



University of Asia Pacific

CSE 310: Object Oriented Programming II Lab: Visual and Web Design

Project Documentation

Real-Estate Listing Platform

Submitted to

Durjoy Mistry

Lecturer, Department of CSE, University of Asia Pacific

Submitted by

Group Name: ThinkTank

Group Number: 2

Name	Registration ID
Nur Habibah Binti Mahbub	21201103
Jannatul Ferdusi	21201114

INTRODUCTION:

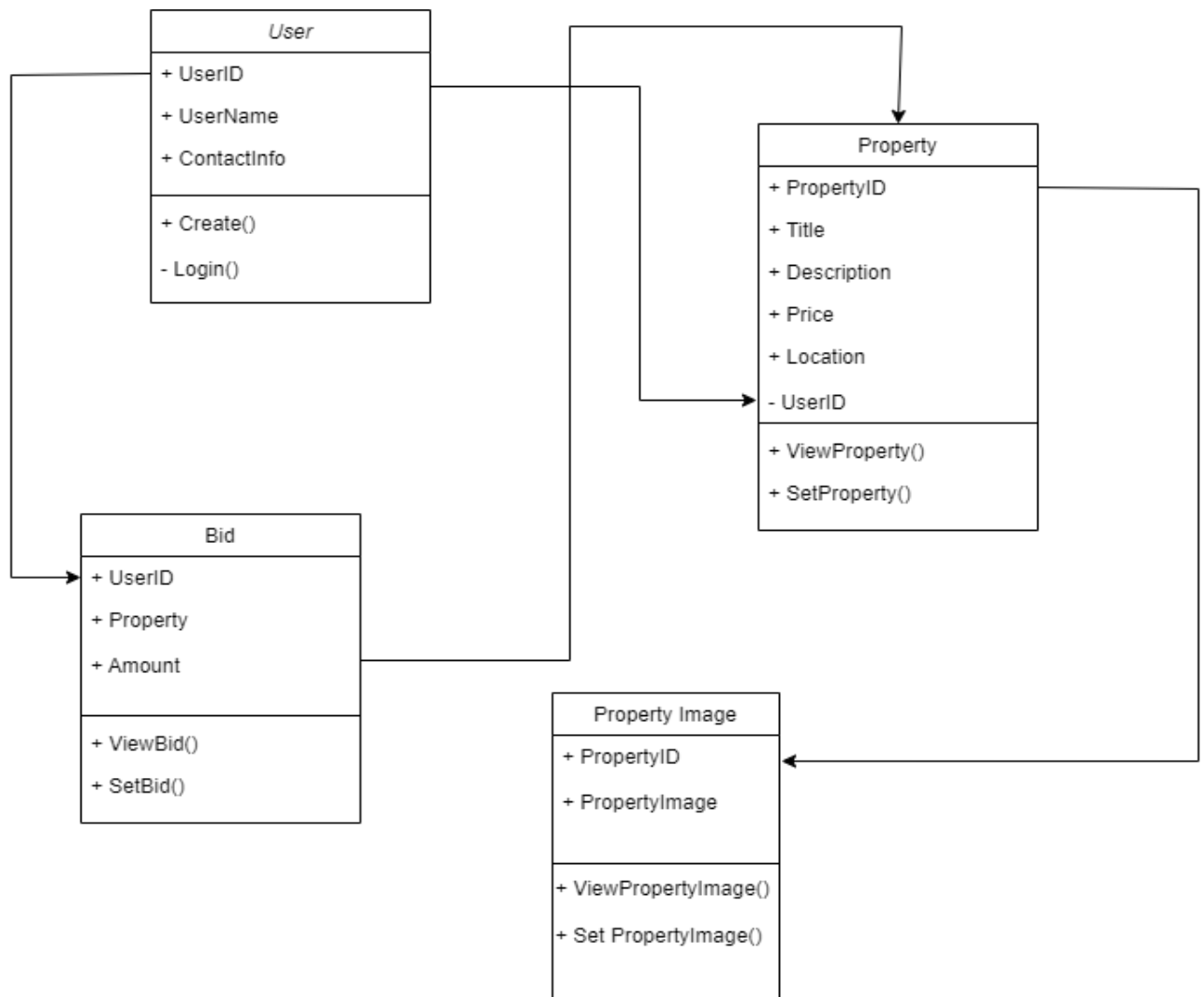
Our project - Real Estate Listing Platform is meant to make it easier for people to find their ideal homes. The platform provides a number of options to make the process easy and effective.

What the platform will offer you is as follows:

- ✓ **Bidding:** Are you considering bidding on a property? Make an offer and beat off other bidders to get the property of your dreams.
- ✓ **Searching:** Use our convenient search function to find your ideal property. To find it, refine the listings based on price range, property type, and other criteria.
- ✓ **Filtering:** Use filters to limit your alternatives based on particular standards. Discovering a home that fits you is now even simpler.
- ✓ **CRUD:** Sellers have easy access to manage their real estate listings. As needed, add new properties, modify current ones.

Our project aims to simplify the real estate market for buyers and sellers with a user-friendly platform, streamlining the buying and selling process.

CLASS DIAGRAM:



Explanation of the Class Diagram:

1. User Class:

The User class represents a user in the real estate listing platform. It includes the following attributes:

- ✧ **user_id**: A unique identifier for the user.
- ✧ **user_name**: The name of the user.
- ✧ **contact_info**: Contact information for the user (e.g. email address)

The creation and administration of user accounts on the platform are modeled after this class. The class offers ways to manipulate user data, and each user has specific details that aid in their identification.

2. Property Class:

The Property class represents a property in the real estate listing platform. It includes the following attributes:

- ✧ ***property_id***: A unique identifier for the property.
- ✧ ***title***: The title or name of the property.
- ✧ ***description***: A description of the property.
- ✧ ***price***: The price of the property.
- ✧ ***location***: The location of the property.
- ✧ ***user_id***: It is a foreign key that refers to the User class, representing the owner of the property.

In order to connect the property to its owner (a user), the `user_id` attribute acts as a foreign key. We can now easily distinguish which user is the owner of a given property due to the relationship that is created between the Property and User classes.

3. Bid Class:

The Bid class represents bid on a property in the real estate listing platform. It includes the following attributes:

- ✧ ***user_id***: It is a foreign key that refers to the User class, representing the user who placed the bid.
- ✧ ***property***: It is also a foreign key which refers to the Property class, representing the property on which the bid was placed.
- ✧ ***amount***: The amount of the bid.

In order to create relationship between the User, Property classes and the Bid class, `user_id` and `property` both function as foreign keys. This lets us keep tabs on who bid on what property and how much it was bid.

4. PropertyImage Class

The PropertyImage class represents images of properties in the real estate listing platform. It includes the following attributes:

- ✧ **property_id:** It is a foreign key that refers to the Property class and signifies the corresponding property of the picture.
- ✧ **property_image:** The image of the property.

The PropertyImage class and the Property class are related to one other by the property_id attribute, which acts as a foreign key. This enables us to control the images linked to each property and link images to their corresponding properties.

PROJECT STRUCTURE:

Apps:

- ★ **mysite:** General site administration, including user, search, filter and property management, is handled via the mysite app.
- ★ **platforms:** The platforms app is in charge of other functions exclusive to the platform, such as handling bids, property images and CRUD function.

Models:

Purposes of Platform Model:

The **Platform** model helps us to keep track of different sections or marketplaces within our real estate listing app. You can easily create and manage platforms, keep an eye on the features, and associate them with their respective owners. This way, you can offer specialized areas for various types of properties and services, making your platform more organized and user-friendly.

The fields are:

Owner (Relationship - This is a foreign key which links the platform to the owner), **Title**, **Description**, **Property_Type**, **Price**, **Size_Sqft**, **Year_Built**, **Location**, **City**, **Country**, **Listed_Date** and **Images**.

Purposes of Bid Model:

The bidding and auction procedures are controlled by the **bid** model. It keeps bid information including the amount bid, bidder, bid status, timestamp and the auction site. The model tracks whose bid corresponds to which auction platform by keeping relationships with other models, such as platforms, and is viewed in the website.

The fields are:

User (It is a foreign key which identifies the user who placed each bid. Since the relationship has been set to cascade delete, related bids are likewise erased in the event that the user is removed.),

Property (It is a foreign key which connects each bid to the item or property that is the subject of the bid, with related_name='bids' providing quick access to all bids for a certain property.),
amount, bid status and date placed.

INSTALLATION AND SETUP:

Setting Up the Project Locally:

1. To clone the project repository → `git clone <repository_url>`
2. To navigate to the project directory → `cd <project_directory>`
3. To set up a virtual environment → `python3 -m venv venv`
 - Activate the virtual environment on Windows → `venv\Scripts\activate`
 - Activate the virtual environment on macOS/Linux → `source venv/bin/activate`
4. Install project dependencies → `pip install -r requirements.txt`
5. Configure environment variables → First create a `.env` file in the project root directory to store environment variables by making sure to keep the `.env` file secure and out of version control. Add any required variables, such as:
`SECRET_KEY=your_secret_key_here`
`DATABASE_URL=postgres://user:password@localhost:5432/your_database_name`
6. Migrate Database → `python manage.py migrate`
7. Create Superuser → `python manage.py createsuperuser`
8. Run the Development Server → `python manage.py runserver`
9. Lastly, verify the project by the link that will be given.

Requirements.txt:

Django~=5.0.4

CONTRIBUTION:

- Public github link – <https://github.com/NHabibahMahbub/Django-Project---Real-Estate-Listing-Platform>
- Screenshot of the of contribution of each member

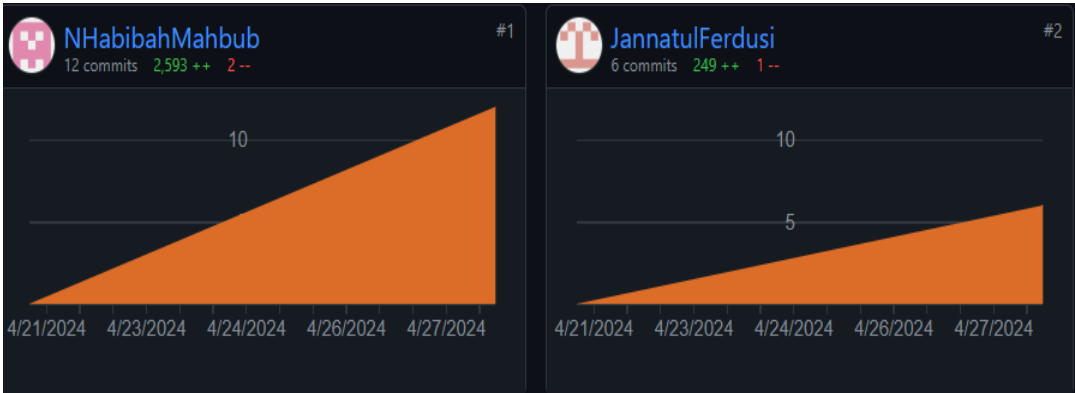


Table 1: Contribution of each member

SL	First Name	Reg ID	Github username	Number of Commits	No of Lines added	No of Lines deleted
1.	Nur Habibah	21201103	NHabibahMahbub	12	2593	2
2.	Jannatul	21201114	JannatulFerdusi	6	249	1

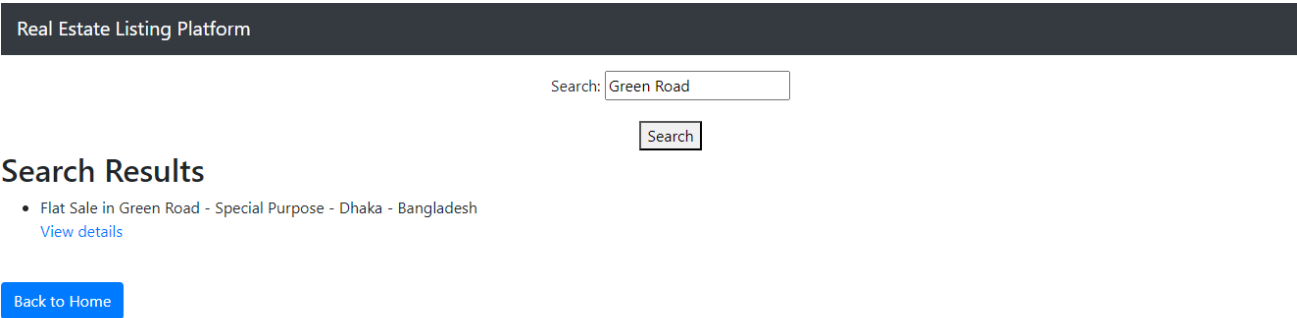
SCREENSHOT OF KEY FEATURES:

Let’s explore the cornerstone features of our project below:

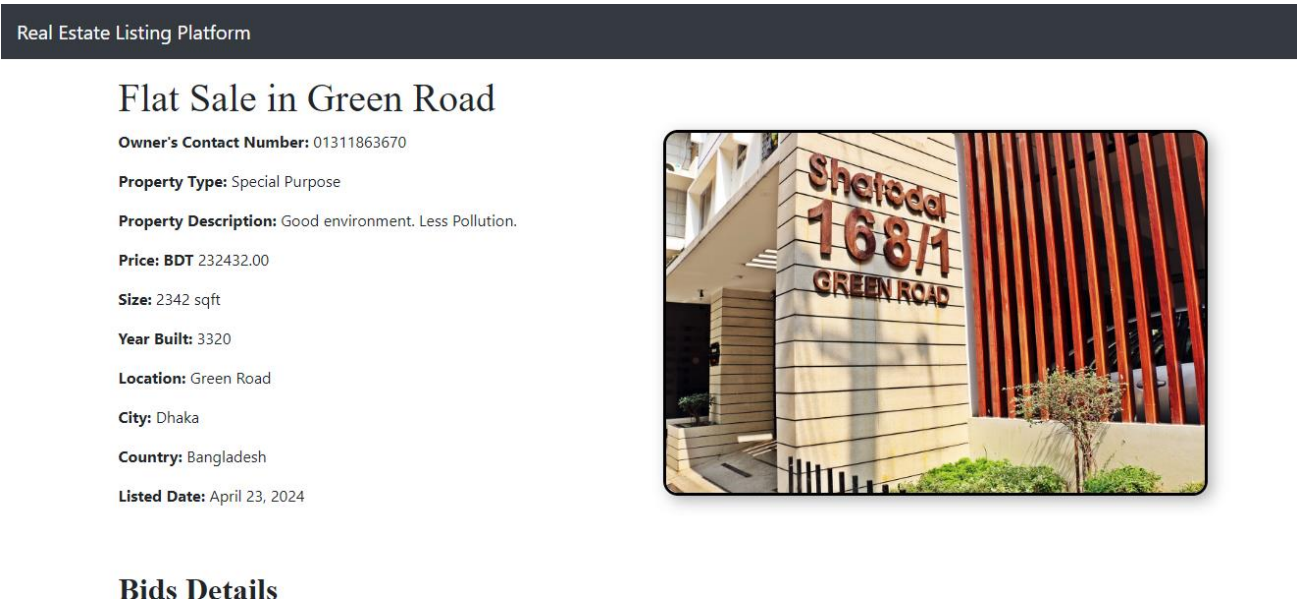
1. Searching and Filtering:

Our platform offers robust filtering and searching capabilities, providing users with precise control over their property exploration.

Searching allows users to delve deeper into our comprehensive database using keywords and specific terms. This enables users to find properties based on specific attributes or features, such as ‘green road’, ‘hill view’, hospital’, or any other keywords.



Then if we click on the view details, it will be shown as:



Another example of searching property is that even if we search by a letter 'h', it will search every property which contains letter h by location, title, description and other attributes.

Real Estate Listing Platform

Search:

Search

Search Results

- A House on the Hillside - Residential - Sylhet - Bangladesh
[View details](#)
- Flat Sale in Green Road - Special Purpose - Dhaka - Bangladesh
[View details](#)
- Space Rent in Ring Road - Industrial - Dhaka - Bangladesh
[View details](#)
- Ready Residential Plot for Sale - Residential - Dhaka - Bangladesh
[View details](#)
- Under Construction Flats for Sale - Residential - Dhaka - Bangladesh
[View details](#)
- Ready Apartment Sale - Residential - Mymensingh - Bangladesh
[View details](#)
- Duplex Apartment on Sale - Residential - Comilla - Bangladesh
[View details](#)
- Floor Available for Lease - Special Purpose - Dhaka - Bangladesh
[View details](#)

On the other hand, our advanced filtering options enable users to set custom filters, such as sorting property listings. It allows users to specify their preferences for sorting properties by offering dropdown menus for selecting the attribute to sort, such as 'Title', 'Price', 'Location', 'City', and 'Year Built', and the order of sorting, either 'Ascending' or 'Descending'. When the user submits the form, a GET request is made with the selected parameters, enabling the server to filter and sort the property listings according to the user's preferences. This allows users to view the properties in an order that suits their interests.

Here, I have filtered / sorted the price by descending order.

Real Estate Listing Platform

Search Platforms

Sort by: Price Order: Descending

Add Platform

Ready Apartment Sale


BDT 78000000.00

Rupnagar

[Inspect further](#)

[Bid Now](#)

Update Delete




A House on the Hillside

BDT 30000000.00

Jafiong

[Inspect further](#)

[Bid Now](#)



Whether users are looking for a cozy family home, a luxurious apartment, or a lucrative investment opportunity, our filtering and searching features provide the tools they need to find the perfect property.

2. Bidding:

Our platform includes a bidding feature, allowing users to participate in auctions for properties listed on our platform. Users can place bids on properties they're interested in, competing with other potential buyers to secure the winning bid. This feature provides an exciting opportunity for users to engage in competitive bidding and potentially acquire their desired property at the best possible price.

Duplex Apartment on Sale


BDT 10000000.00

Laksham

[Inspect further](#)

[Bid Now](#)

[Update](#) [Delete](#)



If we click on the 'Bid Now' option, this page will pop up.

Real Estate Listing Platform

Platform Details

Amount: 70000

Submit

Back to Home

After clicking submit, the amount the user bided will be seen on the inspect further.

Bids Details

User: habibah, Amount: BDT70000.00

Back to Home

Back to Search