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DoorNok Online Shopping System for Local Market

Ajay Yennawar[1], Kartik Jude[2], Anushree Bhandarwar[3], Prashant Govardhan[4]

CSE, Priyadarshini College of Engineering, Nagpur, India[1]

CSE, Priyadarshini College of Engineering, Nagpur, India[2]

CSE, Priyadarshini College of Engineering, Nagpur, India[3]

Prof., CSE, Priyadarshini College of Engineering, Nagpur, India[4]

Abstract: In this era, online shopping is the most common way to buy things without going out. With less effort, people can buy products by staying at home. Shopping on e-commerce websites is increasing day by day, and today's young people prefer online shopping to local stores because of the accessibility and efficiency of the Internet. In this online shopping, many items are not delivered on time and can take up to 2-3 days. Local markets are also influenced by the popularity of e-commerce sites and online shopping. The proposed solution provides local businesses with an online platform based on location preferences. If the owner of a local store can register and sell the item on this platform and the customer can buy the item online at the nearest local store.

This will allow customers to view and purchase all products available in the shop. To make the platform readily available on almost all Android devices owned by the majority of the population.

Keywords: Mobile App Development, Flutter, Ecommerce, Firebase, Local trading

I. INTRODUCTION

E-commerce growth has been exponential in the last decade. Online shopping offers a variety of payment methods, as well as features such as Skip the Line shopping and comfortable shopping at home. An important feature here is to create a user-friendly interface that allows sellers and buyers to easily list the items for sale and track which items are for sale. Shoppers, on the other hand, have a list that contain a variety of merchandise. Users can see if the desired product is available in this store. If it is not available, you can search for the product in other stores in the application. The smartphone is also available to most people, and because of this convenience, most people prefer online shopping to offline shopping. Sites like Amazon and Flipkart have a large market share compared to other competitors in the market due to their large user base, but it takes 3-4 days for a product to reach its customers, and in some cases, it takes a week. Products are delivered much faster and more efficiently when customers shop at nearby stores. Users can also get the product on the day they place an order. Amazon's Prime membership has the ability for users to pay an additional fee to get the product within 12 days, but users have to pay more for it, fuel and human resources. Other resources such as are overused.

Therefore, the DoorNok app provides a platform for local store owners to sell their products on the Internet, allowing customers to shop at local stores. Local stores can deliver the product immediately. That's the plus point of this DoorNok application. Users order from local stores, so you don't have to pay extra to speed up delivery. DoorNok uses the phone location to find the available store closest to the customer and also provides the distance from the current location to the available stores near that location. It provides a list of products available in the store, and customers can buy and get the products immediately. The platform is primarily focused on bringing local shops to the online platform to reduce the time it takes to purchase a product and deliver it to customers. The platform also includes a rental system and the sale and purchase of second-hand goods with the appropriate modules in one application. With this application, users can sell, buy, and rent the application with just a few clicks.

II. LITERATURE SURVEY

Literature reviews show that as customer needs evolve, companies need to upgrade themselves to meet customer demands in order to achieve more profits and meet competitive markets [1]. This article describes the factors that influence a customer's buying behaviour. Today, people don't want to waste time in long lines just to buy some things. It's more convenient to buy a product from your mobile phone with just a few clicks. To improve the customer experience [2], we have implemented voice recognition, one of the successful feature releases. The customer does not need to be able to enter it here. Simply click on the microphone icon and search for the product by speaking your name to the microphone

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and the product will appear on the screen. According to the paper [3], applications evolve over time. We also investigated whether mobile applications were preferred over regular websites. This service is offered in a variety of forms. Catalogue products may differ significantly from the original product.

Paper [4] presents an intelligent recommender system in which users receive personalized advertisements along with product notifications with the help of machine learning machines. Use the built-in barcode scanner to scan the products that the seller wants to add and add to the database. Also, online payments were not very user-friendly, and people were hesitant to use online payments for fear of lack of secure transactions. A similar approach is described in an article [6] where a smartphone application was developed to buy things in a mall. The crowded malls on weekends make it easier to buy online. Car rental systems are available in big cities, but there is no system for renting all kinds of goods. [5] According to the economic analysis of rent hunting, it is easy to fall into a discount trap, and it is possible to buy unnecessary things and fall into advertisements, and they may accumulate in the house and become the maximum. Home space. Therefore, borrowing these things is the best solution to this problem.

III. PROPOSED WORK

We have proposed a system that allows users to purchase products from nearby stores, with an interface that is easy for both buyers and sellers to use. The user's current location is obtained using the Google Maps Application Programming Interface (API) and the nearby stores are displayed to the user. Users can see the distance from their current location to that particular store. This platform is for both sellers and users to create ecosystem of affordable and fast ecommerce. This project has two applications:

1. Seller App: The seller app is for local stores where sellers can upload and sell their products. Simply click on the image of the item, add a name, description, category and price and you can upload it to his shop. The seller app includes features such as:

- authentication,
- seller dashboard,
- uploading new products
- delete product and other details

2. Users App: The user app consists of three main features:
A. DoorNok Stores
B. Rent Panel
C. Toogood Panel

A. DoorNok Store: The DoorNok Store is an important feature of the app that allows customers to check nearby stores and shop online. Customers can browse products, add them to their shopping cart, place orders, and pay securely online. Users can see the calculated numerical distance between their current location and a particular store and decide which store to buy the product from. Users can choose to pay online or cash on delivery as needed.

B. Rental: Knowing the user's location allows the user to rent an item in the app. They can rent a house / room, a car, clothes, books, and whatever they want to rent. All you have to do is upload a photo of the item you want to rent, add a name, description and rental price, and anyone who wants to buy this product can contact the user to buy the product. C Toogood: This is an inter-personal buying and selling feature that allows users to sell their products to others in the app. Today's e-commerce offers a service that allows anyone to buy and sell second-hand goods through applications.

IV. IMPLEMENTATION

We have developed an Android application using Flutter technology [7]. Flutter is Google's open-source framework for building beautifully natively compiled multi-platform applications from a single code base. Some features of Flutter are:

• Fast: Flutter code is compiled into ARM or Intel machine code and JavaScript for fast performance on any device.
• Multi-Platform: Deploy from a single code base (mobile, web, desktop, and embedded) to multiple devices.
• Productivity: Build and iterate quickly with hot reloads. Update your code and see your changes almost instantly without losing state.
• Developer Experience: Control your code base with automated testing, developer tools, and everything else you need to build production-quality apps.

We used Firebase [9] to create a connection between the frontend and the backend. Firebase is a back-end model as a service that makes it easy for developers to build, manage, and scale their apps. It helps developers build apps faster and more securely, and uses NoSQL to store data in the database.

The features of Firebase are:

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• Authentication: The Firebase Authentication service provides an easy-to-use UI library and SDK for authenticating users to your app.
• Remote Configuration: The Remote Configuration service helps you release updates to your users immediately.
• Cloud Firestore: Cloud Firestore is a NoSQL document database that provides services such as global storage, synchronization, and queries through applications.

A. Technologies used

- Visual Studio Code
- Flutter 2.0.6
- Dart
- Firebase
- Google Cloud Platform
- Android Emulator

B. Operational Details

The seller, who is the administrator of the seller app, registers himself and his current store location is stored in the Firestore database in the form of geopoints representing latitude and longitude. The seller then creates a list by adding to the shop the items that the user sees when they click on the seller's shop, as shown in Figure 1.

When a user searches for a particular product, the data stored in the Firestore database is retrieved and displayed in the DoorNok user dashboard. When a user registers in the same way as a seller app user, the user app now saves the current location in the database. The distance from the user's current location and all other stores around the user is then calculated using the Geolocator and Geocoder Dirt Package [8] and these stores are displayed on the user's screen as shown in Figure 2. It shows. Stores are displayed to each user according to their geographical location. After that, users can browse various products. Below are the features and information of the user app.

• Shows the numerically calculated distance between the user's current location and all stores at that location.
• Browse different products and shops
• Add items to your cart
• Increase or decrease the quantity of items
• In the online payment rental window by Razorpay [8]

Users can create a post by clicking the Add button shown in the screenshot. The user uploads an image and adds the item's name, description, category and price. Anyone who wants to buy this item can contact the relevant users to make a transaction (Figure 4). Similarly, the app's TooGud feature allows users to add products they want to sell in their area. (Fig. 3). Other users registered on the platform can view other users' posts, contact sellers to interact with users, and retrieve data from the Firestore database.

V. FLOWCHARTS

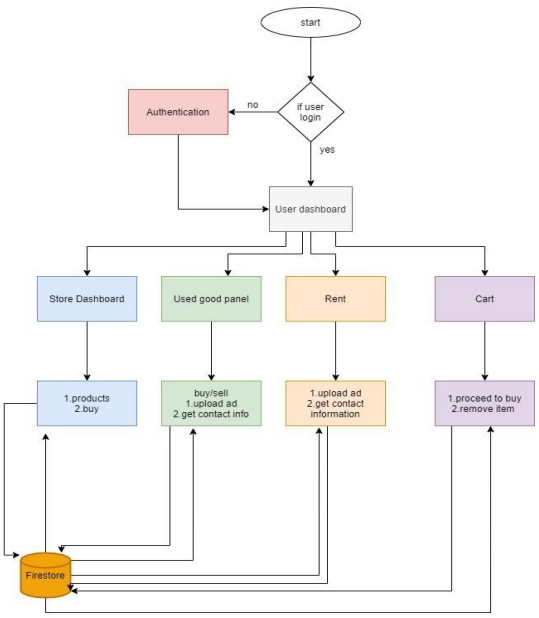

Fig.1 User Data Flow Representation

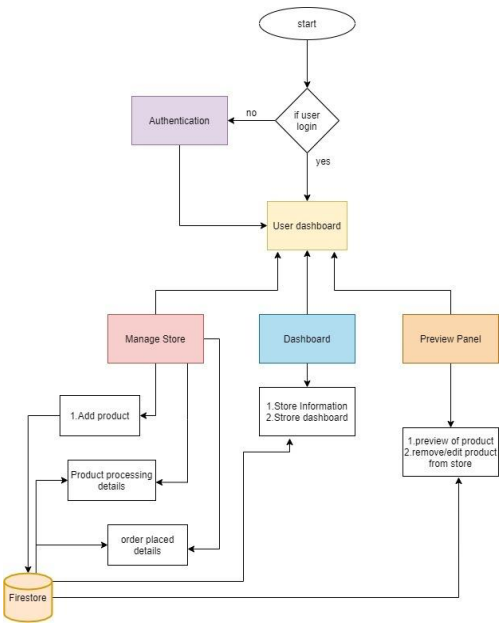

Fig.2 Seller Data Flow Representation

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VI. SCREENSHOTS

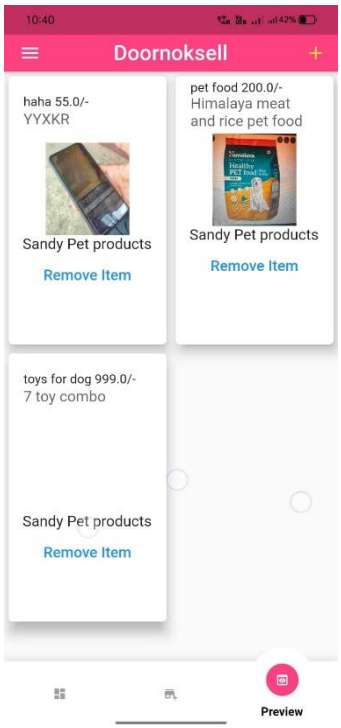

Fig.1. Products Added by Seller

Fig.2. DoorNok Main Page

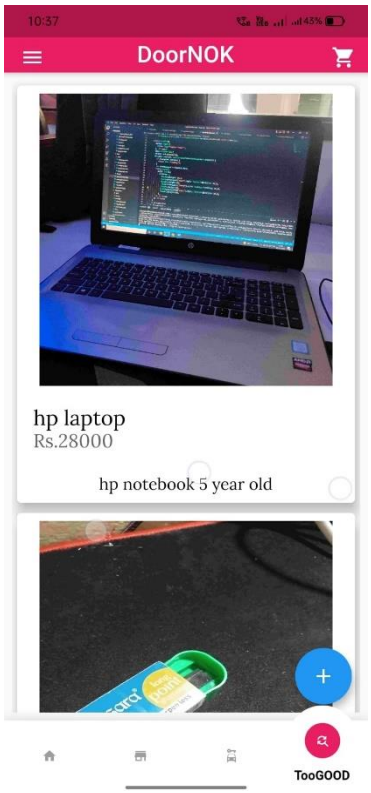

Fig.3. TooGud Page

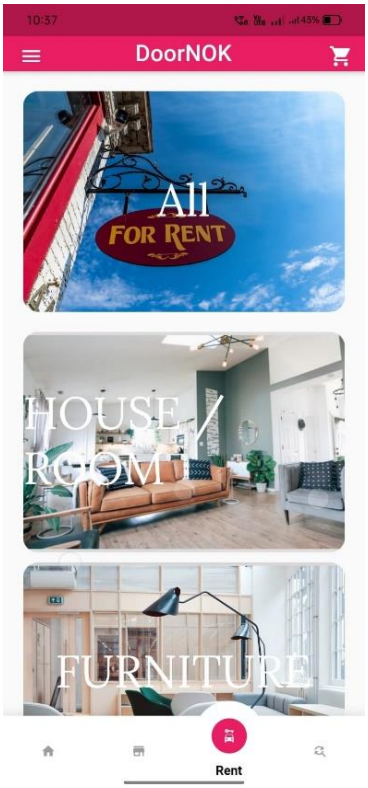

Fig.4. Rent Page

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VII. CONCLUSION

As the demand for online shopping grows, customers need to have a secure and fast delivery platform. In the meantime, smartphones have become an integral part of our lives, reducing all the effort of shopping. The advantage of this is that there are no long queues in the store and customers can use the online payment feature to deliver the product to their home. Use your mobile phone location to find the nearest store from your current location. You don't have to go to the store. You can view all the products available in that particular store and buy locally with an online presence, along with the ability to rent a house, room, car, book, clothes and more. The app's Toogud feature allows users to sell their products or buy from other customers. This app creates an ecosystem for buying and selling things locally.

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