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ShoppyCo-An Modern Android Application for Seamless Shopping Experience

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ABSTRACT: ShoppyCo Android Application is the kind of digital shopping for coconut based custom products. Java language is used to build this ShoppyCo Android application project. This project will give a real time application which will be made available in the online platform. This application offers a user-friendly interface with features including services like signing up/login to the app, displaying the products according to their categories, adding my cart, place order, order details, search results, exit as logout, product browsing, search, cart management, secure payment, and order tracking and even the admin side application. This project has done to achieve the e-commerce for the coconut based products such as coconut/coconut shell art and handcrafts, coconut based food products and other such products. It aimed at providing users with a seamless shopping experience. The backend system employs robust database management Additionally, the app utilizes recommendation to personalize product suggestions for users, enhancing their shopping experience. With its intuitive design and comprehensive functionalities, this ShoppyCo E-commerce Android application aims to revolutionize online shopping for users.

KEYWORDS: Android application, E-commerce, Java, Firebase, User Interface Design.

I. INTRODUCTION

ShoppyCo app offers a seamless shopping experience right at your fingertips. With a user- friendly interface and robust functionality, customers can effortlessly browse through a wide range of products, make secure purchases, and track their orders with ease. This prioritize user convenience by providing features such as personalized recommendations, saved favorites, and quick checkout options. Embrace the future of online shopping and explore our app today!.. In today's digital age, e-commerce has become an indispensable part of the retail landscape, offering Paper is organized as follows. Section II describes automatic text detection using morphological operations, connected component analysis and set of selection or rejection criteria. The flow diagram represents the step of the algorithm. After detection of text, how text region is filled using an Inpainting technique that is given in Section III. Section IV presents experimental results showing results of images tested. Finally, Section V presents conclusion. consumers convenience, variety, and accessibility like never before. With the widespread adoption of smartphones, developing an e-commerce Android application has become a strategic-imperative for businesses which aiming to reach a broader audience and capitalize on the growing mobile commerce trend. This ShoppyCo project aims to create a user friendly e-commerce Android application using Java in Android Studio, leveraging the strength of Java's flexibility and Android Studio's rich development environment. By harnessing the capabilities of modern technologies and integrating essential features such as secure payment processing and seamless shipping functionality, this application seeks to provide users with a compelling and intuitive shopping experience while enabling businesses to effectively showcase and sell their products in the competitive online marketplace. This application offers a user-friendly interface with features including services like sign up/login to the app, displays the products according to its categories, add my cart, place order, order details, search results, exit as logout, product browsing, search, cart management, secure payment, and order tracking. This project has done to achieve the e-commerce for the coconut based products such as coconut/coconut shell art and handcrafts, coconut based food products and other such products. It aimed at providing users with a seamless shopping experience. The backend system employs robust database management and integrates with payment gateways for secure transactions. And This ShoppyCo app utilizes recommendation to personalize product suggestions for users, enhancing their shopping experience. With its intuitive design and comprehensive functionalities, this ShoppyCo Android application aims to revolutionize online shopping for users. This Project also gives the new features as

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receiving the picture from the user to make it as customized one, which can be print or paste in the coconut shell crafts, and also the user can make an order for the sweets or other kinds of foods which is available in the application.

II. RELATED WORK

Design and Development of E-Commerce Web Application for Cooperative Store ; This paper proposes e-commerce web application that is developed to make the existing service more convenient, reliable and effective for people residing within the college campus. Authors : Sangay Tenzin, et al; International Research Journal of Engineering and Technology (IRJET). [1]
E-Commerce Application For Local Stores by Jyoti C. Kolte et al|2021 International Journal of Creative Research Thoughts (IJCRT); This paper informs that it can lead to error free, secure, reliable and fast management Application. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. [2]

E-Commerce Website; author: Harshadi Hansora, et a lhad published in International Journal of Advance Research, Ideas and Innovations in Technology|2021. This paper informs, The ideal applications do not distract the user from his/her intent and they provide on appropriately level of security, accessibility and speed. Task based interfaces, and design are important aspects that developers have to consider when designing mobile phone applications. [3]

The Rising Trends of Smart E-Commerce Logistics; This paper interprets that the field of smart logistics for e-commerce is still in its early stages and has significant potential for growth. Their analysis highlights the increased interest in this field of study in recent years, which corresponds to the growth of e-commerce demand. Published in IEEE |06 March 2023. [4]

Implementing E-Commerce Mobile and Web Application for Agricultural Products: e-Farmers' Hut;author: Sovon Chakraborty, et al;6th International Conference on Trends in Electronics and Informatics (ICOEI) April 2022; This study proposes e-Farmers' Hut had designed to be user friendly for both clients and farmers. Moreover, the application would be made lower in size and more user-friendly, since internet connectivity is not always reliable in rural areas where farmer live. [5]

III. EXISTING SYSTEM

An existing e-commerce Android application typically comprises a frontend with features like homepage showcasing products, product listings, search and filters, shopping cart, checkout process, user account management, and order history. Backend components include a database for storing product and user data, a server built with technologies like Node.js, Python, or Java for handling requests and business logic, APIs for communication between frontend and backend, and integrations with payment gateways and shipping services for secure transactions and real-time shipping calculations. Additional features may include social media integration, wishlist functionality, reviews and ratings, multi-language support, responsive design, and analytics for insights into user behavior and sales data. Examples of such applications include Amazon, eBay, Alibaba, and Flipkart, which have evolved to provide seamless shopping experiences and incorporate various technologies to enhance user satisfaction and engagement.

IV. PROPOSED SYSTEM

In order to overcome some of the disadvantages of the existing system, A proposed e- commerce Android application would feature a user-friendly interface with a homepage showcasing featured products, categories, and promotions. Users can browse through product listings, search for items, and filter them based on various criteria. Each product will have a detailed page displaying images, descriptions, reviews, and pricing information. The application will include a shopping cart where users can add or remove items, and a streamlined checkout process with multiple payment options and shipping methods. User authentication and profile management will be integrated, along with an order history section for tracking past purchases. The backend system will include a robust database to store product and user information, a server to handle business logic and communication, RESTful APIs for frontend-backend interaction, and integrations with payment gateways and shipping services for secure transactions and order fulfillment.

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Additional features include the user can sell through this app, totally it gives user friendly experiences.

V. IMPLEMENTATION

Implementations for this ShoppyCo Android application involve developing various components. Implementing the ShoppyCo Android application using Java in Android Studio involves several key steps. Firstly, we will create the frontend by designing UI layouts using XML files and implementing corresponding Java classes for activities and fragments. This includes screens for the homepage, product listings, cart management, and checkout process. Recycler Views are commonly used to display product lists, while other UI elements like buttons and text fields are customized to fit the application's design. Secondly, we will be developed the backend using Java, with frameworks like Spring Boot for creating RESTful APIs. These APIs will handle requests from the frontend, including actions such as fetching product data, managing user authentication, and processing orders. Data persistence can be managed using an ORM(object relational mapping) framework like Hibernate, connecting to a relational database such as SQLite. Integration with payment gateways like Stripe or PayPal SDKs enables secure transactions, while APIs from shipping providers like FedEx can be integrated for shipping functionality. Proper exception handling and error logging ensure the reliability of the application. Testing is crucial, and you can use JUnit for unit tests an Mockito for mocking dependencies.

VI. METHODOLOGY

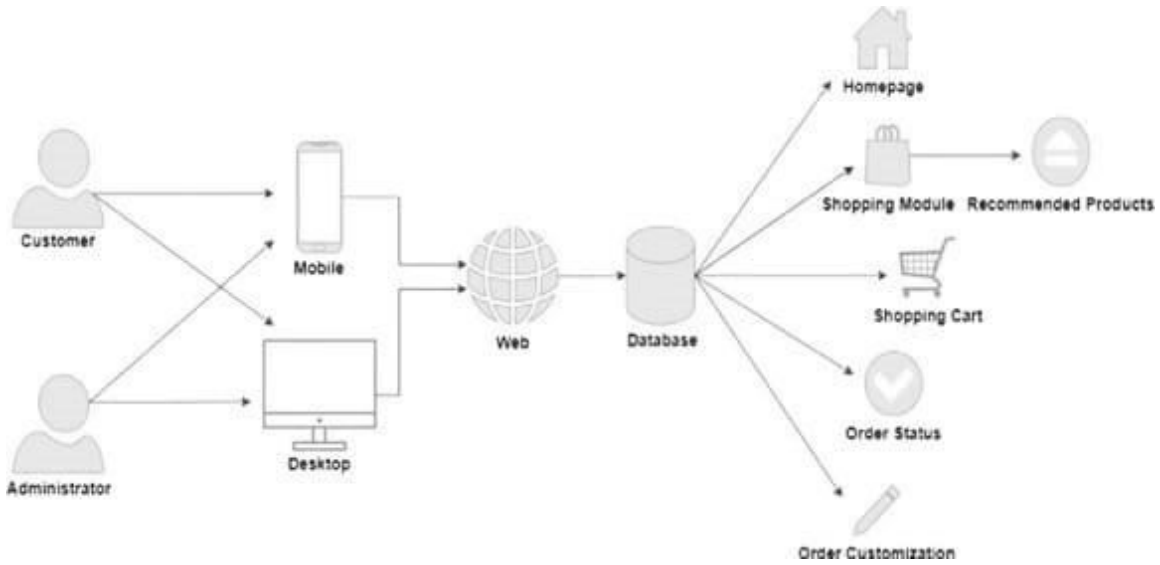

Figure 1: Methodology

The above figure shows that, the E-Commerce Application where the customer can get to know about the services which are available in this application and admin can update the products into it

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VII. EXPERIMENTAL RESULTS

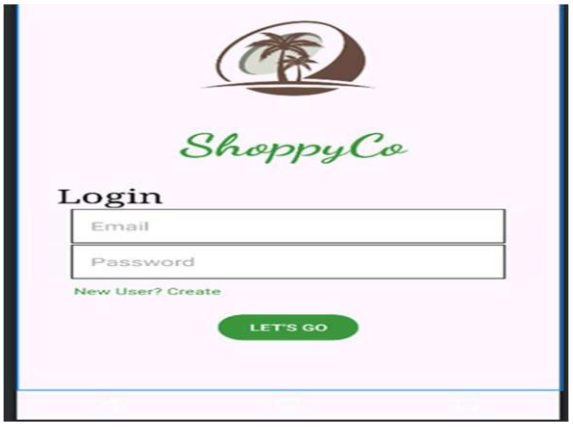

Figure 2 : Login Page

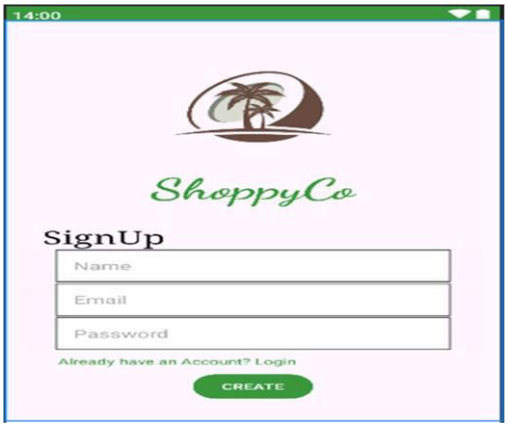

Figure 3 : Signup page

The figure:2 shows that, the Login page of this ShoppyCo Application, Through this login page the user can login to the ShoppyCo Application. figure: 3 shows that, the Signup page , through this signup page the user can signup to the application to make their shopping.

Figure 4: Product List Page

Figure : 4 shows that, the list of the products. This application is full of with the coconut and coconut shell products. The user can buy this product even in online , User can order the sweets and those food products in priorly for any functions and festivals. And this project provides the personalized product where the picture can receive from the user side and make it as customizable. Totally, This application gives the best user experience. Figure: 5 shows order page which is used to order the products and proceed to checkout. Figure:5 shows admin side product management page which is used for the admin to add, delete, update the products

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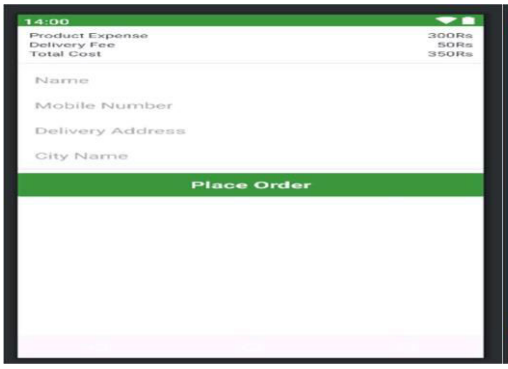

Figure 5: Order Page

Figure 6: Product Management Page

VIII. CONCLUSION

In conclusion, developing the ShoppyCo Android application using Java in Android Studio offers a comprehensive solution for businesses to tap into the vast online market. Leveraging Java's versatility and Android Studio's robust development environment, developers can create a user- friendly frontend with activities and fragments, while Room ORM simplifies database management, ensuring efficient storage and retrieval of product and user data. Integration with payment gateways like Stripe or PayPal SDKs facilitates secure transactions, while APIs from shipping providers enable accurate shipping cost calculations and package tracking. With a focus on usability, security, and reliability, businesses can deliver a seamless shopping experience to users, driving engagement and fostering trust.

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