower and effort required to develop and maintain the user authentication service. It even handles tasks like merging accounts, which if done manually can be hectic.
- 4) *Remote Config*: The remote configuration service helps in publishing updates to the user immediately. The changes can range from changing components of the UI to changing the behavior of the applications. These are often used while publishing seasonal offers and contents to the application that has a limited life.
- 5) *Hosting*: Firebase provides hosting of applications with speed and security. It can be used to host Static or Dynamic websites and microservices. It has the capability of hosting an application with a single command.
- 6) *Firebase Cloud Messaging (FCM)*: The FCM service provides a connection between the server and the application end users, which can be used to receive and send messages and notifications. These connections are reliable and battery-efficient.

II. PROPOSED METHODOLOGY

In the Figure a system is displayed with backend as Node JS in the center which sends the HTML pages to the frontend which is React Native App which then sends back the API requests while the Node JS retrieves the data from the database which is Firebase here. Modules are important to have a precise overview on the development of the project process so that while execution clarity of the next step is maintained. JB Campus Cart has following modules:

- 1) Authentication
- 2) Seller Module
- 3) Buyer Module
- 4) Chat Module
- 5) Payment Module

JB Campus Cart comprises these five important modules. Each module is explained in detail below.

- a) *Authentication*: If a customer is a first time user then they have to register in JB Campus Cart and then can login into the application. Users holding BVRITH campus mail IDs are only permitted to use the application.
- b) *Seller Module*: The user who wants to sell any of their products like stationary, textbooks etc. can post the details of the item like price, images, description and they will be displayed on the feed for the buyer to choose from the many items available.
- c) *Buyer Module*: The buyer will choose from the posts on the feed according to the items she is looking for and can also search for the items and then connect with seller to negotiate the price.
- d) *Chat Module*: The buyer and the seller can text with each other using the chat module feature to discuss about the item, price and location for where the item can be taken.
- e) *Payment Module*: The buyer can pay the money to the seller through PhonePe option or in person as payment.

III. LITERATURE REVIEW

In many nations, Campus Cart has been established specifically for international universities.

The research papers that discuss the current campus cart systems in use around the world are listed below.

The Campus Second-hand Musical Instrument Trade Platform Based on Java [1] is an application where the front-end users publish their own used musical instruments and buy used items from other users, while the back-end administrator handles users, commodities, and website data. The MVC mode serves as the primary technical support while JSP is used for page technology. The major programming language for the website is Java, and data is stored in a MySQL database.

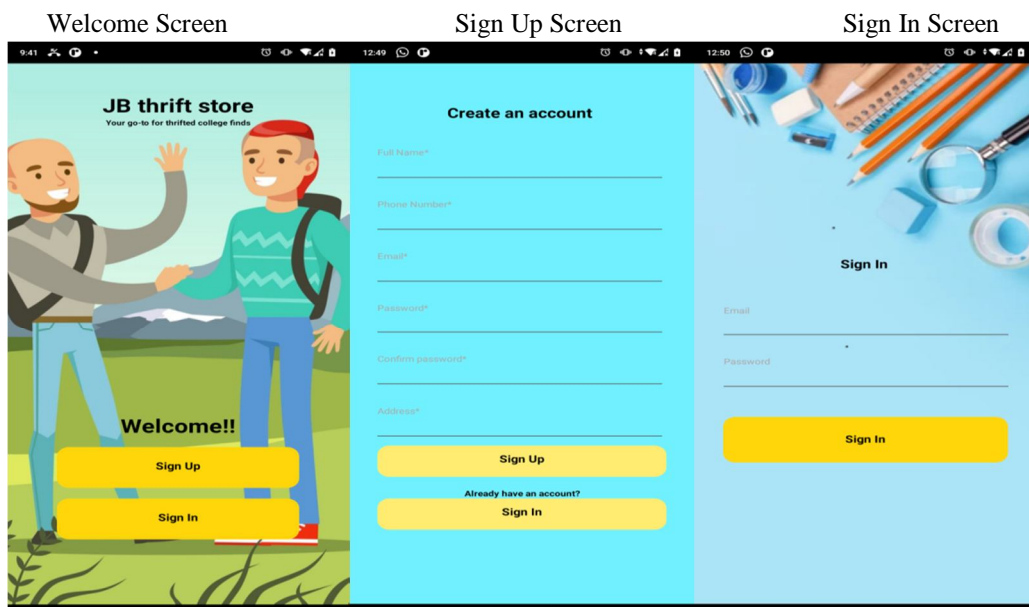
How to finish a second-hand items trading platform based on the android platform is described in Design and Implementation of a second-hand items trading platform based on Android [2]. They analyzed and designed the system's functions with a focus on the demands of the market. A system that offers home services with a single click has been proposed by a web application on demand home service system [3]. This essay explains web home services, as well as how services are ordered and delivered. Registered users can utilize on-demand home services systems to look for domestic services via a web application.

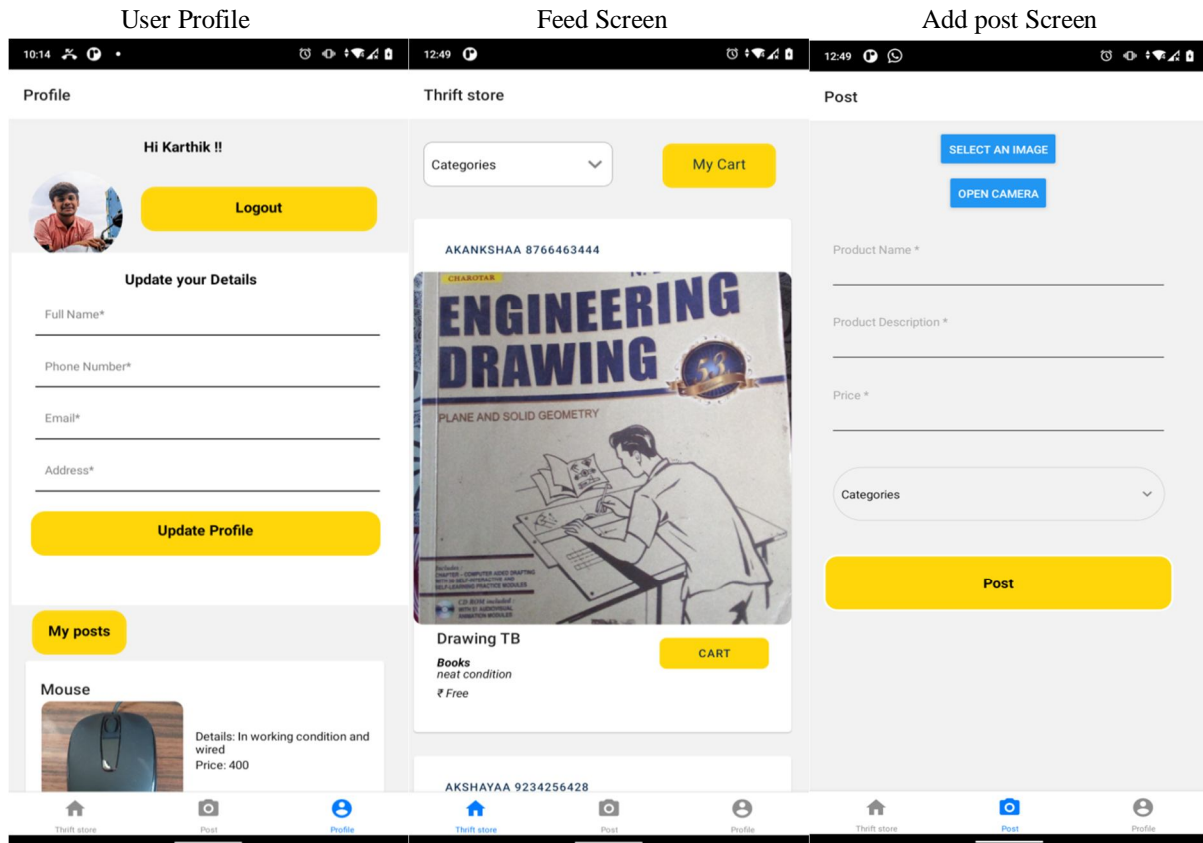
Design and development of the campus second-hand trading application [4] In accordance with their university circumstances, students typically produce a lot of extra products, such as books, outfits, or comedies. particularly for graduating students who will shortly be departing. It is difficult to take their quilt, two pillows, mattress, washbasin, kettles, and other items back home. Just throwing them out is a significant resource and financial waste. These used products could be purchased by freshmen, who are the ones that need them most. Thus, it is necessary to deal with these issues in an acceptable manner.

A mobile platform for a smart campus, OnCampus [5] OnCampus can make a significant contribution in the following ways: by establishing social networks based on interest mining, by offering educational advice based on emotion analysis, by serving as a platform for information sharing, and by creating a secondary trading platform aimed at the most effective distribution of campus resources. This platform will be built using a client-server architecture and the XMPP protocol for instant messaging, which enables the seller to send the buyer their location. Design of a campus used-commodity trading building [6] This essay examines the value of developing a campus secondary market trading system that uses a C2C business model and a MySQL database.

What factors influence the selling willingness for hypothetical reference prices? refurbished goods According to [7], they conducted three experimental tests using electronic items to tell customers about the likely future value of their possessions and to determine whether or not they might considerably enhance consumers' intentions to sell. Design of a Campus Second-Hand Items Selling Platform Based on B/S [8], describe how they created a platform for selling used products for the campus transaction market using JSP, HTML, and JS for view logic and MySQL as the database. It is useful, easy to use, and has a pleasant user interface. It implements the online and offline interaction between the buyers and sellers and allows campus residents who need to purchase and sell to share the same access to information.

IV. RESULTS





V. CONCLUSIONS

JB Campus Cart, which is only available on college campuses, will assist several students on campus in making the best use of their goods by trading them with their friends and/or juniors. People have things in their daily life that they no longer require and can appropriately give with someone in need. JB Campus Cart is a customized Android application for college campuses. Customers who are college students can connect with one another through this project and trade the merchandise. React Native was used in the system architecture design to increase the software's stability and maintainability, and a platform for trading used goods was built to offer customers on campus a convenient service. This programme can be created to support iOS platforms as well, presented to numerous other institutions around India, and assist numerous college students in earning money and obtaining the necessities at a fair price. With the help of the suggested approach, a community is created that promotes lowering product waste and enhancing resource use.

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