Ahsanullah University of Science and Technology

Department of Computer Science and Engineering

CSE3104 Database Sessional

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Real-Estate Listing Platform

Group :C1-02

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Abstract

The "Real Estate Listing Platform" project aims to design and develop a sophisticated database system for managing records of properties categorized in details and lets people explore more. This system will enable buyers and renters to search for properties as per their preferences, book and give reviews on both our service and the property quality. Clients can efficiently manage their property details, buyer information, and all the things related to the business. The project aims to simplify the real estate transaction process, improve customer service, and enhance the operational efficiency of online property business.

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1 Purpose of the Project

The primary purpose of the "Real Estate Listing Platform" project is to establish an online platform that facilitates the seamless listing and management of properties. This system is designed to address the following key objectives:

- **Exploring Properties:** The project aims to simplify the process of accessing property details in various categories and formats. Users can effortlessly search for available properties, explore details, and make informed decisions.

- **Global Property Listing:** Similar to a global marketplace, our platform serves as a comprehensive real estate hub where users can effortlessly discover and engage with property listings from any location. This not only expands the reach of property buyers and sellers but also streamlines the property transaction process.

- **Enhanced User Experience:** By providing an intuitive and user-friendly platform, the project aims to elevate the overall experience for users. Clients can easily access property information, engage in straightforward transactions, and manage their listings efficiently.

- **Diverse Property Offerings:** Overcoming the limitations of physical space, the system's flexibility allows for the collaboration of various real estate agents or agencies to showcase a wide range of properties. This promotes availability and variety in the real estate market.

- **Review and feedback System:** The project encourages users to publicly share reviews and feedback about properties and real estate agents. This transparent feedback mechanism benefits both sellers and potential buyers, offering genuine insights into the quality of service and the attributes of listed properties.

The goal of the "Real Estate Listing Platform" project is to streamline the process of buying and selling properties by creating a user-friendly and efficient online platform. The project seeks to simplify property transactions, making it easier for both buyers and sellers to navigate through listings, gather information, and complete transactions seamlessly.

2 Project Potential Clients

The "Real Estate Listing Platform" project has the potential to serve a wide range of clients, including but not limited to:

1. **Seller:** This project is designed to help the common property owners not related to any specific agencies to market their available properties more easily with less hassle. It offers flexibility and solubility, making it suitable for buyers and renters from all locations to access the platform and connecting with the owners quickly at any time in need.

2. **Buyer:** A virtual platform will enhance swift property search. Due to increased screen time of common people most individuals prefer searching up properties online for details. Thus this platform will be beneficial for the common property seekers and tenants who are looking for their ideal properties as they will be able to explore the options more widely.

3. **Agent:** Additionally, this e-platform allows buyers to have an agent who can assist them in finding the best properties that meet their requirements, negotiating the best terms and price, and guiding them through the entire transaction process.

The versatility and adaptability of the "Real Estate Listing Platform" make it a valuable resource for the common property seekers and tenants, whether they are looking to buy a property or rent a property, sell their property and services.

3 Project Estimated Cost

The successful development and implementation of the "Real Estate Listing Platform" project require financial resources to cover various expenses. The estimated costs associated with this project are outlined as follows:

- **Development Phase:** The initial development phase is anticipated to cost approximately $60,000. This budget encompasses expenses related to database design, software development, and the creation of an intuitive user interface tailored for real estate listings.

- **Infrastructure and Hardware:** To host the platform, there is a need for server infrastructure and hardware. The estimated cost for server setup and related equipment is approximately $3,000.

- **User Training:** Ensuring that real estate professionals and platform users can effectively navigate and utilize the system is crucial. Training costs, which include materials and training sessions, are estimated at $4,000.

- **Ongoing Maintenance:** Post-implementation, consistent maintenance and support are vital for the smooth operation of the platform. Monthly maintenance costs are estimated at $1,200.

- **Additional Expenses:** Other potential expenses, such as licensing fees, security enhancements, and solubility upgrades, should be considered as part of the project's overall budget. These additional costs may vary based on specific project requirements and decisions made during development.

It's important to note that the estimated costs provided here are approximate figures and may be subject to change based on the unique needs and decisions associated with the development of the Real Estate Listing Platform.

4 Project Stakeholders

The "Real Estate Listing Platform" project involves various stakeholders who play crucial roles in its planning, development, and ongoing operation. The key project stakeholders are as follows:

1. **Real estate Agents and Agencies:** They are the primary stakeholders responsible for utilizing the platform to list and manage property details, availability, and transactions.

2. **Property Seekers:** Users who utilize the platform to search for and engage with property listings are significant stakeholders. Their experience and satisfaction are integral to the success of the project.

3. **Platform Developers:** The team responsible for designing, developing, and maintaining the platform, including the database system and associated software, are key stakeholders. They are accountable for delivering a functional and reliable real estate solution.

4. **Maintenance and Support Team:** Ongoing maintenance and support of the platform are essential. The maintenance team is responsible for ensuring the continued performance of the platform and addressing any issues that may arise.

5. **Management and Decision-Makers:** Individuals, such as business owners and executives, responsible for making strategic decisions regarding the project's implementation, are critical stakeholders. Their support and engagement are vital to the success of the real estate listing platform.

Collaboration and effective communication among these stakeholders are crucial to ensure the successful development, implementation, and long-term operation of the real estate

listing platform. Their active involvement will contribute to achieving project objectives and ensuring the platform's overall success in the dynamic real estate industry.

5   Project Details

The "Real Estate Listing Platform" project comprises several key components that collectively make it a robust and efficient solution for the real estate buisness industry. These components include:

- **Database Development:** The project involves designing and implementing a relational database that stores information related to user accounts, categories of property, property details, agent payment records, agent lists and customer review records. This database forms the core of the system.

- **User Interface:** A user-friendly web-based front-end is developed to provide customers with an intuitive platform for exploring and purchasing property. The interface also enables sellers to manage property prices, availability, and customer data.

- **Payment Gateway Integration:** The system integrates with payment gateways to facilitate secure online transactions, allowing buyers to complete payments efficiently.

- **Reporting and Analytics:** To support the listing process in monitoring their operations, the project includes a reporting and analytics feature. This component allows the platform to generate reports on revenue, and passenger statistics.

The collaborative efforts of the development team and stakeholders ensure that these project components are successfully integrated to create a comprehensive and effective "Real Estate Listing Platform".

6   Entity Relationship Diagram (ERD)

An Entity-Relationship Diagram (ERD) illustrates the structure of the database used in the "Real Estate Listing Platform" It displays the entities, relationships, and attributes within the database. Below is a simplified representation of the ERD:
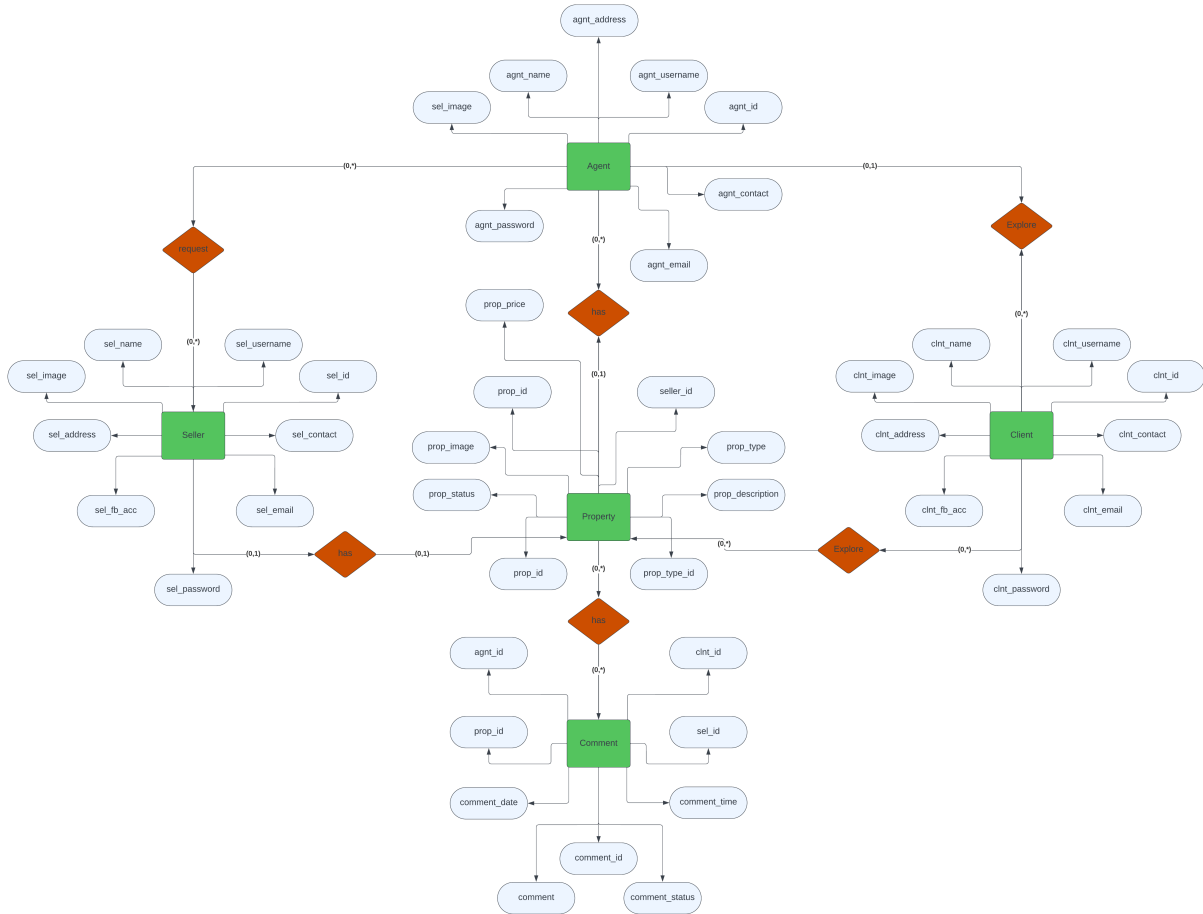

Figure 1: Entity-Relationship Diagram (ERD) for the Online Store & Reviews

7 Project Schema

The database schema for the "Real Estate Listing Platform" delineates the structure of the database tables and their associated attributes. Simplified examples of crucial tables, along with sample data, are presented in tabular form below.

7.1 Client Table

The "Client" table stores basic information related to the user.

UserID	Name	Email	Password	Active deals
101	Manzar Rahman	manzar123@gmail.com	manzar123	2
102	Sharjil Shabab	sharjil780@gmail.com	sharjil4047	1
103	Ahammed Aoual	aoual1234@gmail.com	aoual8989	4

Table 1: Sample Data in the "User" Table

7.2 Seller Table

The "Seller" table stores basic information related to the seller.

sellerID	Name	Email	Password	Active deals
101	Manzar Rahman	manzar123@gmail.com	manzar123	2
102	Sharjil Shabab	sharjil780@gmail.com	sharjil4047	1
103	Ahammed Aoual	aoual1234@gmail.com	aoual8989	4

Table 2: Sample Data in the "Seller" Table

7.3   Estates Table

The "Estates" table stores information for each products.

Estate ID	Name	Category	Price ($)	Status	Images
1231	Harmony Haven	Residential	199900	Available	sample image
1232	Commerce Central	Commercial	570040	Pending	sample image
1233	Logistics Function	Industrial	7540000	Sold	sample image

Table 3: Sample Data in the "Estates" Table

7.4   Agents Table

The "Agents" table keeps record of each agents.

agntId	agntName	agntUsername	agntEmail	agntImage
129831	Sharjil	mrgdfk	smaple.gmail.com	sample image
129832	Manzar	Eftee	smaple.gmail.com	sample image
129833	Aoual	Aurnob	smaple.gmail.com	sample image

Table 4: Sample Data in the "Agents" Table

7.5   Comments Table

The "Comments" table keeps record of each comments on each property listing.

agntId	sellerID	propertyID	clientID	cmntTime
129831	37710	47710	57710	6:00 pm
129832	37711	47711	57711	7:00 pm
129833	37712	47712	57712	8:00 pm

Table 5: Sample Data in the "Comments" Table

These tables provide a visual representation of the sample data within the "User", "Estates", "Agents", "Comments" tables. We will customize and expand the schema and data tables as needed for your specific project.

8   Searching Design

The "Real Estate Listing Platform" offers advanced search capabilities to users, allowing them to find and select property based on specific criteria, it also allows them to find an agent who can help them to find the best fitted property for them. The design includes the following search options:

- **Search Property:** property seekers and tenants can search properties according to the categories of the goods they want to buy. The system provides real-time results and displays available properties with updated prices.

- **Search Agents:** property seekers and tenants can search agents according to the specific criteria they want to buy, rent or sell. The system provides real-time results and displays available agents with updated charges.

- **Orders Record Lookup:** Users can access their order records based on their order ID references, and accessing Cart.

- **Purchase Status Check:** Customers can check the status of their purchases by entering their purchase reference and name, providing them with updates on their order details.

The searching design ensures that users can easily find the information they need, facilitating a convenient and efficient booking experience.

9 Conclusion and Future Work

9.1 Conclusion

The "Real Estate Listing Platform" project seeks to revolutionize the real estate industry by providing a comprehensive solution for managing property details, real-time updates on listings, client information, and the overall transaction process. It is designed to offer an intuitive interface, advanced functionalities, and valuable insights through reporting and analogies.

The successful implementation of this project aims to enhance operational efficiency, customer satisfaction, and foster growth within the real estate market for both property sellers and seekers. The platform will simplify the property search and transaction process, making it more accessible and convenient for users, while empowering real estate professionals to make informed decisions based on data-driven insights.

The collaborative efforts of stakeholders, platform developers, and ongoing system support will be instrumental in ensuring the success and continued improvement of this real estate listing platform.

9.2 Future Works

In the future, the "Real Estate Listing Platform" can be expanded to incorporate additional features and capabilities for enhanced benefits. Some potential future developments include:

- **Reward Programs for Property Seekers and Sellers:** Introducing reward programs to recognize and incentives frequent users, fostering stronger engagement and loyalty within the real estate community.

- **Integration with Cryptocurrency Transactions:** Implementing a cryptocurrency payment gateway, allowing users to conduct property transactions using various

cryptocurrencies through their digital wallets.

- **Continuous Accessibility Improvements:** Ongoing efforts to enhance the platform's accessibility, security, and solubility, ensuring it aligns with evolving industry needs and adheres to emerging standards.

These future enhancements will further establish the "Real Estate Listing Platform" as a forward-thinking solution that adapts to the dynamic landscape of the real estate industry.