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SHOP THE SHOP APPLICATION

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Abstract - Need for rental plots and shops are growing nowadays. Currently rental shops are hard to find and very difficult to get one around us without the help of the brokers. Here the Brokers play a vital role in finding rental plots etc. But they used to charge a lot of money according to the place and the area it is situated. So, it becomes impossible for an average person to get rental shop details with the help of brokers. And many brokers have also started to sell many fake rental shops and plot details to the people for money. Due to this many fraud cases etc are being filed day to day. To avoid such a situation and to be more protective in future we have come up with an idea called 'SHOP THE SHOP' app. With the use of this app a person or a user can easily go in and search the rental shops/plots according to their needs and find a best deal which is suited for them. Because of this we can mainly avoid the brokerage fees and other fraud documents related to the rental shops. The main objective of this project is to build a Shop Buying app using which one person can easily get to know the rental shops nearby. The 'SHOP THE SHOP' app can be developed using Android Studio and DJANGO. By using this App users can avoid commission fees for the brokers which is around 2 to 5% of the property value.

Index Terms – Commercial Real Estate, No Brokerage, Android Application, Money Saving, Sell, Buy, Rent, Lease.

I. INTRODUCTION

Nowadays the need for rental shops and plots are growing day by day. Due to this many brokers are coming into the play between the shop vendor and the person who is trying to get a shop/plot. The brokers actually act as medium between both of them like we can name them as seller (shop vendor) and consumer (buyer).

But brokers are charging a lot of money between the seller and buyer. So, it becomes very complicated for a seller or buyer to sell/buy a shop. To avoid such inconvenience, we have come up with an android app called 'SHOP THE SHOP' where it terminates the broker interaction between the seller and the buyer. SELLER BUYER BROKER Due to this the buyer and seller can avoid spending unwanted money to the brokers around there. The ultimate goal of this app is to make it very user friendly for both the buyer and seller. The user can easily download or get access to it via the internet. After getting into it the user needs to register and give their following information so that they can create their own profile to access the app from both the end. It also contains authentication, where the user creates their own password while creating an individual profile. It helps the user to avoid unwanted access into their profile without the user's knowledge. Even if the users tend to forget their password, we have given an additional bar which contains 'FORGET PASSWORD'. Where the user can recover or change the password using their phone number. After this process an OTP is generated for an additional security reason. The OTP is sent to the respected mobile number which the user has given during the login entry. After entering the OTP, the back-end crosscheck it, and allows the user for further access. At last, the profile has been created and the user has been allowed to surf through the information regarding the rental shops and plots.

II. RELATED WORKS

J. Foss stated that brokerage is a big percentage in the property value, this makes people pay around 2-5% of their property value which is a lot [1]. Rebecca Lee pointed out that searching for buyers in today's market is very tedious work, finding sellers and buyers in the market is difficult for many common people, there needs to be a common platform so that ordinary people can access it [2]. Feng Yongmei stated that due to lack of marketing many real estate lands are not sold and many companies are going down, these needs to be avoided so that all the lands get a worthy buyer and people make use of the marketing for buying their land. This makes profit for both the customers and the sellers that they find easy and efficient to buy or sell [3]. Miroslav Vladimirov stated in his journal that Information technology needs to be implemented in real estate so that it would ease many users that they will find it more easy and safe to search and sell any property for that case we have created an android application that is we create a software that relates real estate industry for commercial properties [4]. Shan Yu has done some research on real estate in her research paper so we looked it up for reference and got some valuable points on real estate and working in the real estate industry which was very much helpful in developing our application [5].

III. MATERIALS AND METHODS

3.1 Figma

It is mostly known as a 'Vector Graphics Editor' tool. Which is primarily Web Based with a lot of added offline features. And it is suitable for both Mac and Windows. The Figma mobile app for android and iOS allow viewing and interacting with Figma prototypes in real time mobile bias. The point set of Figma focuses on use in stoner interface and stoner experience design, with an emphasis on real time collaboration. Figma is different from other plate editing tools. Substantially because it works directly on your surfer. This means you get to pierce your systems and design from any computer or platform without having to buy multiple licenses or install software. Figma offers a generous free plan where you can produce and store 3 active systems at a time. It's further than enough for you to learn trial, work on small systems.

3.2 Android Studio

Android Studio is the official IDE (Integrated Development Environment) for Android App Development. It is based on IntelliJ. It has a built-in layout editor which makes designing layouts a lot easier. It has many other features too like code completion which helps us to program quickly. It also has built-in integration with GitHub which makes it easier to commit, push and pull changes. This is the main application that we have been using to develop our project front-end. It uses the Gradle build system to build the project, it automatically adds its dependencies to the project so that we don't need to download or install it manually when we change our machine or system for working.

3.3 Django

Some features that make Django an ideal frame for web operation development are as follows: Super presto Django development is extremely fast. Our ideas can take the shape of a product veritably snappily. Completely loaded Django has dozens of systems that can be integrated to carry out common tasks similar as stoner authentication, authorization, and happy administration. Protean Django can be used for nearly any kind of design, from CMSs toe-commerce apps to on- demand delivery platforms. Secure Django also has support to help common security issues, including cross-site request phony, cross-site scripting, SQL injection, and clickjacking. Scalable Django websites can gauge fast to meet high business demands.

3.4 Github

Currently, GitHub is one of the most popular coffers for inventors to partake in law and work on systems together. It's free, easy to use, and has come central in the movement toward open- source software. Still, read on — we 'll explain what GitHub is, why it's popular, If this all sounds like a commodity you should know. GitHub is an online software development platform used for storing, tracking, and uniting on software systems. It enables inventors to upload their own law lines and to unite with fellow inventors on open- source systems. GitHub also serves as a social networking point in which inventors can openly network, unite, and pitch their work. Since its founding in 2008, GitHub has acquired millions of druggies and established itself as a go-to platform for cooperative software systems. The service is free and comes with several helpful features for participating in law and working with others in real- time. On top of its law- related functions, GitHub also encourages druggies to make a particular profile and brand for themselves. You can visit anyone's profile and see what projects they enjoy and contribute to. This makes GitHub a type of social network for programmers and fosters a cooperative approach to software and website development.

IV. IMPLEMENTATION

First, we created the skeleton of the app, by understanding the requirements and other important things. We designed the flow and how it will work and identified the database tables. Then we created the Database tables for our app which consists of Three tables namely User, Property, Property-Image. The User table contains all the fields which are filled by the user like mobile number, full name, password etc. The Property table consists of all the fields required for the property like property size, price, address etc.

The property image is a multi-value table which contains multiple images of each property. Then we started designing the front-end of the website using FIGMA. The Whole App was designed in Figma by using the frames and other tools available in Figma. The requirements were analyzed and the design was made in a form where it is easy to use and interactive for the users of the app. Once the designing part was over, back-end implementation started. We used the Django framework for back-end implementation which uses the Python programming language.

Database models were created using the Django framework as it is an easy way for implementing back-end. The database used for our app is SQLite as it is the default database of Django framework. Views were created for the REST API interface in the back-end, so that API calls can be made from the front-end to access the database. Then for the Sign Up process we required OTP sending, for that we integrated FAST2SMS SMS Gateway service in our back-end. When a user enters a mobile number and requests for OTP, the back-end makes an API call to the SMS Gateway service with the mobile number and OTP to send the SMS to the specified mobile number. Then we bought a few credits in the FAST2SMS app for sending OTP. OTP is used in two places: one is during the sign up and another is during the forgotten password process. So for both the processes OTP is sent and verified in the back-end front-end Implementation started after completing the back-end implementation, as per the design in FIGMA all the things we developed in the Android Studio.

Android Studio uses Java code to compile and execute. We debugged using the android studio debugger and found some bugs and rectified it. There are mainly 5 pages in the app namely : Login , Signup , Buy Dashboard, Sell Dashboard, Create Property, View property. Once all the front-end designs were made, we used the retrofit client to make API calls from the android to the back-end which is Django. Retrofit provides various functionalities to make API calls in an easier way. It transfers data to and from. So with the help of retrofit we integrated the back-end with the front-end which is android. After integration of the back-end with the front-end which is Android, the app is complete for rolling out to testing. Then we started testing the app in each possible way. We found a few bugs in the app and then we resolved it. After all the possible testing the app is created with a signature and it is rolled out for production. This is how the SHOP THE SHOP app was implemented by us. This app will be very much useful for the users who want to buy a commercial plot or land or shop. This will also be useful for the users who need to send their commercial land

or plot. By this way it creates a straight forward view for the customers to look into Commercial plots without any other property disturbances like house etc.

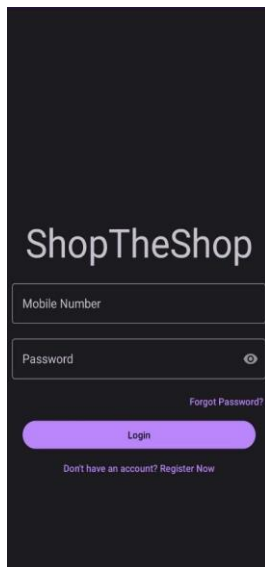


Figure 1 Authentication Page

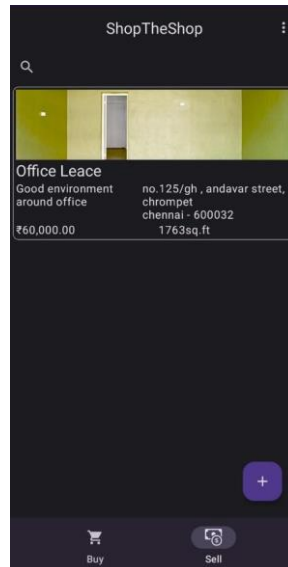


Figure 2 Dashboard Page

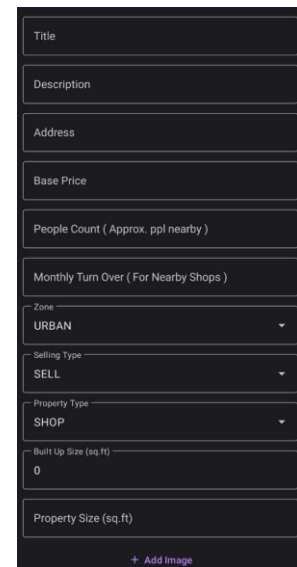


Figure 3 Creating Plot Page

V DISCUSSION

Although our app works as intended, there are many features that can be added to our application. We have planned for add an inbuilt chat function in the app so that users can chat with the buyer or seller without calling and contacting him directly. There is a serious privacy issue in our app that is we are allowing the user to view the contact details of the seller when he sells something. This issue needs to be covered in upcoming upgrades, so for eliminating this privacy issue chat function is planned to be implemented.

We have also planned to give an analysis for the buyer about the property with the help of the property size and the property area like what all can be built in that property and giving some suggestions about what to keep in the shop or sell. This will be implemented with the help of data science and data analyzing.

More upgrades to be done in the app so that it gets more efficient with a good-looking User Interface, the UI will be upgraded with Material UI design and make it more looking pleasant and easy for users to work with. Since we have made an App for only Android, we have planned to create our app for iOS using a Framework called as Flutter which will use the Dart language and it will be easy to implement and work with.

Web application is also an upcoming goal so that people who work on personal computers can also make use of our application 'SHOP THE SHOP'.

VI CONCLUSION

The main objective of our application is to create an application to remove the brokerage barrier between clients and Real estate agents. By this way the users can make access to the properties near their areas in simple clicks. It also provides a way to search for property with address and so on. To conclude, our app will be very much helpful for the commercial plot lenders and buyers as they save a lot of brokerage fees. Brokerage is a very big issue running in real estate that is around 2-5% of the property value, the real estate brokers are getting more greedy and asking for more percentage for their work. By cutting off the brokerage fee and eliminating intermediates we can save a lot of money. This app will be used for both buyers and sellers for their buying and selling of commercial properties. The main reason for developing this app is we make our users save their money from the brokers and make profit for themselves. Our further works may provide enhancement to these modules and make 'SHOP THE SHOP' app more effective and efficient.

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