

## Virtual Brokerage

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### Abstract

Customers today find it challenging to reach house owners directly without the influence of brokers. They are an integral part of the transaction, which results in increased compensation from both clients and property owners. The search for a rental home has some restrictions for bachelors. We are developing an app that enables direct connections between customers and property owners to address these problems. Two modules are included in the app to help customers and property owners. The house's owner may post any essential information, including images and ownership information. Customers can look for a home for rent or sale based on their selected criteria, including rent fee, location, family type (bachelor or family), furnished types, and number of bedrooms (BHK). Property owners benefit from this software since it helps them avoid dealing with brokers and paying them.

**Keywords:** Brokers, Tenant, House Owner, Bachelor, Mobile App, Rental Home, Preferred Requirements, Family Type, Rent Fee.

### 1. Introduction

Nowadays, it can be difficult to find a rental home, and managing rental homes can be complicated for landlords. Brokers are essential to the transaction since it is difficult for clients to contact homeowners without their influence, and as a result, both customers and homeowners pay them more. Renting a home is challenging for bachelors. Our Android-based virtual brokerage [1] system promises to streamline the process by giving tenants and landlords an easy way to interact and conduct business. Renters can quickly search for available rental homes based on their interests, read detailed property listings, get in touch with landlords, and even submit rental applications online using our mobile app made using Android Studio. In contrast, landlords can conveniently display [2] their rental homes, handle queries, review rental applications, and get in touch with potential tenants all in one location. Our online rental brokerage system connects tenants and landlords in a convenient and

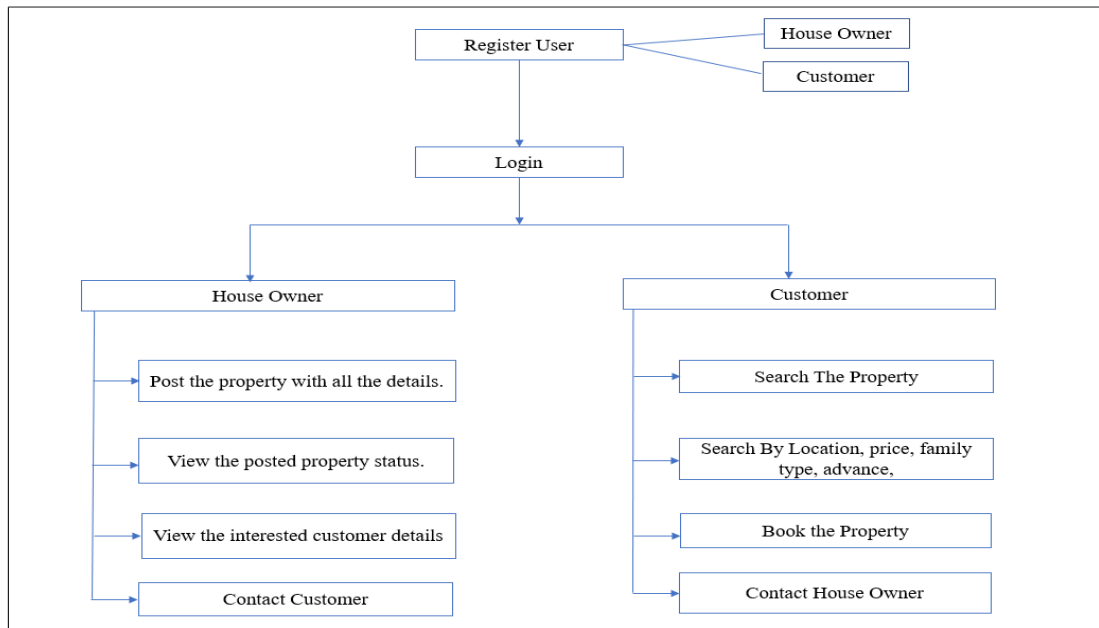
secure setting, streamlining the rental process, and improving the overall [3] experience for all parties. Let's look at the features of our Android app that was developed to revolutionize how people find and manage rental properties by establishing a seamless online brokerage service for both tenants and landlords.

### 2. Experimental Methods or Methodology

First, the user must create an account using their email address, select a strong password, and select their profile, either as a consumer or a property owner. After logging in, users can access the appropriate [4] module. Rental and purchase information, location, preferred family type, price, and images of the property are all available for posting by the home's owner. They can check the status of their property and see if anyone has shown interest after they [5] have uploaded their property. Customers can log in and seek homes for rent or sale according to their preferences, such as filtering by

price, family type, location, furnished kind, etc. Customers who are interested in a property can book it, [6] and the owner will be notified of the interested party's name and phone number. Additionally, the customer can see the name and phone number [7] of

the house owner. The customer and the homeowner can get in touch and agree. Consequently, brokers' interference is avoided. Methodology and Virtual Brokerage are shown in Figure 1.

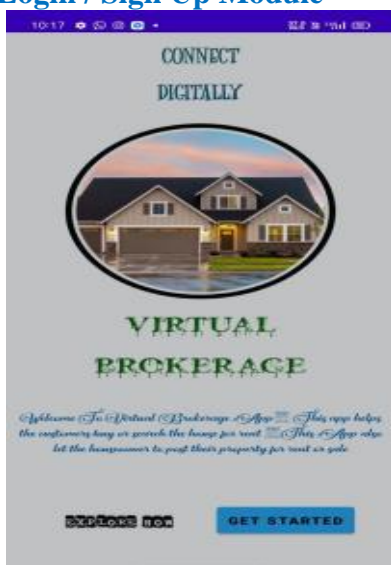


**Figure 1 Proposed Methodology – Virtual Brokerage**

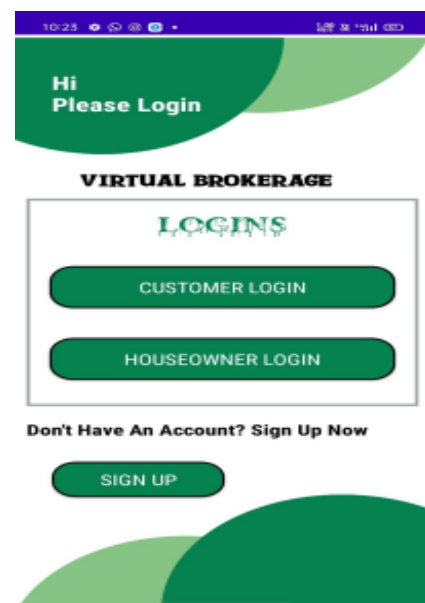
### 3. Results and Discussion

#### 3.1 Application Interfaces

##### 3.1.1 Login / Sign Up Module



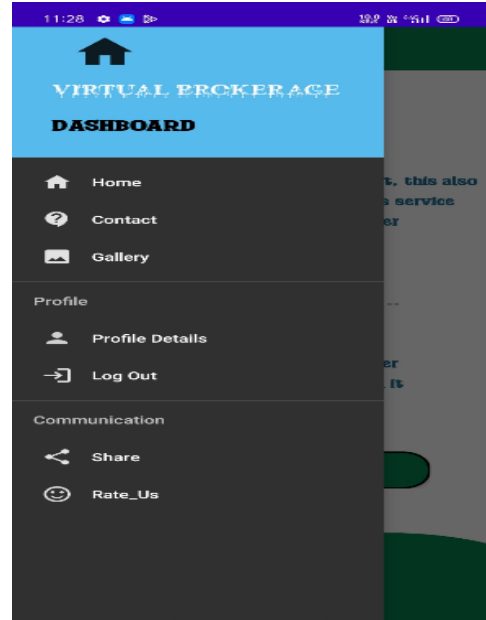
**Figure 2 Introduction Page**



**Figure 3 Login / Sign-Up Page**



**Figure 4 Sing-Up Details Page**



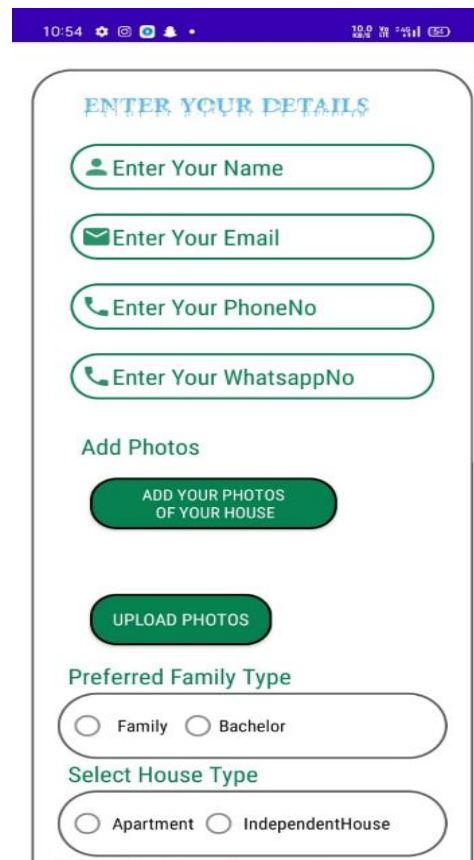
**Figure 6 Navigation Bar Enabled**

Figures 2, 3 &4 depict the user can log in or register his/ her account [8] using email ID, name, password, house owner, or customer and then create an account. After creating an account, the user can log in to the chosen module. [11]

### 3.1.2 House Owner Module



**Figure 5 House Owner Front Page**



**Figure 7 Property Upload Page**

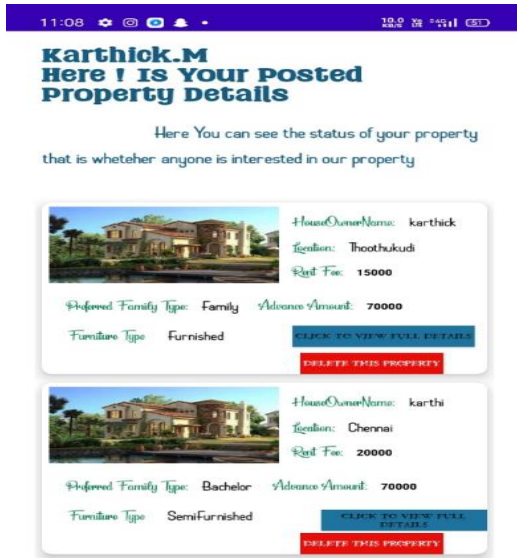


Figure 8 Uploaded Property Page

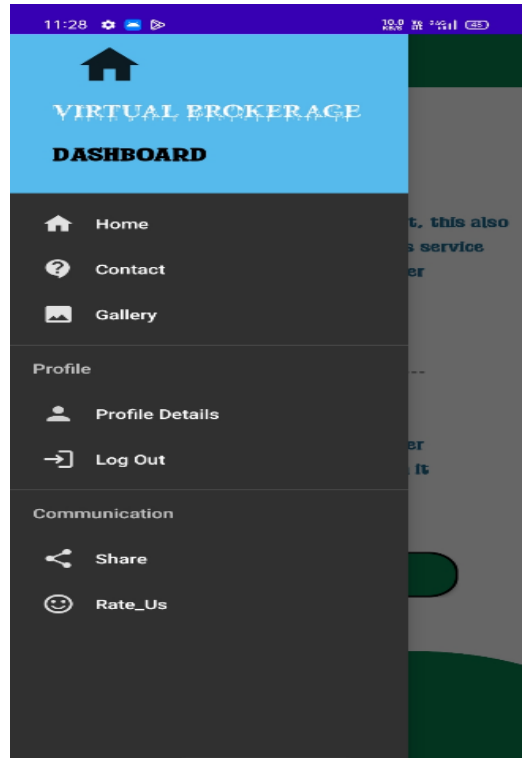


Figure 10 Navigation Bar Enabled

Figures 5,6,7,8 show that the house owner can upload the property by entering fields such as name, email, property type, [9] rent fees, advance amount, family type, furnished or not with house location. [10]

### 3.1.3 Customer Module

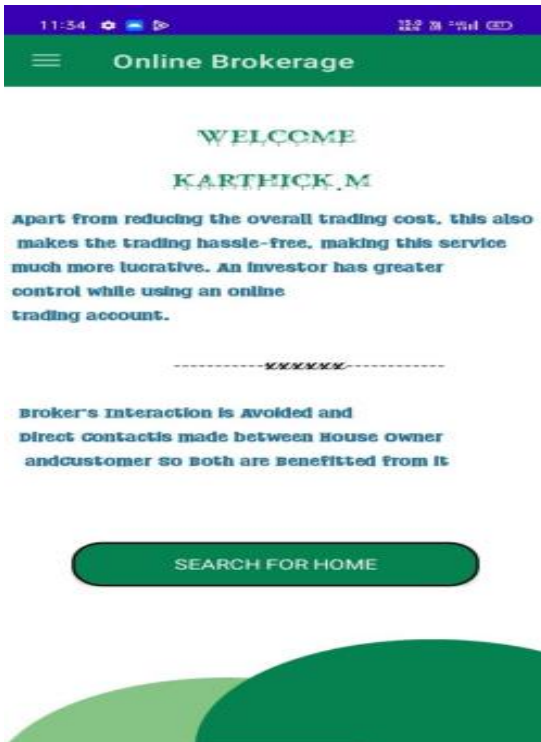


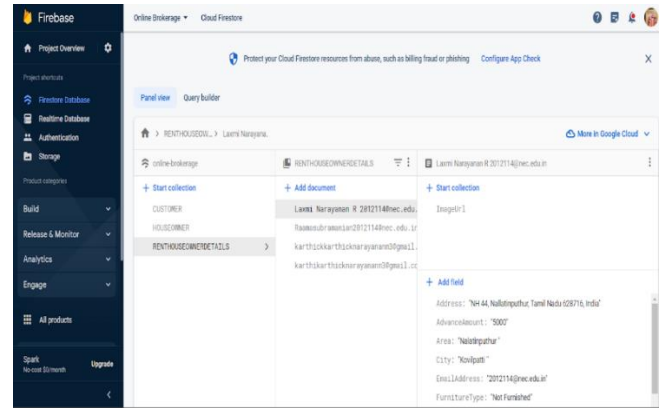
Figure 9 Customer Module Front Page



Figure 11 Customer Property Viewing Page



**Figure 12 Property Book Page**



**Figure 14 Database Collections (Property Details, Booking Details)**

**Conclusion**

Our suggested strategy seeks to connect with customers to cut down on time and money wasted on a property. The owners merely upload all of the home's information together with a government-approved certificate via mobile. The consumer can examine the owner-uploaded listing details, select the home they want to rent, and then get in touch with that owner. This app's user interface will be compelling, it will integrate brilliantly with devices, it will be well supported, it will have strong app maintenance, and it will be safe for users.

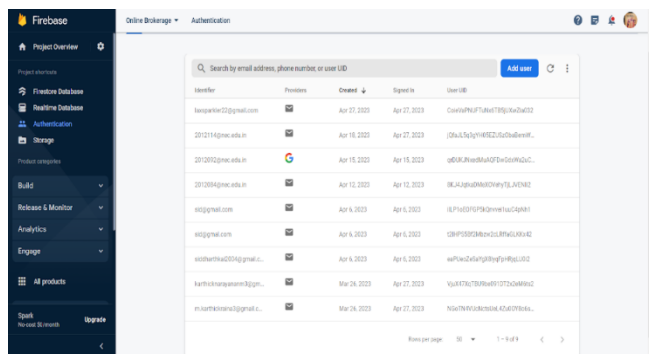
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Figures 9,10,11,12 are show depict customers can view the property by applying several filters such as rent fee, location, preferred [12] family type, furnished type, and advance amount and they can view the full property details. If they are interested, they can contact the house owner and if they book the property, the houseowner will receive a notification of the customer's phone number and email ID. [15]

**3.2 Firebase (Authentication and Storing Data Purpose)**

We have used Firebase for scaling and deploying our mobile apps. [13] For login authentication, we used Firebase Authentication, and for storage, we used Fire Store. We further used fire storage to store pictures of the property. [14] I kept login information, property information, and booking information in the Fire store. Figures 13 & 14 show the login and database process.



**Figure 13 Login Authorization**

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