

TCP2201 Project

Trimester 1, 2021/2022

by Group 2

Team Leader:

Nur Adlina Marini Binti Amir Suharman, 01110380227, 1181100317@student.mmu.edu.my

Team members:

Iman Aisyah binti Zailani, 0106503101, 1191302815@student.mmu.edu.my

Kishen Kumar A/L Sivalingam, 0123399367, 1191101423@student.mmu.edu.my

Ahmad Luqman bin Ahmad Lutpi, 0193868897, 1191101434@student.mmu.edu.my

Table of Contents

Introduction	3
Functional Requirements Distribution	4
Use Case Diagram	5
UML Class Diagram	6
Overview	6
Main & MainPage Class	7
Property Class	8
User Class	9
Admin Class	10
Tenant Class	11
Owner Class	12
Sequence Diagram	14
Admin - New User Registration Request	14
Potential Tenant - Rent Property	15
Property Agent - View Report	16
Property Owner - Add New Property	17
Collaboration Diagram	18
Admin - New User Registration Request	18
Potential Tenant - Rent Property	18
Property Agent - View Report	19
Property Owner - Add New Property	19
State Diagram	20
Potential Tenant - Edit Profile	20
Admin - New User Registration Request	21
Potential Agent - Add Property	22
Potential Owner - Deactivate Property	22
Appendix	23
Source Code	23
Instructions on Compiling and Running the Program	23
User Documentation	25
Main Page	25
Admin	25
Potential Tenant	35
Property Agent	43
Property Owner	48

Introduction

We are a team of programmers assigned to develop a Cyberjaya Online Rental Management System called PropertyInCyberjaya. This is a rental management system which acts as an online tool for property owners, property agents, and potential tenants to rent out or to rent a property.

PropertyInCyberjaya system includes variety of features from viewing list of properties with a filtered or sorted functions, adding new properties, validating user registration request for administrator, viewing list of rented out or inactive properties, setting the availability of a property, deleting or deactivating a property, and many more.

Other than that, we also ensure that our system is secured from hackers, competitors, rivals, or scammers from hijacking or cyber attacking the system. What made this system so secured is by the help of the administrators who are in charge of managing the back end of the system. Our system will not simply grant new users a registered administrator, potential tenant, property owner or agent account without validating the user based on its personal details.

We have successfully developed a user-friendly system with suitable menus, clearly written labels, resizable windows, coloured buttons to emphasize the functionality of the button etc. A **user documentation** has been prepared as guidelines for the end users.

The PropertyInCyberjaya system's user interfaces were built using the Model View Controller (MVC) software design pattern. This is done to distinguish internal representations of data from how data is presented to and accepted by users. The Property object will act as a model, the User will be the view class, while the actor is the controller class which is responsible for storing data in the Property object and updating the User accordingly. Iterator design pattern has also been used in our system where functions that require reading or writing the csv will be provided an iterator to let it iterate through its objects.

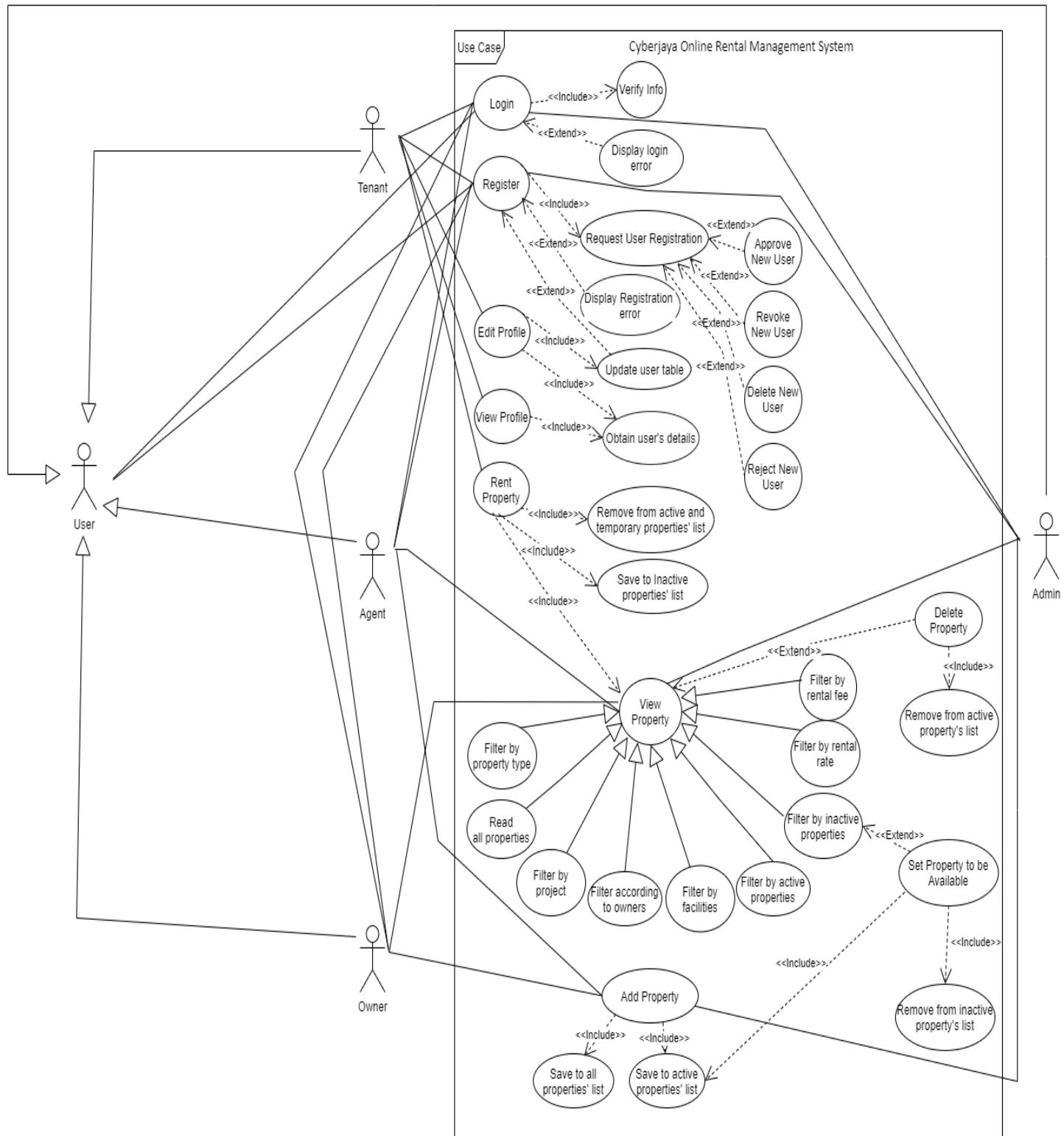
User Distribution

User	Student No.	Assigned User
Admin	Student 1	Nur Adlina Marini Binti Amir Suharman
Potential Tenant	Student 2	Kishen Kumar A/L Sivalingam
Property Agent	Student 3	Ahmad Luqman bin Ahmad Lutpi
Property Owner	Student 4	Iman Aisyah binti Zailani

Functional Requirements Distribution

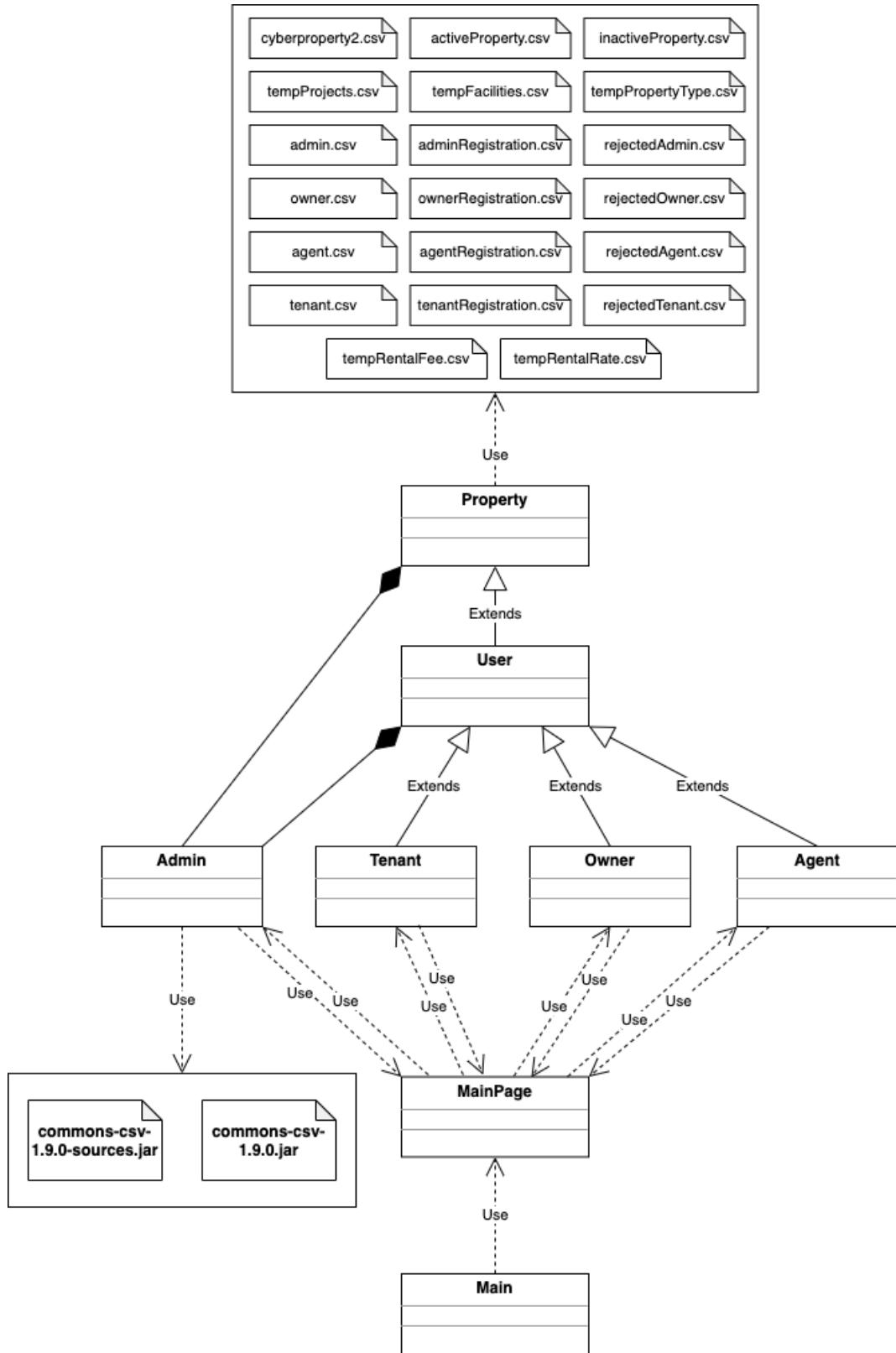
No.	Item	Done by
1	List of properties entered into the system (1m)	Student 1
2	List of property according to property type (1m)	Student 2
3	List of inactive property (1m)	Student 1
4	List of active property (1m)	Student 1
5	List according to project / condominium / taman (1m)	Student 1
6	List according to facilities (1m)	Student 1
7	List according to rental rate (1m)	Student 3
8	Sort listing according to rental price (1m)	Student 4 & 1
9	Finding a minimum of 30 existing property listings in the program. Using real data with actual / realistic rental and township / project (BONUS 1m)	Student 3

Use Case Diagram

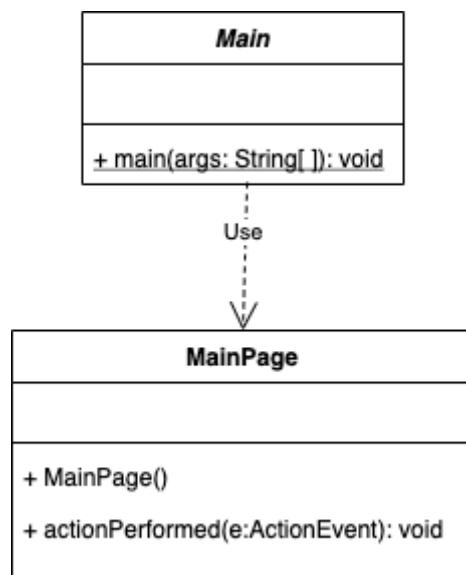


UML Class Diagram

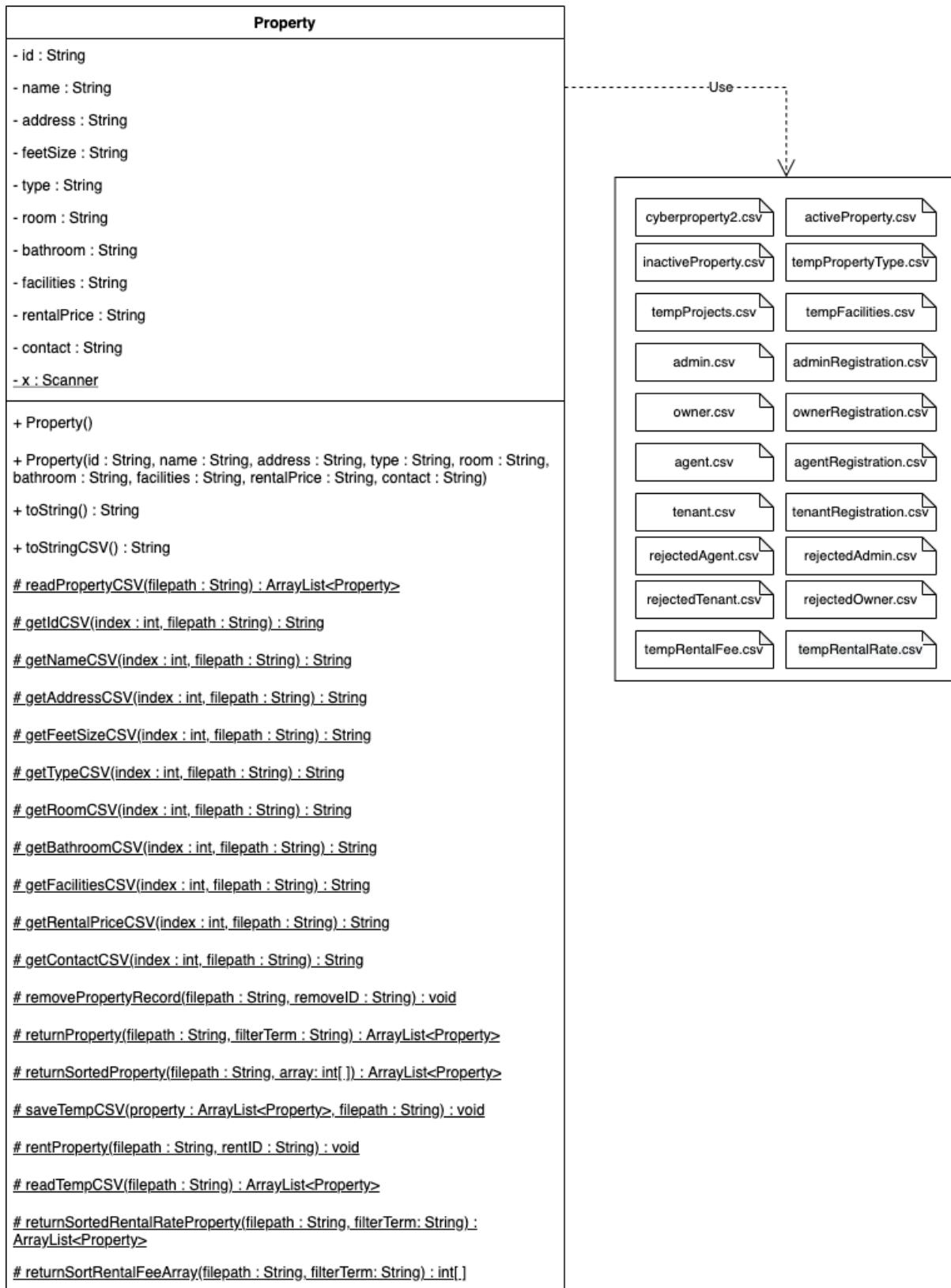
Overview



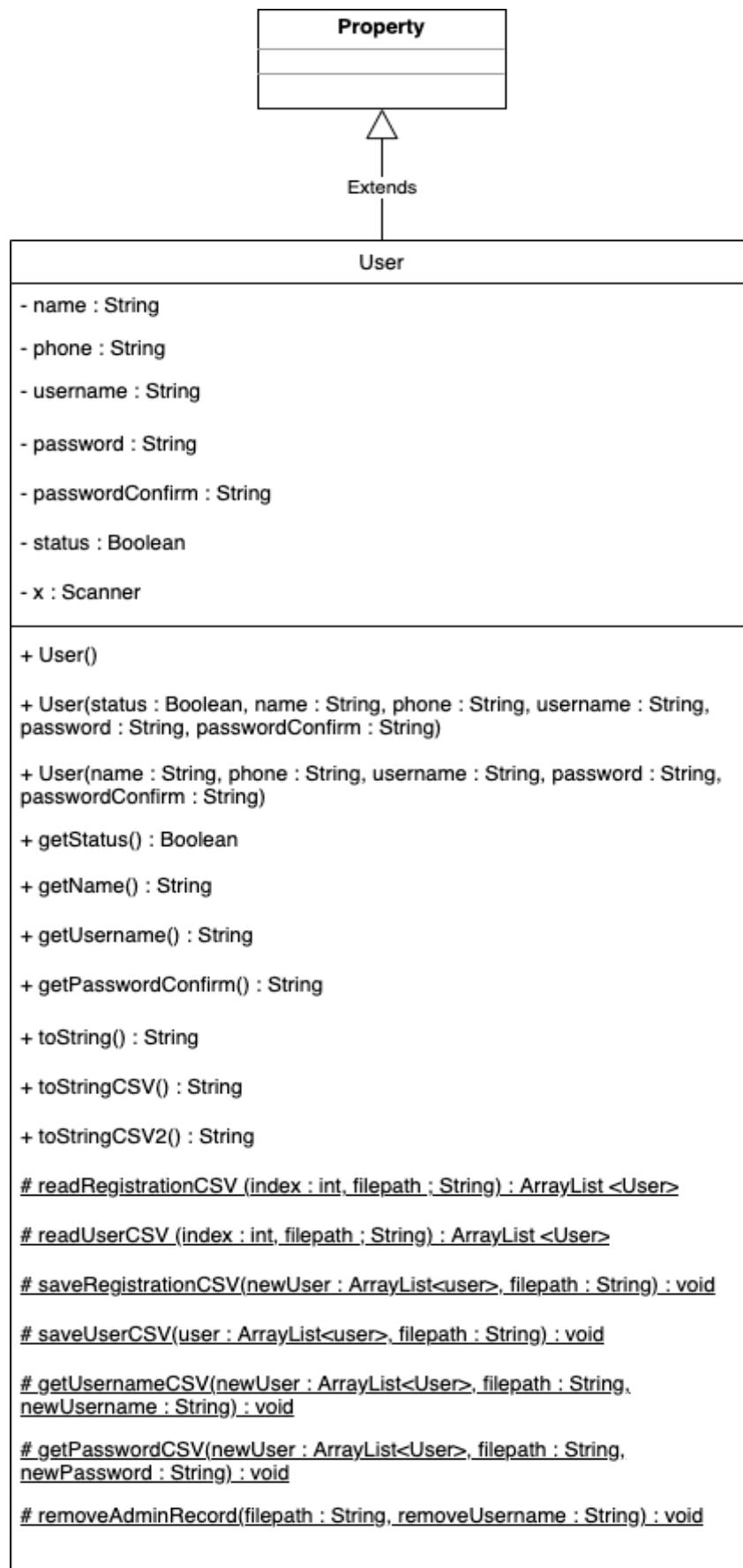
Main & MainPage Class



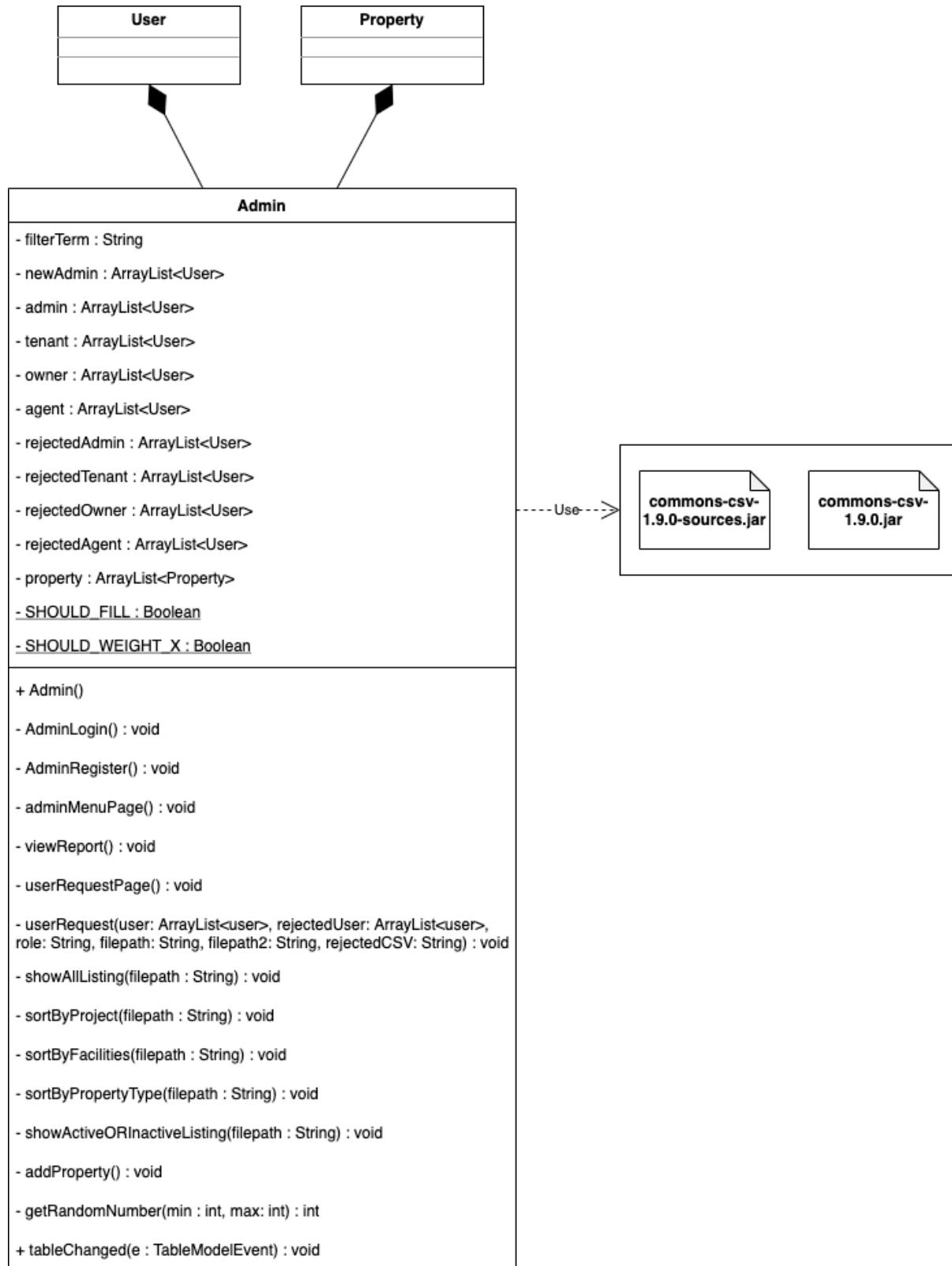
Property Class



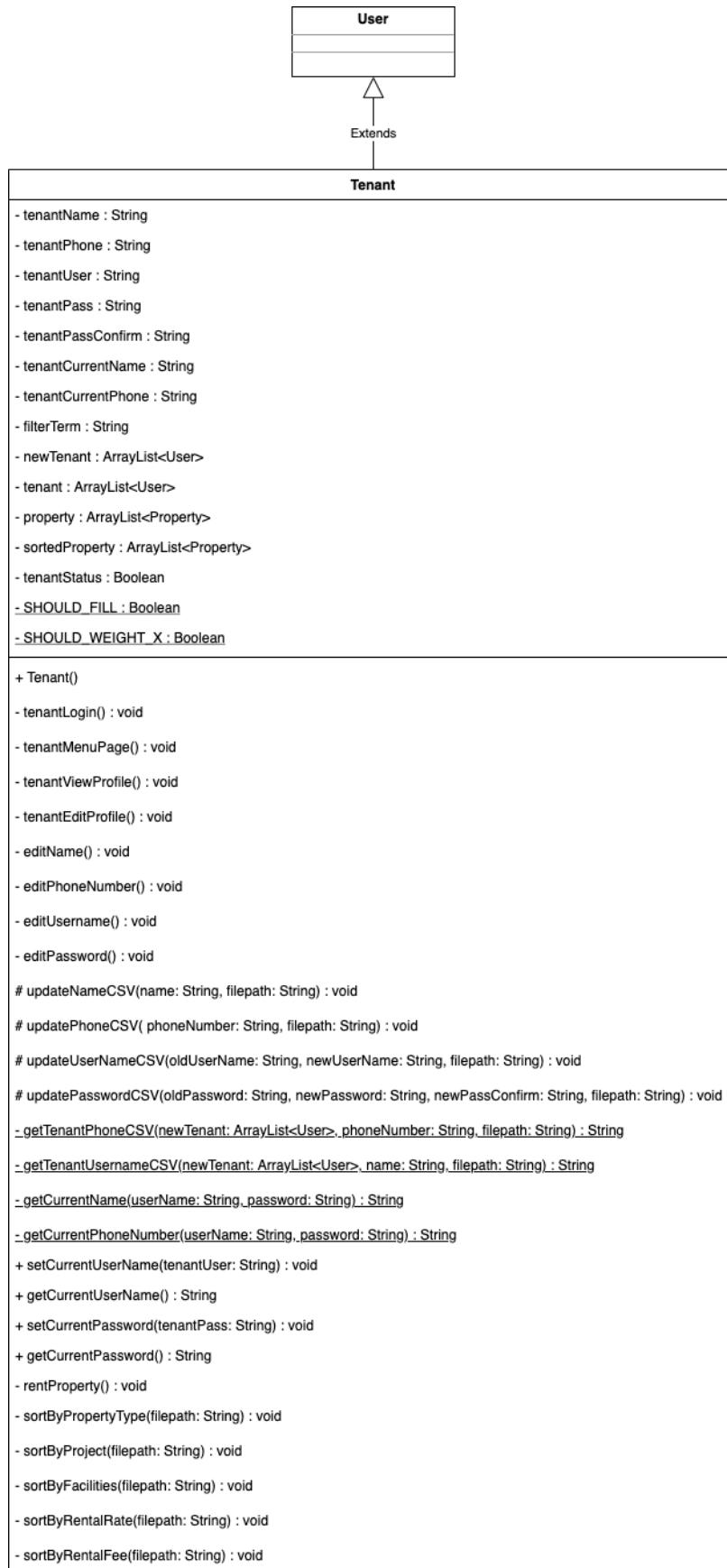
User Class



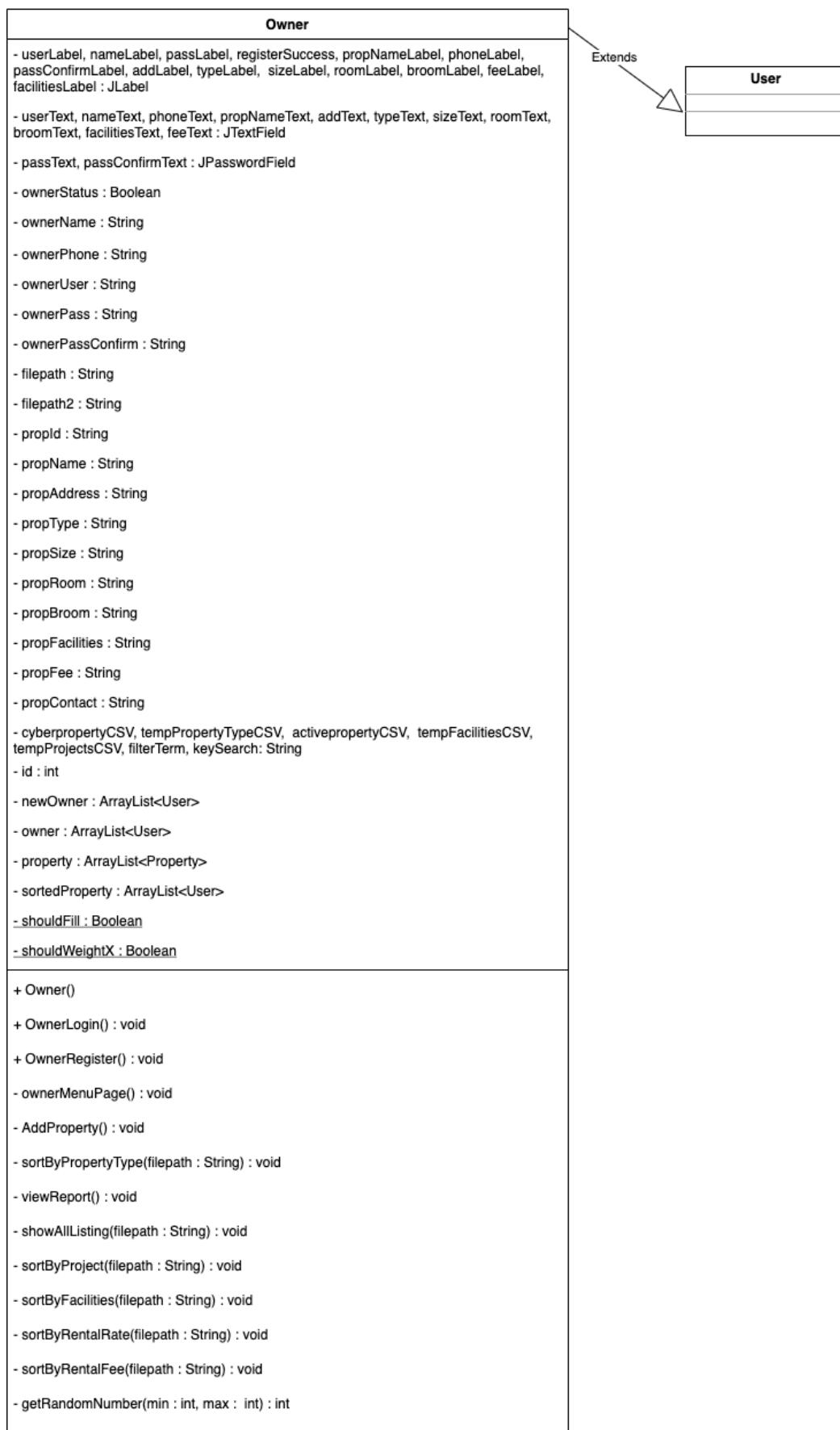
Admin Class



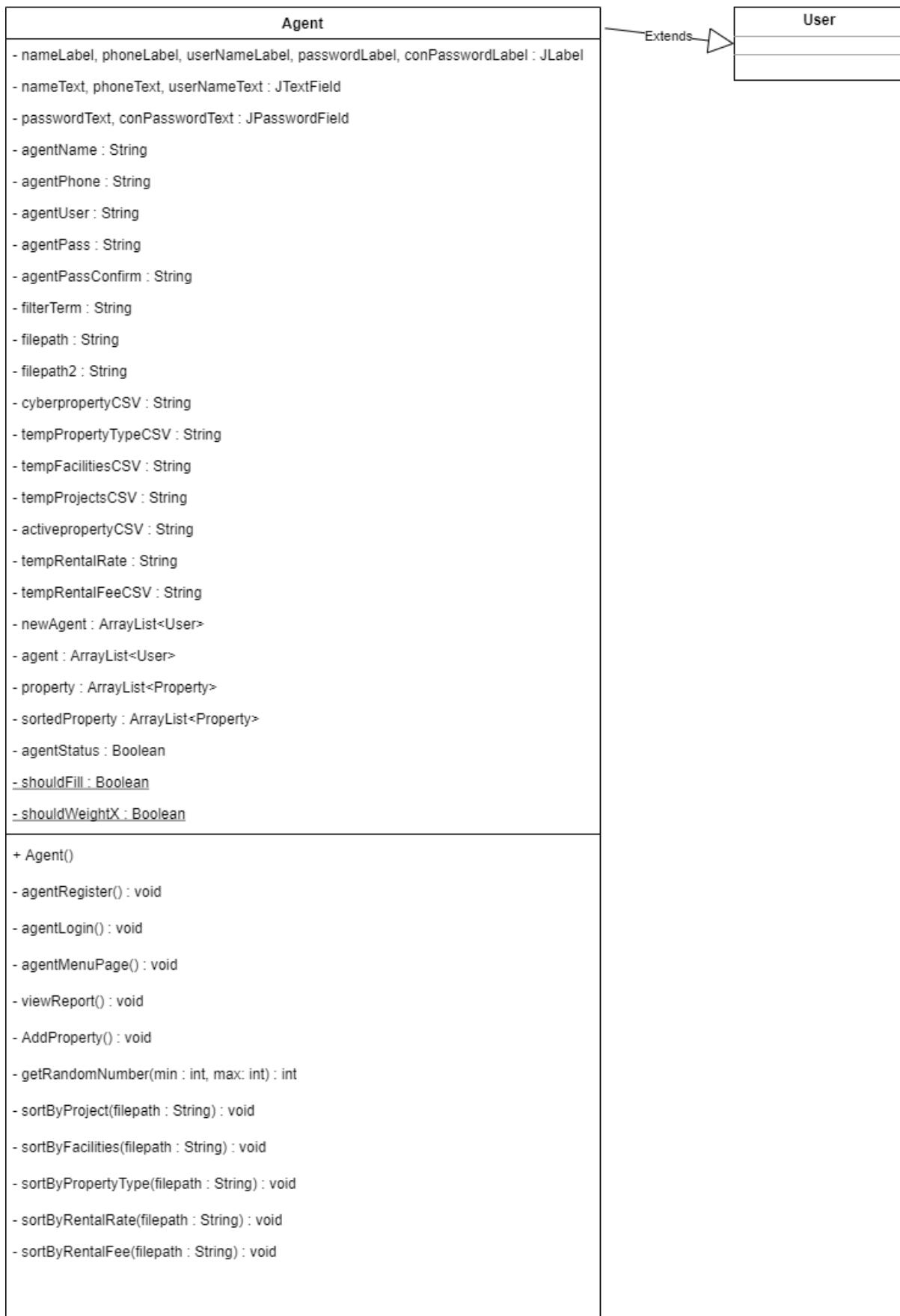
Tenant Class



Owner Class



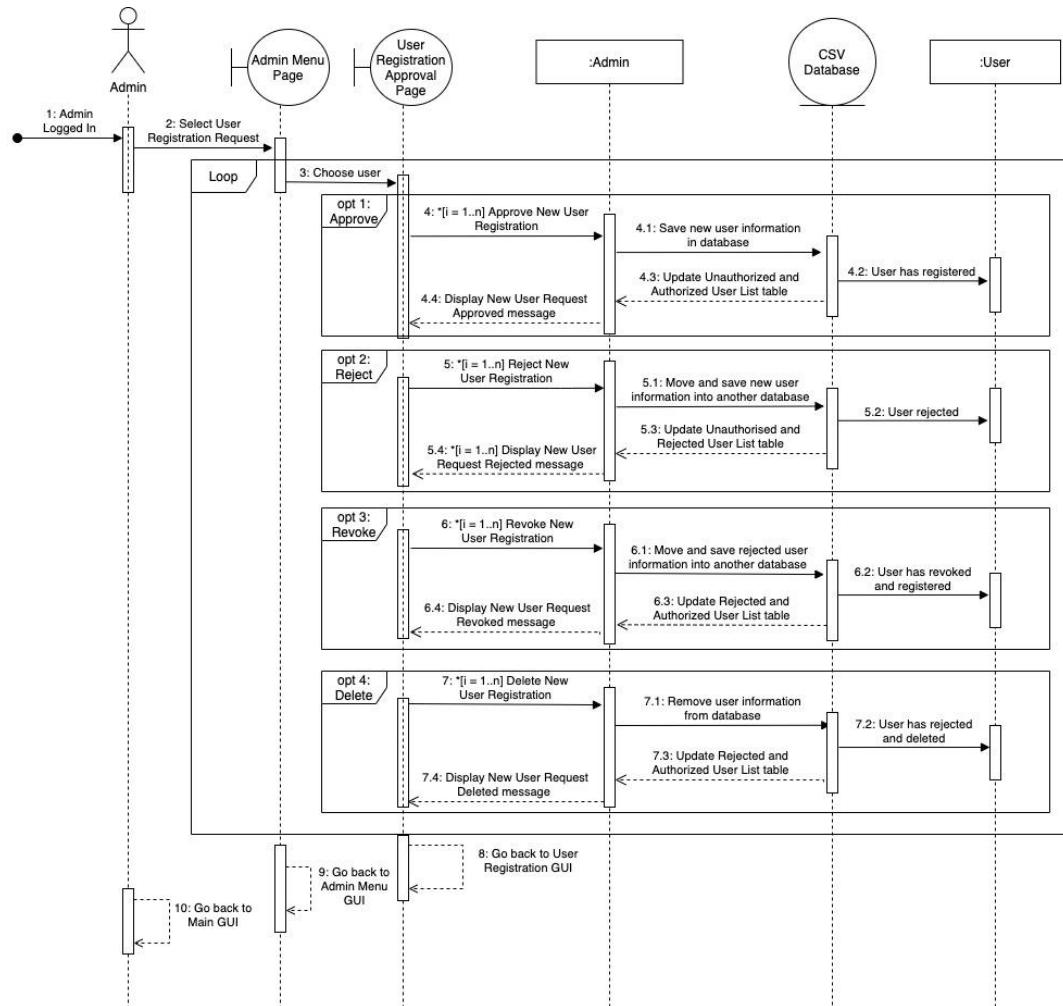
Agent Class



Sequence Diagram

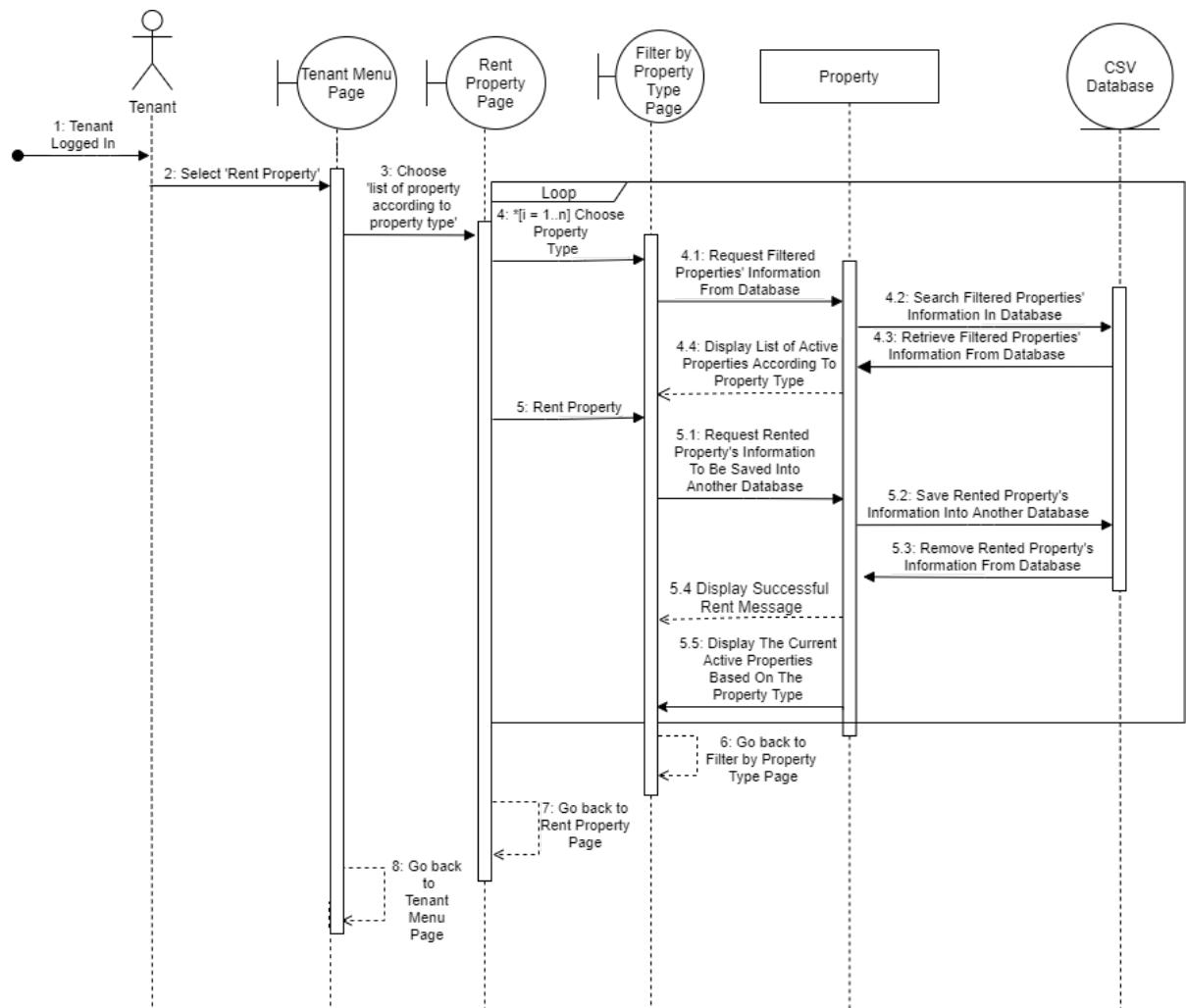
Admin - New User Registration Request

1. The default registered admin must first log in and the system will direct the admin from Admin Profile Page to the Admin Menu Page.
2. Admin will select on the User Registration Request button and the system will direct the admin to the User Registration Approval Page.
3. Admin will choose either Admin, Tenant, Owner, or Agent Registration Request button and the system will direct the admin to the Current and New Chosen User Registration Page.
4. In this page, admin will be able to perform 4 options or tasks such as approving, rejecting, revoking, or deleting new user registration.
5. The database will be updated for every change made in the system.
6. Admin may click on the Back button to go back to the previous page.



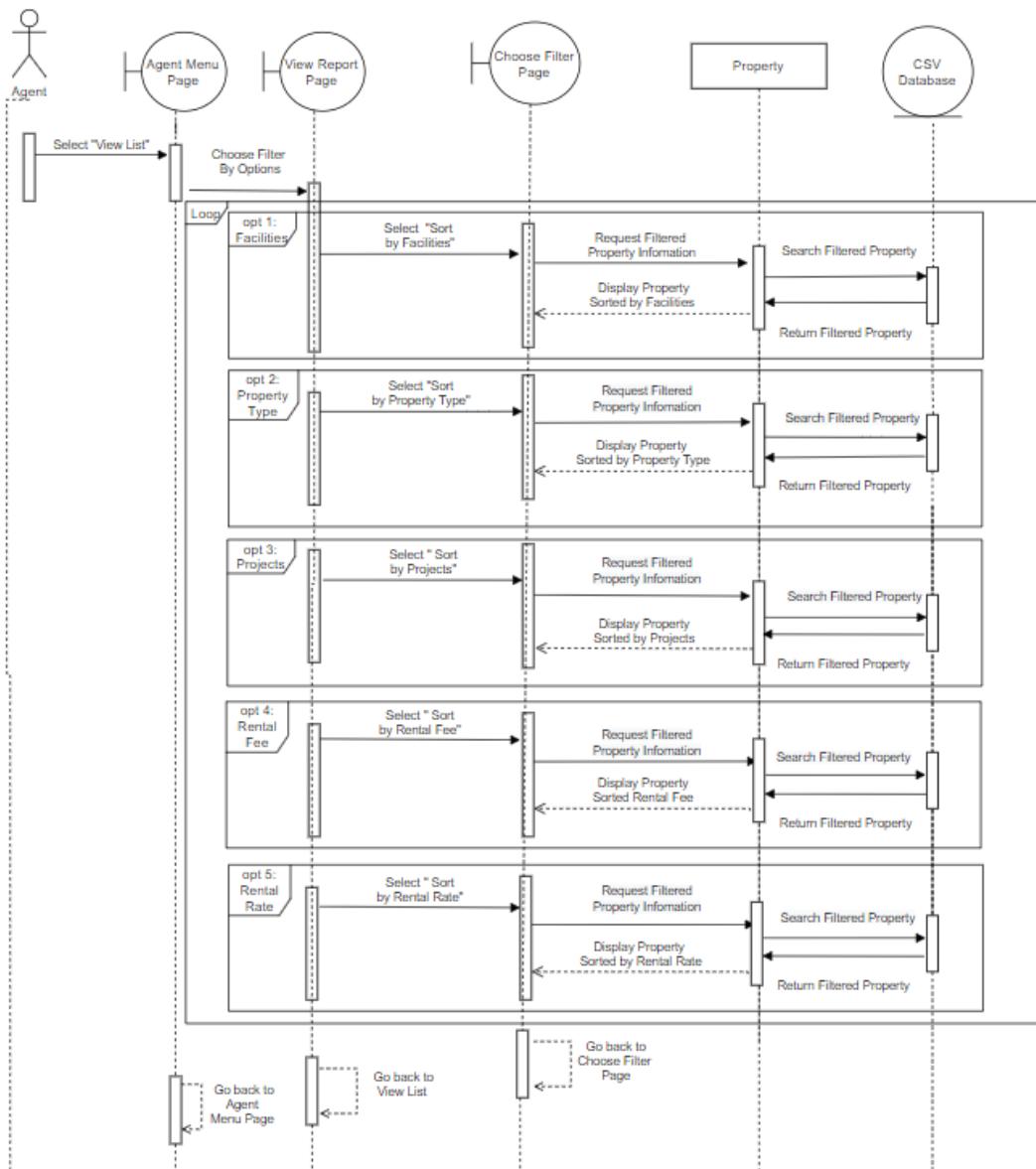
Potential Tenant - Rent Property

1. The default registered tenant must first log in and the system will direct the tenant from Tenant Login Page to the Tenant Menu Page.
2. The tenant will select on the ‘Rent Property’ button and the system will direct the tenant to the Rent Property page.
3. The tenant will choose a list of properties according to property type and the system will direct to the Filter by Property Type Page.
4. The tenant will choose the property type so that the list will be filtered according to it.
5. Then, the tenant will be able to perform 2 tasks such as viewing the properties which have been filtered based on the property type and renting the filtered properties.
6. The database will be updated for every change made in the system.
7. The tenant may click on the Back button to go back to the previous page.
8. This use case’s steps will be repeated if the tenant chooses either a list of properties according to project, a list of properties according to facilities, a list of properties according to rental rate or a list of properties according to rental fee.



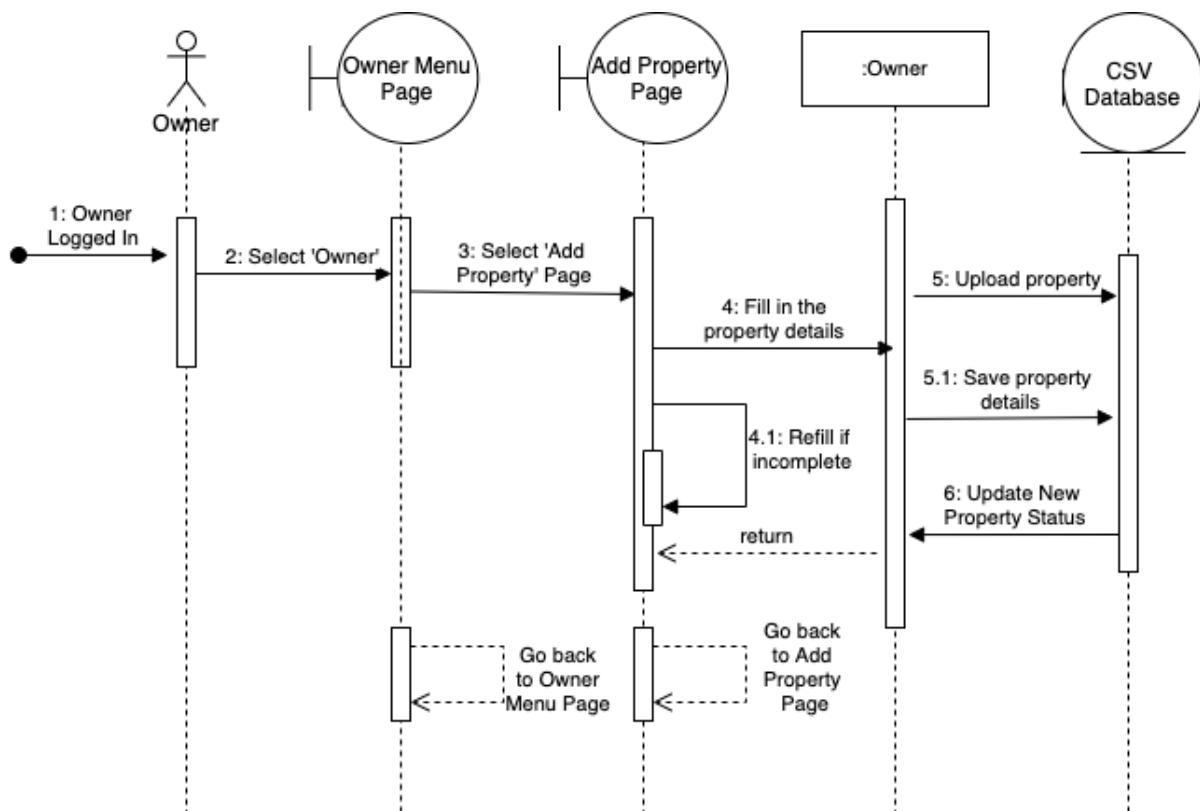
Property Agent - View Report

1. The default registered Agent must first log in and the system will direct the tenant from Agent Login Page to the Agent Menu Page.
2. The tenant will select on the 'View Report' button and the system will direct the agent to the View Report page.
3. In the View Report Page, the agent will have 5 choices to choose from which are view List of Property sorted by Facilities, Property Type, Projects, Rental Rate and Rental Fee.
4. After choosing one of the options, it will direct the agent to another page to further sort the properties based on their choices.
5. The agent may click on the Back button to go back to the previous page.



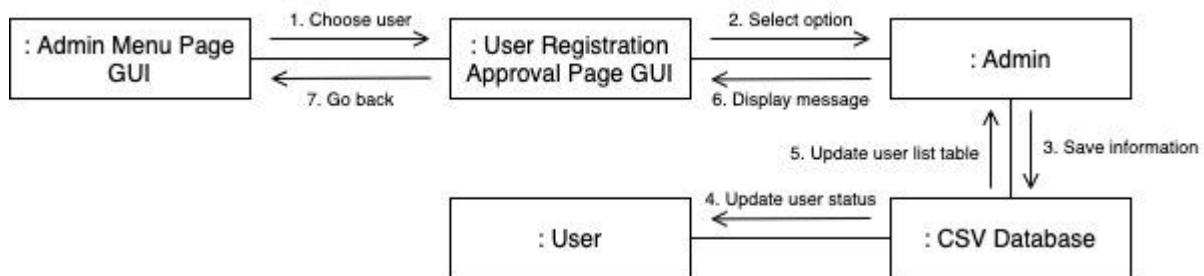
Property Owner - Add New Property

1. The default registered owner must first log in into the system.
2. The system will direct the owner from the Owner Profile Page to the Owner Menu Page.
3. Property owner will select the ‘Add Property’ button and the system will direct the owner to the ‘Add Property’ Page.
4. The owner will need to fill in the complete information of the new property which are the property name, address, category or type, size, number of rooms and bathrooms, facilities provided, rental fee and phone number of the property owner.
5. After that, the owner will select ‘Upload Property’ in order to update the information in the system
6. If any of the required information for the property is incomplete, the system will notify the owner with a message.
7. Otherwise, if the property information is completely filled by the owner, the system will save it in the database and display a message to the owner to notify that the new property has been uploaded in the system.

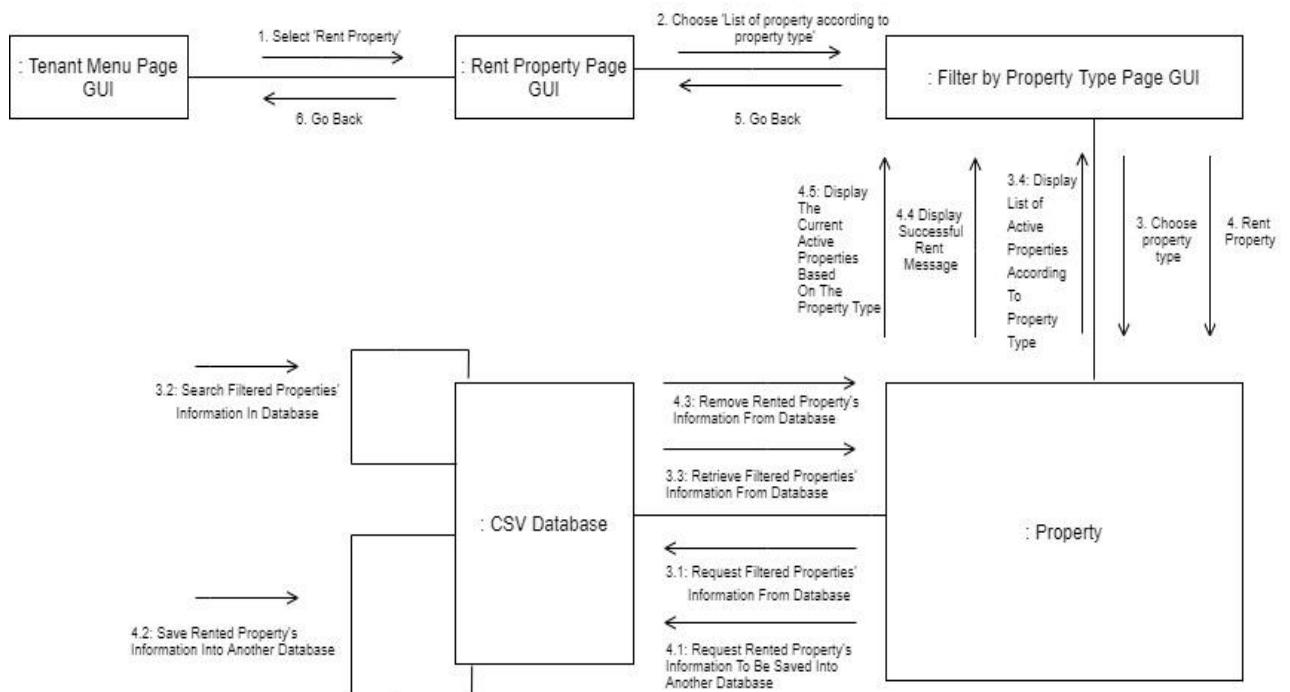


Collaboration Diagram

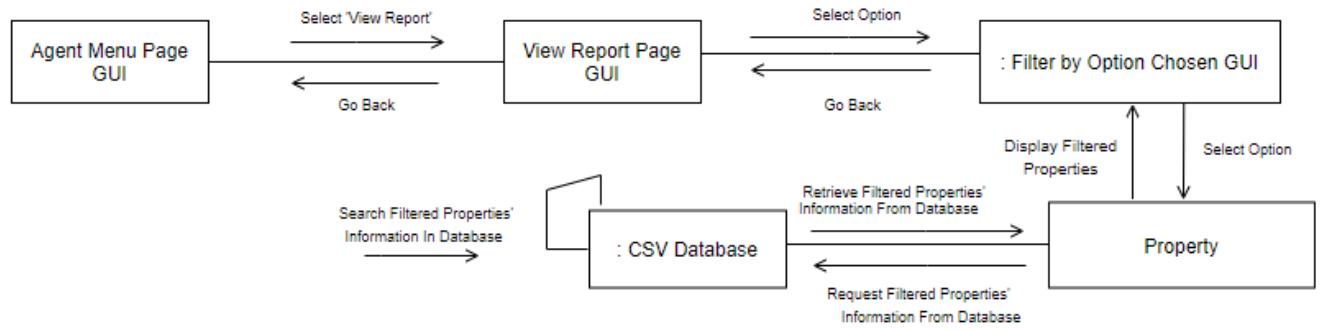
Admin - New User Registration Request



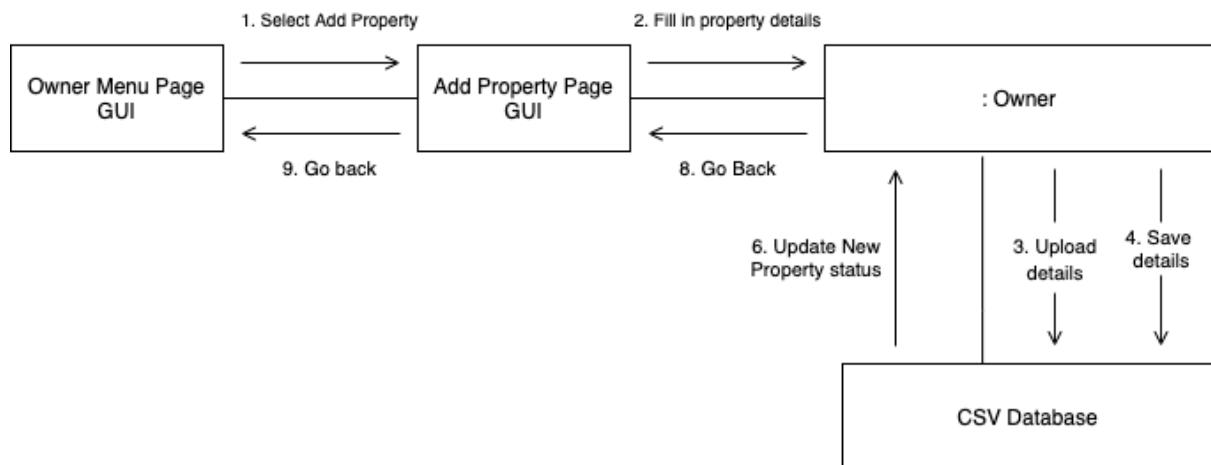
Potential Tenant - Rent Property



Property Agent - View Report

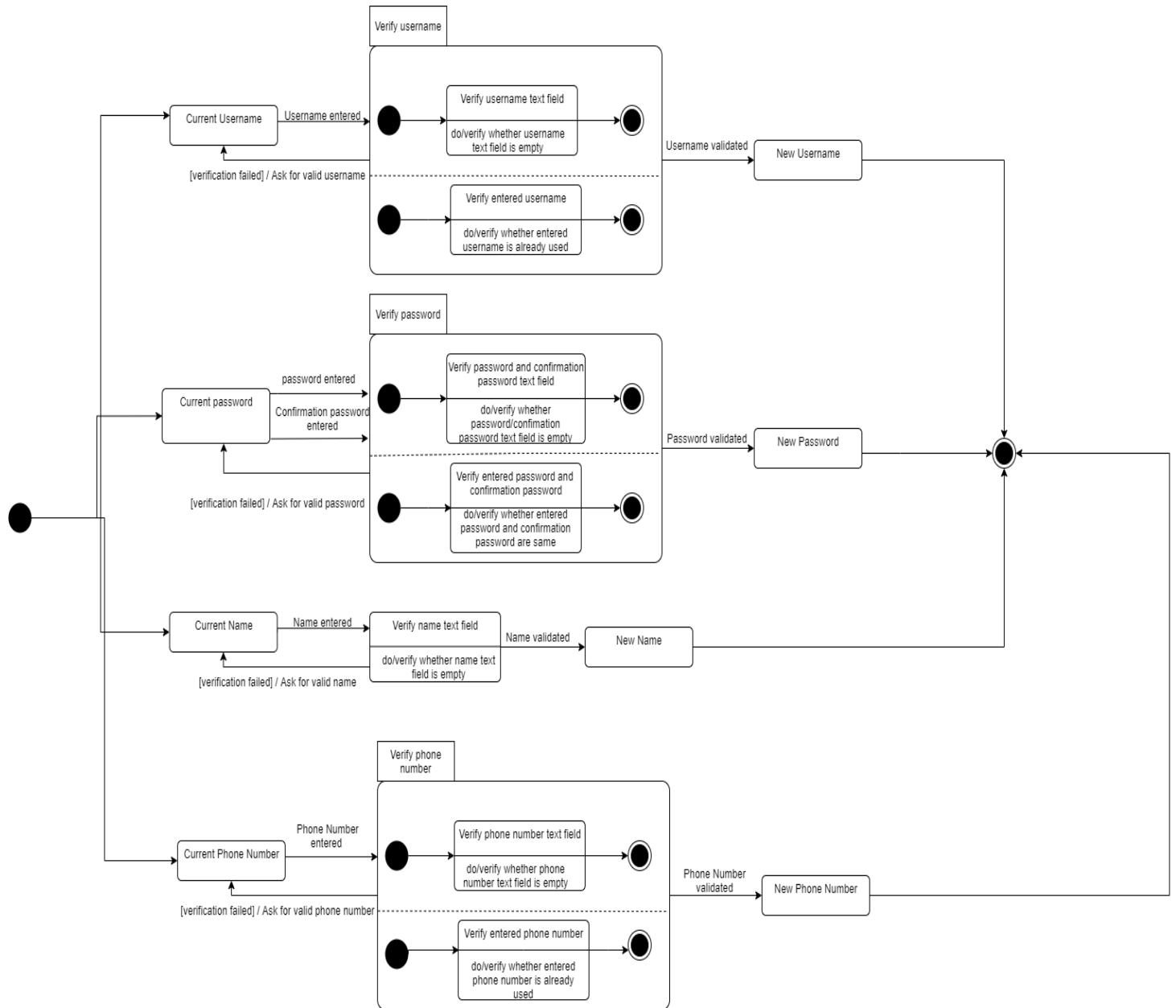


Property Owner - Add New Property

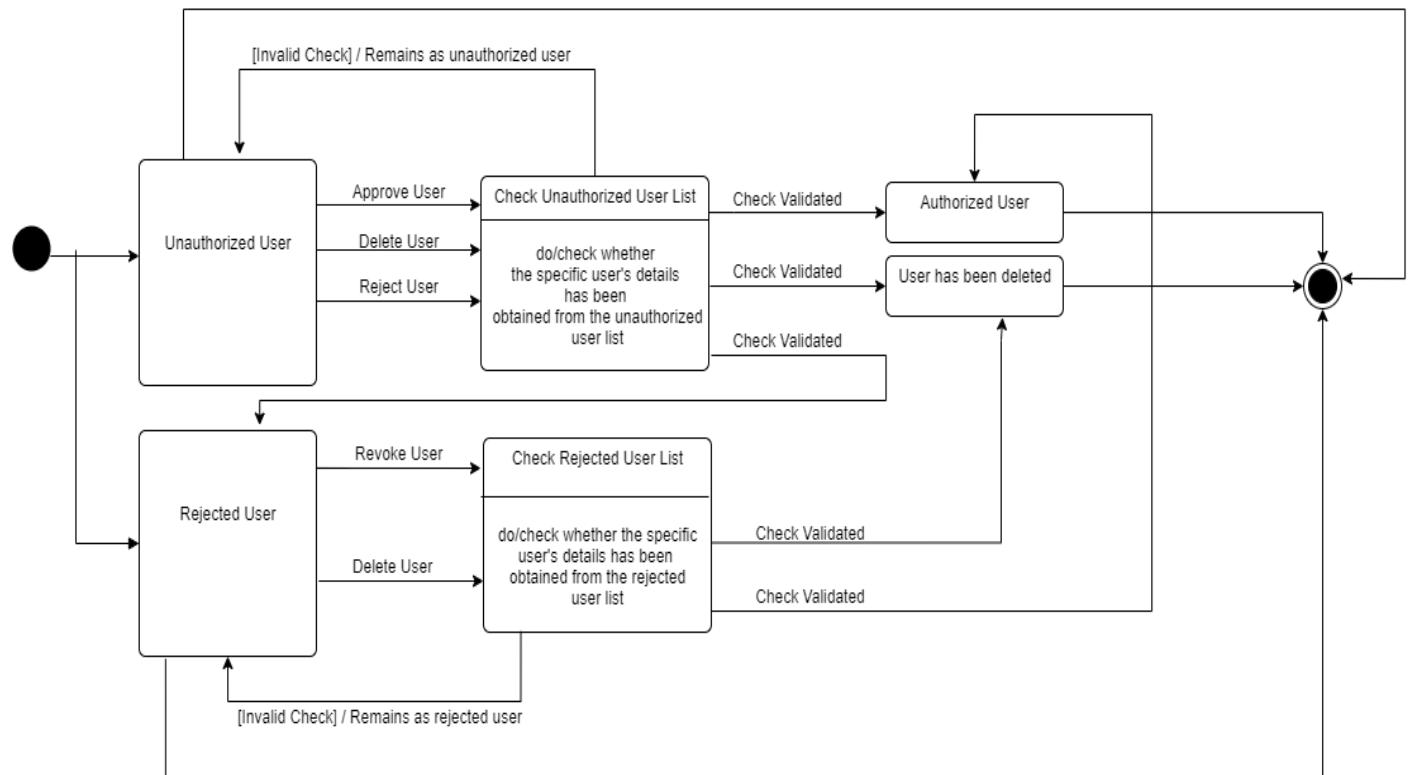


State Diagram

Potential Tenant - Edit Profile



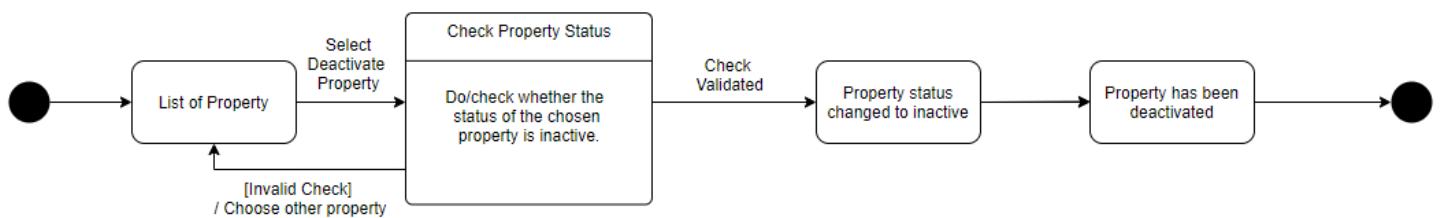
Admin - New User Registration Request



Potential Agent - Add Property



Potential Owner - Deactivate Property



Appendix

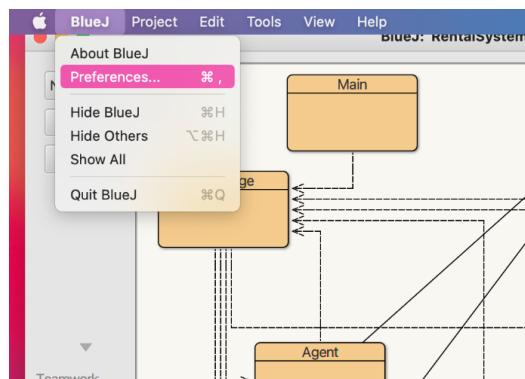
Source Code

Refer to the folder named **RentalSystem**.

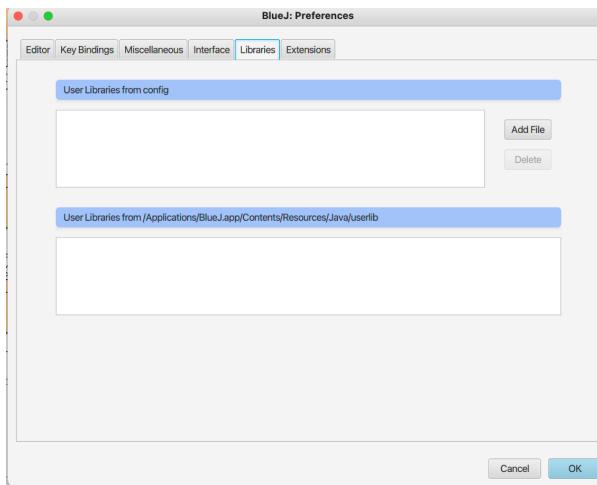
Instructions on Compiling and Running the Program

BlueJ

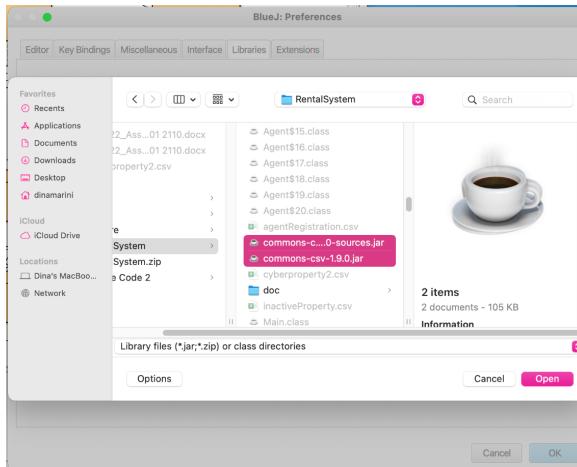
1. Open BlueJ web application and open the RentalSystem project.
2. Note that Admin.java used Apache Commons CSV library for the program to work smoothly. Refer: <https://commons.apache.org/proper/commons-csv/>
3. For first-timers, there are some tweaking needed in the BlueJ application for the BlueJ application to properly import the Apache Commons CSV library.
4. The steps are as below:
 - a. Under the menu bar, Select BlueJ and click on the Preferences.



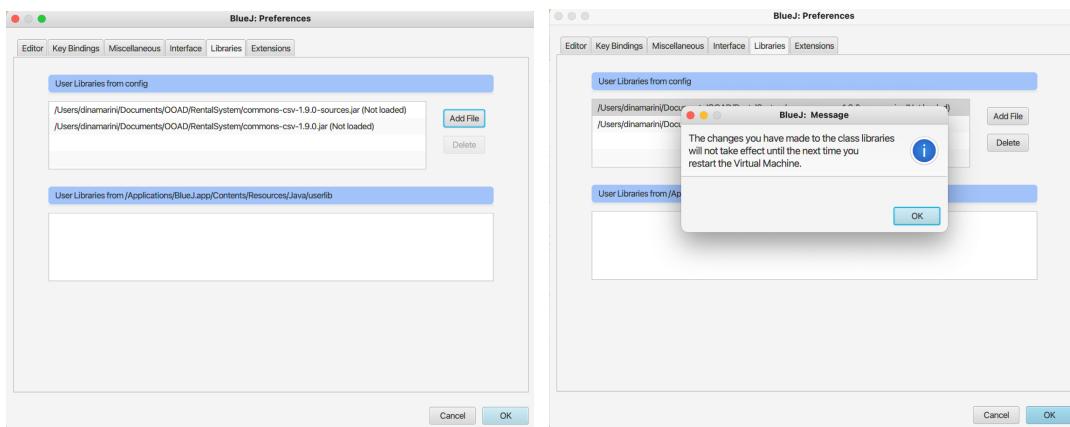
- b. A BlueJ:Preferences frame will pop out. Under the menu bar, select Libraries and click on the Add File button.



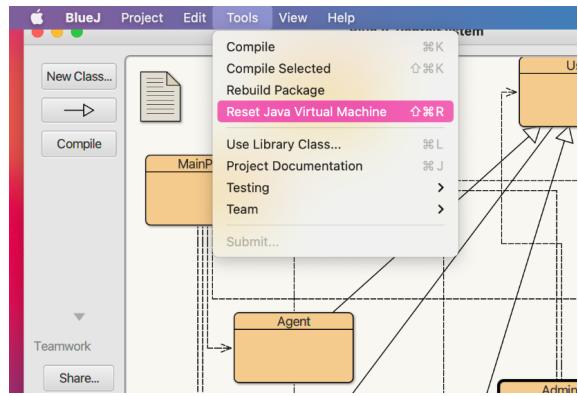
- c. Select on the commons-csv-1.9.0-sources.jar and commons-csv-1.9.0.jar files located under the RentalSystem project folder then click the Open button.



- d. Click the OK button twice.



- e. Under the menu bar, select Tools and click on the Reset Java Virtual Machine.

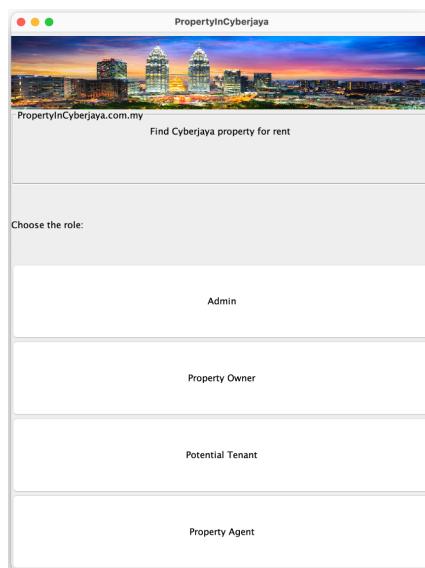


5. Then, compile and run the Main.java as usual.

User Documentation

Main Page

After compiling and running the program, a PropertyInCyberjaya frame will pop up as below. This is the Main Page where the user can choose their role; Admin, Property Owner, Potential Tenant, or Property Agent.

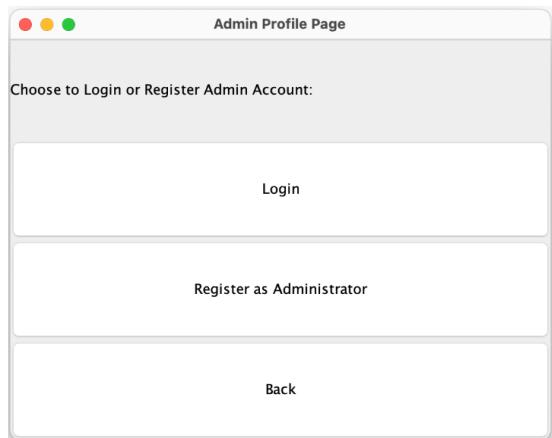


Admin

Admin Profile Page

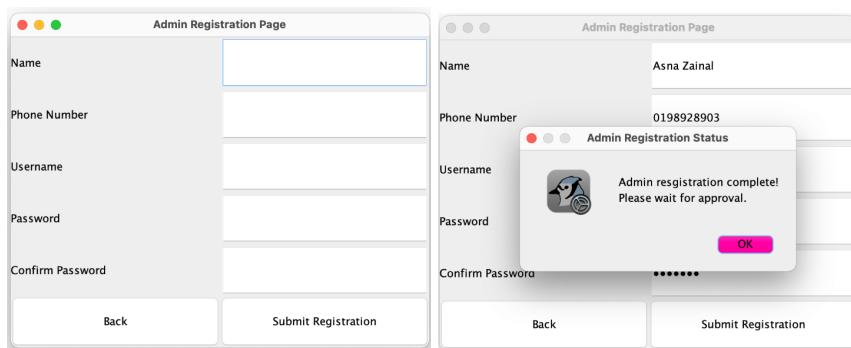
In the Main Page, if the user clicks on the Admin button, the system will direct the user to the Admin Profile Page. If the user does not have an administrator account yet, the user may

click on the Register as Administrator button to register as admin first. Otherwise, the user may click on the Login button to proceed with the signing in process.

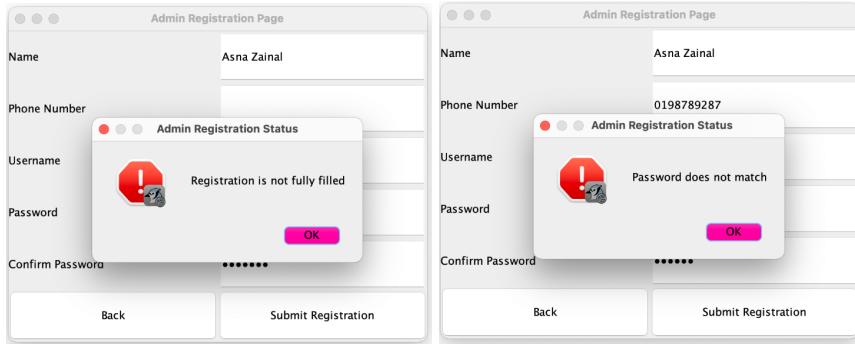


Admin Registration Page

In the Admin Profile Page, if the user clicks on the Register as Administrator button, the system will direct the user to the Admin Registration Page. In this page, the user must fill in the required information such as the user's name, phone number, username, and password. The user must double confirm the chosen password by reentering the password in the Confirm Password field. Click the Submit Registration button to complete the admin registration process.



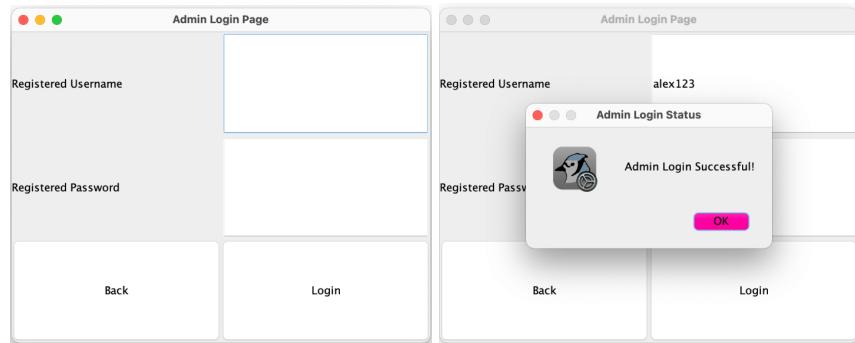
If the registration form is not complete or the confirmed password does not match with the password, an error message will be displayed as below. The User may refill the empty field or reenter the password then click on the Submit Registration button again.



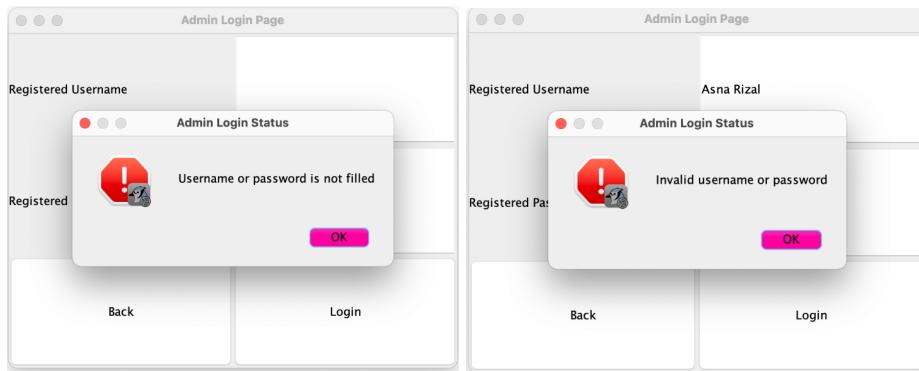
This registration process does not guarantee the user a registered admin account straight away. The user must first wait for the default admin to perform background checking and to validate the user registration before approving the user as an admin. The reason behind this is to prevent hackers, competitors, rivals or scammers from entering and hijacking the system.

Admin Login Page

If the user already has an registered admin account, the user may skip the registration process and click on the Login button in the Admin Profile Page and the system will direct the user to the Admin Login Page. In this page, the user must enter the registered username and password and the system will do the user validation at the back end. If the data match with the username and password entered, the user may successfully login into the system as an admin.

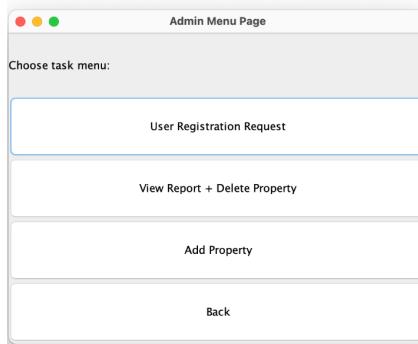


If the Login process is not complete or the username or password is invalid, an error message will be displayed as below. The User may refill the empty field or reenter the correct username or password then click on the Login button again. If the error message keeps on appearing even if the user already entered the correct details, then the default admin has not made the user validation yet or the user is not granted an admin account.



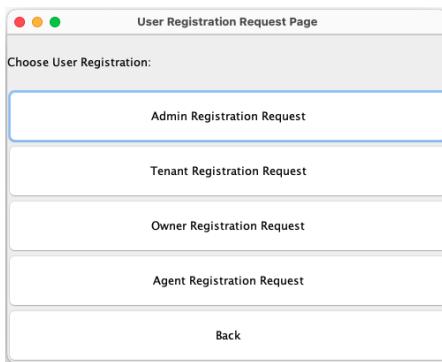
Admin Menu Page

Once the user successfully logs into the system as an admin, the system will direct the admin to the Admin Menu Page. In this page, there are some tasks to choose from: validating user registration requests, viewing reports, deleting, and adding property as well as resetting the rented property status to be available.



User Registration Request Page

If the admin clicks on the User Registration Request button in the Admin Menu Page, the system will direct the admin to the User Registration Request page. In this page, the admin can choose on validating new admin, potential tenant, property owner, or property agent registration request.



Current and New <>User>> Registration Page

If the admin clicks on the Admin Registration Request button in the User Registration Request page, the system will direct the admin to the Current and New Admin Registration page. In this page, the admin can perform tasks such as approving, deleting, rejecting, or revoking new admin. Authorized Admin List are the registered administrator, Unauthorized Admin List are the new users that are currently waiting for a registered administrator account, while Rejected Admin List are the rejected new user list. However, the rejected admin list can be revoked to be as an authorized administrator.

Authorized Admin List					
Name	Phone Number	Username	Password	Confirm Password	
Alex Banks dinaamir	0131203948 0121038022	alex123 dinaamir123	alex!@# dinaamir!@#	alex!@# dinaamir!@#	

Unauthorized Admin List					
Select	Name	Phone Number	Username	Password	Confirm Password
raise false	Harrzana ruad Zuraida Omar Asna Rizal	01220890228 60178290392 0198298390	nana_ruad zuraida123 asna_rizal	nana_ruad! ida asnal!@#	nana_ruad! ida asnal!@#

Rejected Admin List					
Select	Name	Phone Number	Username	Password	Confirm Password
false	iman Yurina	0145672876 0189878898	iman123 yuri_na	iman!@# yurina_	iman!@# yurina_

Buttons:

- Approve New Admin
- Delete New Admin
- Reject New Admin
- Revoke New Admin
- Back

Process to Approve, Delete, Reject, and Revoke User Registration Request

If there is a user submitting a registration form back in the Admin Registration Page, the information will appear under the Unauthorized Admin List. The process to approve, delete, reject, or revoke Unauthorized/Rejected Admin List are the same except that the admin must click on the correct button.

Firstly, the admin must choose the row(s) of interest and double click on the “false” under Select attribute. Secondly, retype the “false” word to “true”. Finally, it is important to bring the cursor somewhere else and click. This step is to make sure that the cursor is not in the text field so that the Approve New Admin, Delete New Admin, Reject New Admin, and Revoke New Admin button works if the admin clicks on one of these buttons.

Current and New Admin Registration					
Authorized Admin List					
Name Alex Banks dinaamir	Phone Number 0131203948 0121038022	Username alex123 dinaamir123	Password alex!#@# dinaamir!#@#	Confirm Password alex!#@# dinaamir!#@#	
Unauthorized Admin List					
Select raise false false	Name Färzana ruad Zuraida Omar	Phone Number 0122400228 60178290392	Username nana_ruad zuraidal23	Password nana_ruad!#@# ida	Confirm Password nana_ruad!#@# ida
true	Asna Rizal	0198298390	asna_rizal	asna!#@#	asna!#@#
<input type="button" value="Approve New Admin"/> <input type="button" value="Delete New Admin"/> <input type="button" value="Reject New Admin"/>					
Rejected Admin List					
Select false false	Name iman Yurina	Phone Number 0145672876 0189878898	Username iman123 yuri_na	Password iman!#@# yurina_	Confirm Password iman!#@# yurina_
<input type="button" value="Revoke New Admin"/> <input type="button" value="Delete New Admin"/> <input type="button" value="Back"/>					

Current and New Admin Registration					
Authorized Admin List					
Name Alex Banks dinaamir	Phone Number 0131203948 0121038022	Username alex123 dinaamir123	Password alex!#@# dinaamir!#@#	Confirm Password alex!#@# dinaamir!#@#	
Unauthorized Admin List					
Select raise false true	Name Färzana ruad Zuraida Omar Asna Rizal	Phone Number 0122400228 60178290392 0198298390	Username nana_ruad zuraidal23 asna_rizal	Password nana_ruad!#@# ida asna!#@#	Confirm Password nana_ruad!#@# ida asna!#@#
<input type="button" value="Approve New Admin"/> <input type="button" value="Delete New Admin"/> <input type="button" value="Reject New Admin"/>					
Rejected Admin List					
Select false false	Name iman Yurina	Phone Number 0145672876 0189878898	Username iman123 yuri_na	Password iman!#@# yurina_	Confirm Password iman!#@# yurina_
<input type="button" value="Revoke New Admin"/> <input type="button" value="Delete New Admin"/> <input type="button" value="Back"/>					

(1) Double click on the “false”.

(2) Retype the “false” word to “true”.

Current and New Admin Registration					
Authorized Admin List					
Name Alex Banks dinaamir	Phone Number 0131203948 0121038022	Username alex123 dinaamir123	Password alex!#@# dinaamir!#@#	Confirm Password alex!#@# dinaamir!#@#	
Unauthorized Admin List					
Select raise false true	Name Färzana ruad Zuraida Omar Asna Rizal	Phone Number 0122400228 60178290392 0198298390	Username nana_ruad zuraidal23 asna_rizal	Password nana_ruad!#@# ida asna!#@#	Confirm Password nana_ruad!#@# ida asna!#@#
<input type="button" value="Approve New Admin"/> <input type="button" value="Delete New Admin"/> <input type="button" value="Reject New Admin"/>					
Rejected Admin List					
Select false false	Name iman Yurina	Phone Number 0145672876 0189878898	Username iman123 yuri_na	Password iman!#@# yurina_	Confirm Password iman!#@# yurina_
<input type="button" value="Revoke New Admin"/> <input type="button" value="Delete New Admin"/> <input type="button" value="Back"/>					

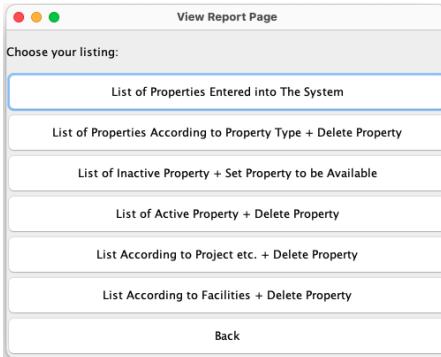
(3) Bring the cursor to someplace else and click.

If the admin clicks on the **Approve New Admin** button, the information of the unauthorized admin chosen will be moved to the Authorized Admin List. If the admin clicks on the **Delete New Admin** Button, the information of the unauthorized or rejected admin chosen will be removed or destroyed from the system. If the admin clicks on the **Reject New Admin** Button, the information of the unauthorized admin chosen will be moved to the Rejected Admin List. If the admin clicks on the **Revoke New Admin** Button, the information of the rejected admin chosen will be moved to the Authorized Admin List.

The process of approving, deleting, rejecting, and revoking new unauthorized admin are the same for all users; potential tenant, property owner, and property agent.

View Report Page

If the admin clicks on the View Report + Delete Property button in the Admin Menu Page, the system will direct the user to the View Report Page. In this page, the admin can view reports and perform tasks as listed in the figure below.



Show All Property Listing

In this page, the system will display all of the properties entered into the system. The properties include active and inactive/rented out property. This feature can only be viewed from an administrator account only.

The screenshot shows a window titled "Show All Property Listing". It displays two property records:

Property ID: 930098	
Name	: Garden Plaza
Address	: Persiaran Harmoni Cyberjaya 62000 Selangor
Built-up Size (ft)	: 700
Type	: Double Storey
Room	: 4
Bathroom	: 2
Facilities	: Swimming Pool-Gymnasium-Business Centre-Multipurpose Hall-Library
Rental (RM)	: 1200
Contact	: 60175743033

Property ID: 399806	
Name	: Shumann Symphony Hills
Address	: Persiaran Bestari Cyber 9 Cyberjaya 63000 Selangor
Built-up Size (ft)	: 3132
Type	: 3 Storey Terrace
Room	: 5+1
Bathroom	: 5
Facilities	: 24-Hours Security-Parking-Shuttle Bus-BBQ-Mini Market-Gymnasium-Jogging Track-Playground-Swimming Pool-Sauna-Badminton Court
Rental (RM)	: 3500
Contact	: 60176284786

List of Active Properties

Admin can view all the available or active properties under the list of active properties feature. This feature includes a Delete button in red colour where the admin can remove or destroy the property information from the system.

Show All Active Listing

Back

Property ID: 930098
Name : Garden Plaza
Address : Persiaran Harmoni Cyberjaya 62000 Selangor
Built-up Size (ft) : 700
Type : Double Storey
Room : 4
Bathroom : 2
Facilities : Swimming Pool-Gymnasium-Business Centre-Multipurpose Hall-Library
Rental (RM) : 1200
Contact : 60175743033
Delete Property
Property ID: 399806
Name : Shumann Symphony Hills
Address : Persiaran Rectari Cyber 9 Cyberjaya 63000 Selangor

List of Property according to Property Type

If the admin chooses to list the property according to property type, the system then will ask the user to choose the type of property wanted. For example, if the admin chooses Bungalow as the property type wanted, the system will display the list of all bungalows available in the database. This feature includes a Delete button in red colour where the admin can remove or destroy the property information from the system.

Filter by property type

Back

Choose Property Type

- Select
- Condominium
- Double Storey
- 3 Storey Terrace
- Serviced Residence
- Semi-detached House
- Double storey terrace
- Bungalow

Type : Double Storey
Room : 4
Bathroom : 2
Facilities : Swimming Pool-Gymnasium-Business Centre-Multipurpose Hall-Library
Rental (RM) : 1200
Contact : 60175743033
Delete Property
Property ID: 399806

Filter by property type

Back

Choose Property Type

- Select

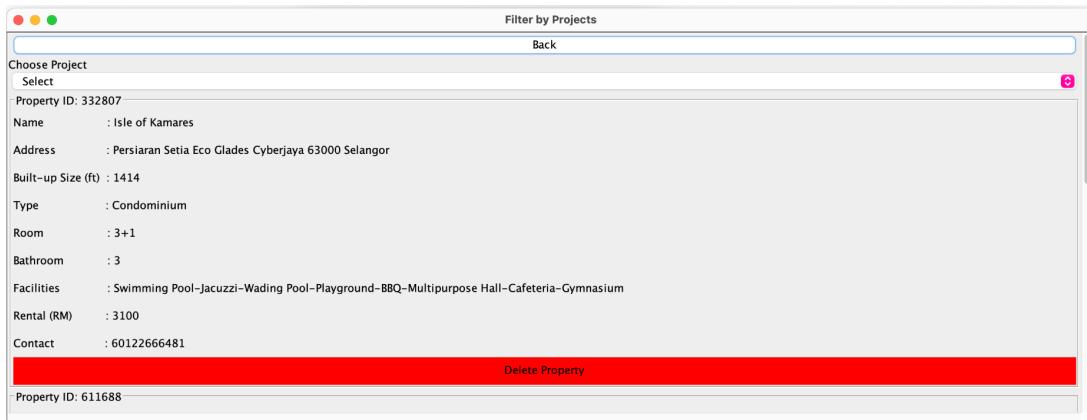
Property Type Chosen: Bungalow

Property ID: 290643

Name : Jacaranda Garden Residence
Address : Garden Residence 63100 Selangor
Built-up Size (ft) : 4541
Type : Bungalow
Room : 6
Bathroom : 6
Facilities : 24-Hours Security-Parking-BBQ-Club House-Gymnasium-Jogging Track-Playground-Swimming Pool
Rental (RM) : 8500
Contact : 60169283184
Delete Property
Property ID: 843070

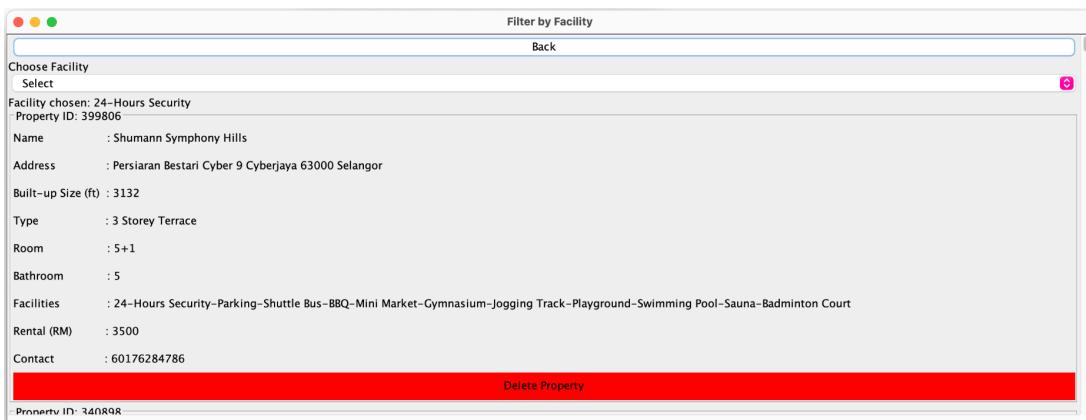
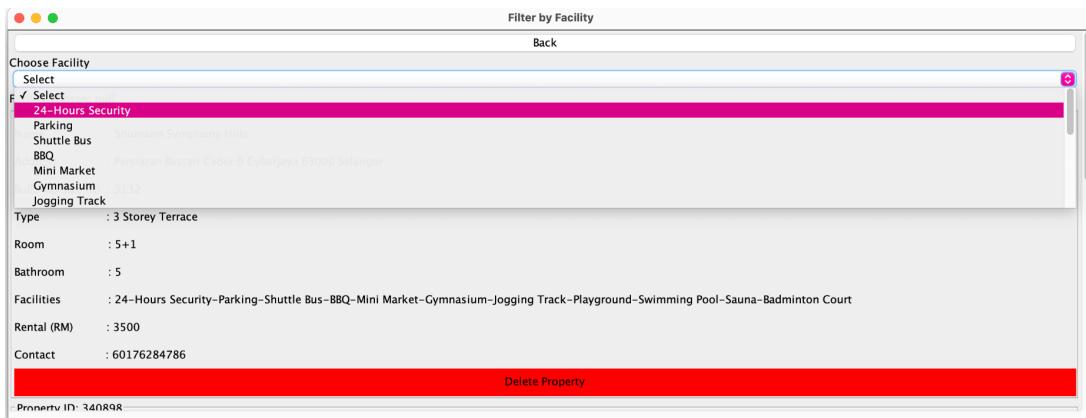
List of Property according to Property Projects

Other than that, admin also has the feature to view the properties by sorting according to the property's projects. The system will first ask the admin to choose the property project wanted. For example, if the admin chooses Setia Eco Glades as the property project wanted, the system will display the list of all properties located in Setia Eco Glades available in the database. This way of viewing properties include a Delete button in red colour where the admin can remove or destroy the property information from the system.



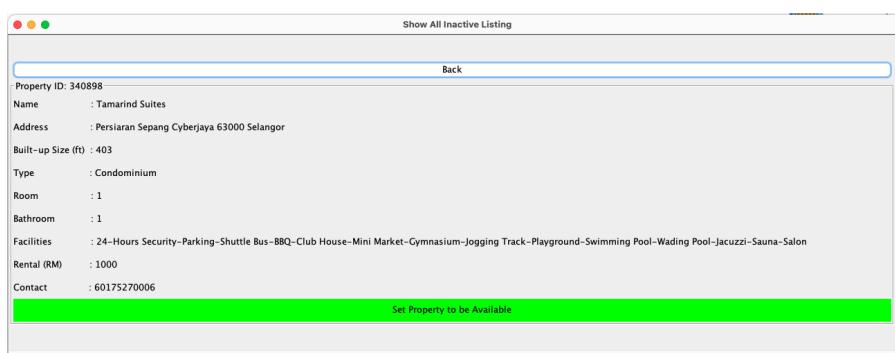
List of Property according to Facilities

Finally, admin has the feature to view the properties by sorting according to the facilities available in the property. The system will first ask the admin to choose the facilities wanted. For example, if the admin chooses 24 Hours Security as the facility wanted, the system will display the list of all properties which includes the facility chosen available in the database. This way of viewing properties include a Delete button in red colour where the admin can remove or destroy the property information from the system.



List of Inactive Properties

Moreover, admin can also view the inactive or rented out properties under the list of inactive properties feature. This feature includes a Set Property to be Available button in green colour where the admin can change the property's status from inactive to active and the information of this property will be displayed in the potential tenant's view board again. This feature is helpful when the previous tenant has discontinued renting the property and putting the property back into the view board to find its new potential tenant.



Add Property

If the admin clicks on the Add Property button in the Admin Menu Page, the system will direct the user to the Add New Property Page. In this page, the admin can fill in the new property details to be displayed on the view board.

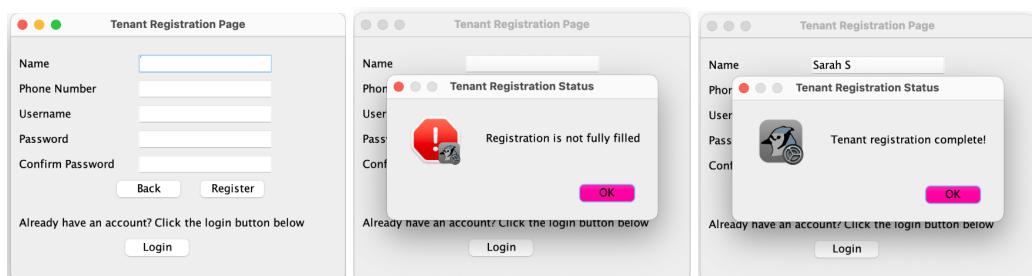
If the adding new property process is incomplete, an error message will be displayed as below. The admin may refill the empty field then click on the Upload Property button again. Take note that commas must not be included in the field as it will interrupt the system. The reason behind this is that we use comma-separated values (CSV) delimited text files as our database.



Potential Tenant

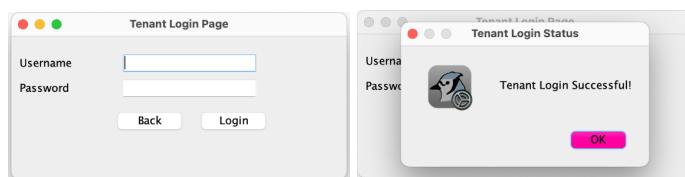
Tenant Profile Page

In the Main Page, if the user clicks on the Tenant button, the system will direct the user to the Tenant Profile Page. If the user does not have a tenant account yet, the user may fill up the registration form first and wait for the user registration approval from the administrator. However, if the user already has a tenant account, the user may click on the Login button to proceed with the signing in process. If one of the text fields is not filled, an error message will be displayed as below and the user may need to refill the empty field then click on the Register button again.



Tenant Login Page

If the user already has a registered tenant account, the user may skip the registration process and click on the Login button in the Tenant Profile Page and the system will direct the user to the Tenant Login Page. In this page, the user must enter the registered username and password and the system will do the user validation at the back end. If the data match with the username and password entered, the user may successfully login into the system as a tenant.

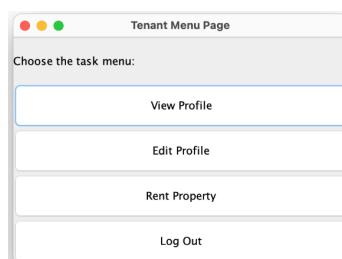


If the Login process is not complete or the username or password is invalid, an error message will be displayed as below. The User may refill the empty field or reenter the correct username or password then click on the Login button again. If the error message keeps on appearing even if the user already entered the correct details, then the default admin has not made the user validation yet or the user is not granted a tenant account.



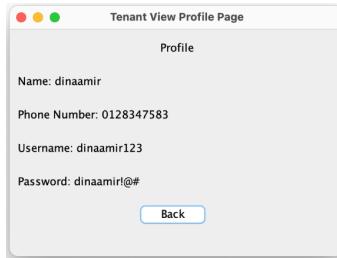
Tenant Menu Page

Once the user successfully logs into the system as a tenant, the system will direct the tenant to the Tenant Menu Page. In this page, there are some tasks to choose from: renting properties, viewing and editing the tenant's profile.



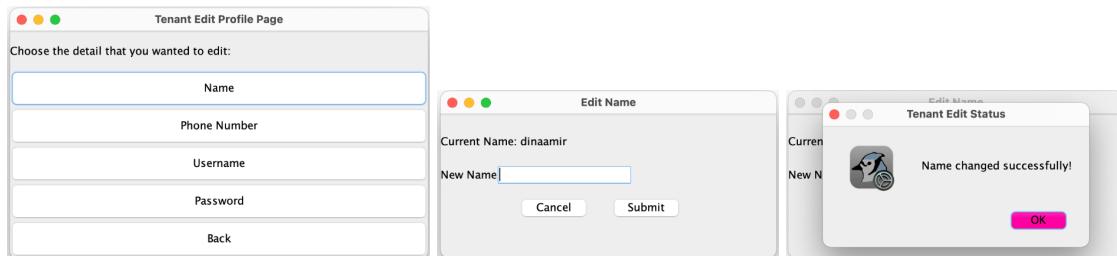
Tenant View Profile Page

If the tenant clicks on the View Profile button in the Tenant Menu Page, the system will direct the tenant to the Tenant View Profile page. In this page, the tenant can view its current profile details such as name, phone number, username and password.

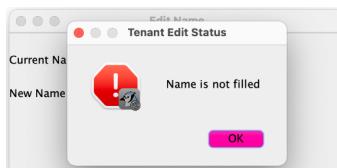


Tenant Edit Profile Page

If the tenant clicks on the Edit Profile button in the Tenant Menu Page, the system will direct the tenant to the Tenant Edit Profile page. In this page, the tenant can edit or change its current name, phone number, username, or password.

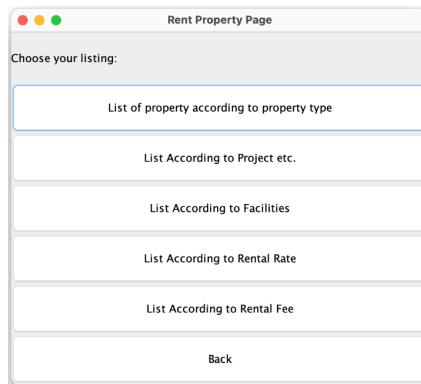


If the text field to make changes on the tenant's details is not filled, an error message will be displayed as below. The tenant may refill the empty field then click on the Submit button again.



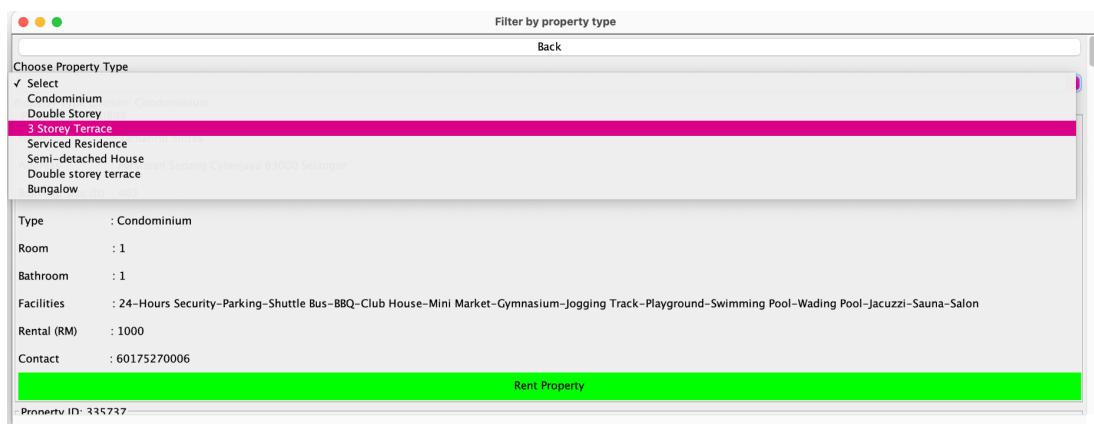
Rent Property Page

If the tenant clicks on the Rent Property button in the Tenant Menu Page, the system will direct the user to the Rent Property Page. In this page, the admin can view boards as listed in the figure below.



List of Property according to Property Type

If the tenant chooses to list the property according to property type, the system then will ask the tenant to choose the type of property wanted. For example, if the tenant chooses 3 Story Terrace as the property type wanted, the system will display the list of all 3 story terraces available in the database. This feature includes a Rent Property button in green colour where the tenant can rent the property.



Filter by property type

Back

Choose Property Type

Select

Property Type Chosen: 3 Storey Terrace
Property ID: 399806

Name	:	Shumann Symphony Hills
Address	:	Persiaran Bestari Cyber 9 Cyberjaya 63000 Selangor
Built-up Size (ft)	:	3132
Type	:	3 Storey Terrace
Room	:	5+1
Bathroom	:	5
Facilities	:	24-Hours Security-Parking-Shuttle Bus-BBQ-Mini Market-Gymnasium-Jogging Track-Playground-Swimming Pool-Sauna-Badminton Court
Rental (RM)	:	3500
Contact	:	60176284786

Rent Property

Property ID: 777522

List of Property according to Property Projects

Other than that, the tenant also has the feature to view the properties by sorting according to the property's projects. The system will first ask the tenant to choose the property project wanted. For example, if the tenant chooses Jalan Fauna as the property project wanted, the system will display the list of all properties located in Jalan Fauna available in the database. This way of viewing properties include a Rent Property button in green colour where the tenant can rent the property.

Filter by Projects

Back

Choose Project

Select

- Select
- Casa View Cybersouth
- Garden Residence
- Jalan Cera
- Jalan Cyber Heights
- Jalan Fauna**
- Jalan Impact
- Jalan Mirage

Type	:	Condominium
Room	:	3+1
Bathroom	:	3
Facilities	:	Swimming Pool-Jacuzzi-Wading Pool-Playground-BBQ-Multipurpose Hall-Cafeteria-Gymnasium
Rental (RM)	:	3100
Contact	:	60122666481

Rent Property

Property ID: 611688

Filter by Projects

Back

Choose Project

Select

Project Chosen: Jalan Fauna
Property ID: 777522

Name	:	Lepironia Gardens
Address	:	Jalan Fauna Lepironia Gardens Setia Ecoglades Cyberjaya 63000 Selangor
Built-up Size (ft)	:	3210
Type	:	3 Storey Terrace
Room	:	5+1
Bathroom	:	6
Facilities	:	Gymnasium-Swimming Pool-Wading Pool-Basketball Court-Badminton Court-Playground-Jogging Track-Tennis Court
Rental (RM)	:	4500
Contact	:	60183740266

Rent Property

Property ID: 528790

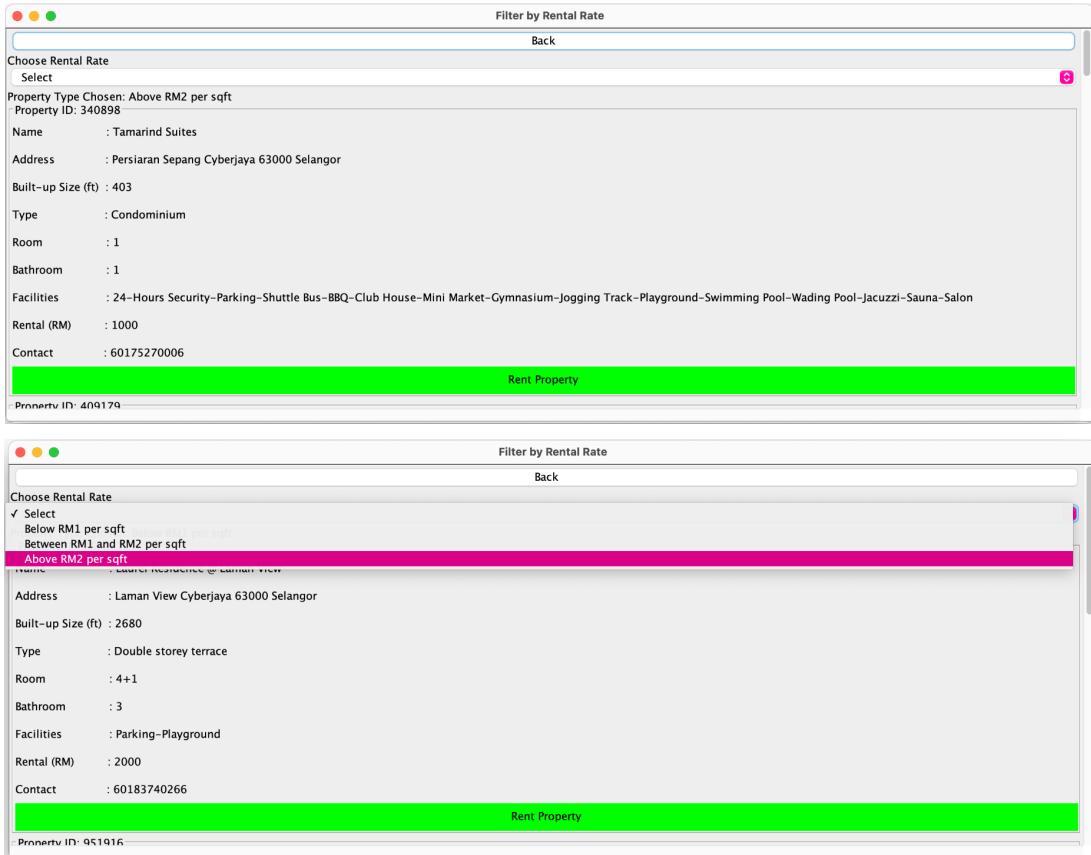
List of Property according to Facilities

Next, the tenant has the feature to view the properties by sorting according to the facilities available in the property. The system will first ask the tenant to choose the facilities wanted. For example, if the tenant chooses 24 Hours Security as the facility wanted, the system will display the list of all properties which includes the facility chosen available in the database. This way of viewing properties includes a Rent Property button in green colour where the tenant can rent a property.

The image contains two screenshots of a mobile application interface. Both screens have a header "Filter by Facility" and a "Back" button. The top screen shows a list of facilities: Library, Nursery, Cafeteria, Club House, Pool, Jacuzzi, Sauna, and Salon. The "Salon" option is highlighted with a pink bar at the bottom. Below the facilities, property details are listed: Type (3 Storey Terrace), Room (5+1), Bathroom (5), Facilities (24-Hours Security-Parking-Shuttle Bus-BBQ-Mini Market-Gymnasium-Jogging Track-Playground-Swimming Pool-Sauna-Badminton Court), Rental (RM) (3500), and Contact (60176284786). A green "Rent Property" button is at the bottom. The bottom screen shows similar details for a different property: Facility chosen: Salon, Property ID: 340898, Name: Tamarind Suites, Address: Persiaran Sepang Cyberjaya 63000 Selangor, Built-up Size (ft) (403), Type (Condominium), Room (1), Bathroom (1), Facilities (24-Hours Security-Parking-Shuttle Bus-BBQ-Club House-Mini Market-Gymnasium-Jogging Track-Playground-Swimming Pool-Wading Pool-Jacuzzi-Sauna-Salon), Rental (RM) (1000), and Contact (60175270006). It also features a green "Rent Property" button at the bottom. Both screens include a "Property ID: <QR>" at the bottom.

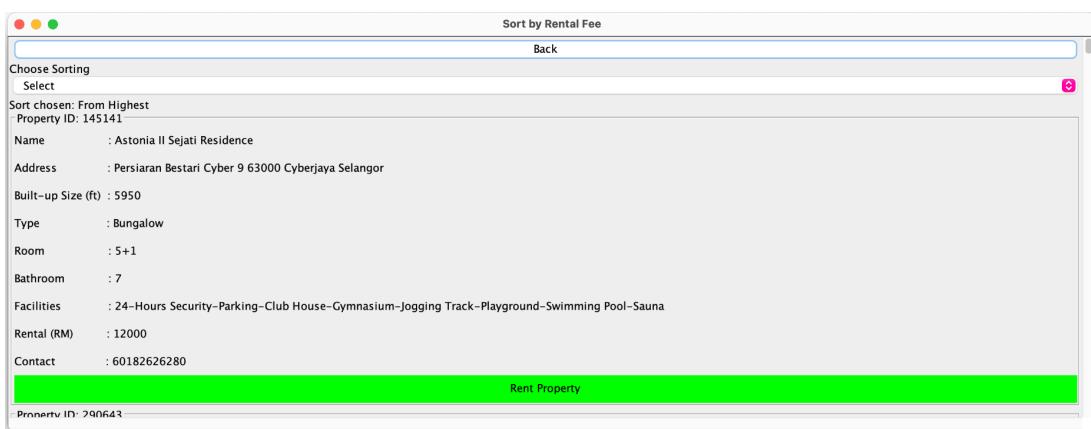
List of Property according to Rental Rate

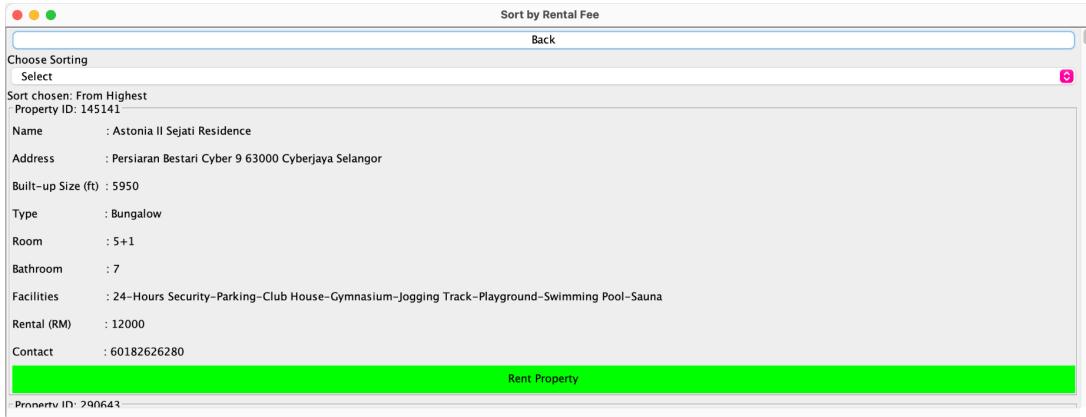
Then, the tenant has the feature to view the properties by sorting according to the rental rate. The system will first ask the tenant to choose the rental rate wanted. For example, if the tenant chooses Above RM2 per sqft as the rental rate wanted, the system will display the list of all properties which includes the rental rate chosen available in the database. This way of viewing properties includes a Rent Property button in green colour where the tenant can rent a property.



List of Property according to Rental Rate

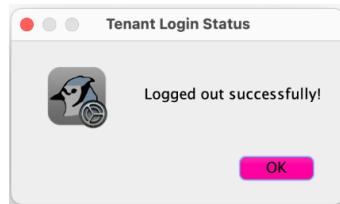
Then, the tenant has the feature to view the properties by sorting according to the rental fee. The system will first ask the tenant to choose either to sort the rental fee from lowest or highest. For example, if the tenant chooses to sort the property rental fee From Highest, the system will display the list of all properties from the most expensive to cheapest rental fee. This way of viewing properties includes a Rent Property button in green colour where the tenant can rent a property.





Tenant Login Status

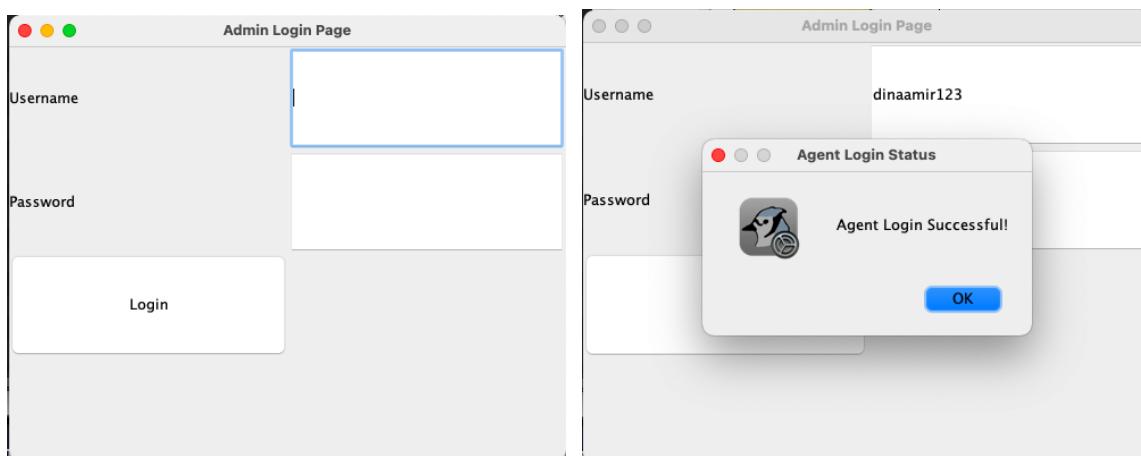
If the tenant clicks on the Log Out button in the Tenant Menu Page, the tenant will be logged out from the system and the system will direct the tenant back to the Tenant Registration page.



Property Agent

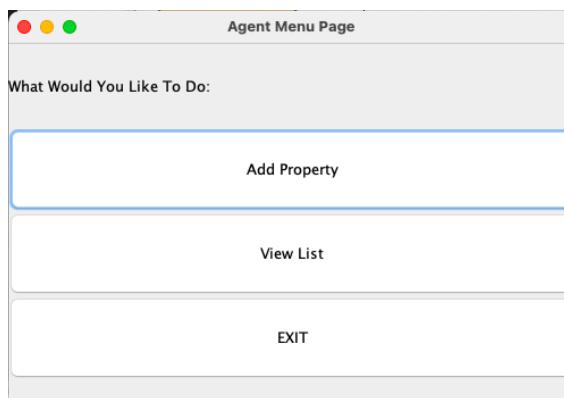
Property Agent Login Page

If the user already has a registered property agent account, the user can skip the registration process and click on the Login button in the Property Agent Profile Page and the system will direct the user to the Agent Login Page. In this page, the user must enter the registered username and password and the system will do the user validation at the back end. If the data match with the username and password entered, the user may successfully login into the system as a property agent.



Agent Menu Page

After login, the system will direct the user to the Agent Menu Page.



Add Property Page

When the property agent clicks on the 'Add Property' button in the Agent Menu Page, the system will direct the user to the Add New Property Page. In this page, the agent can fill in the new property details.

Add New Property Page

Property Name	<input type="text"/>
Address (without comma)	<input type="text"/>
Property category or type	<input type="text"/>
Property Size	<input type="text"/>
Number of rooms	<input type="text"/>
Number of bathrooms	<input type="text"/>
Facilities provided	<input type="text"/>
Rental Fee	<input type="text"/>
Phone Number	<input type="text"/>

Back **Upload Property**

Property Name	HYBE Insight
Address (without comma)	ultimedia 2 Cyberjaya 63000 Selangor
Property category or type	Condominium
Property Size	<input type="text"/>
Number of rooms	<input type="text"/>
Number of bathrooms	<input type="text"/>
Facilities provided	<input type="text"/>
Rental Fee	<input type="text"/>
Phone Number	60106503101

Back **Upload Property**

New property uploaded!

OK

Property ID: 206755	
Name	: HYBE Insight
Address	: Persiaran Multimedia 2 Cyberjaya 63000 Selangor
Built-up Size (ft)	: 1360
Type	: Condominium
Room	: 7
Bathroom	: 3
Facilities	: Gymnasium
Rental (RM)	: 700
Contact	: 60106503101

View Report Page

When the property agent clicks on the ‘View Report’ button from the Agent Menu Page, the system will direct the user to the View Report Page. In this page, the agent can choose to list or sort the property list according to own liking.

View Report Page

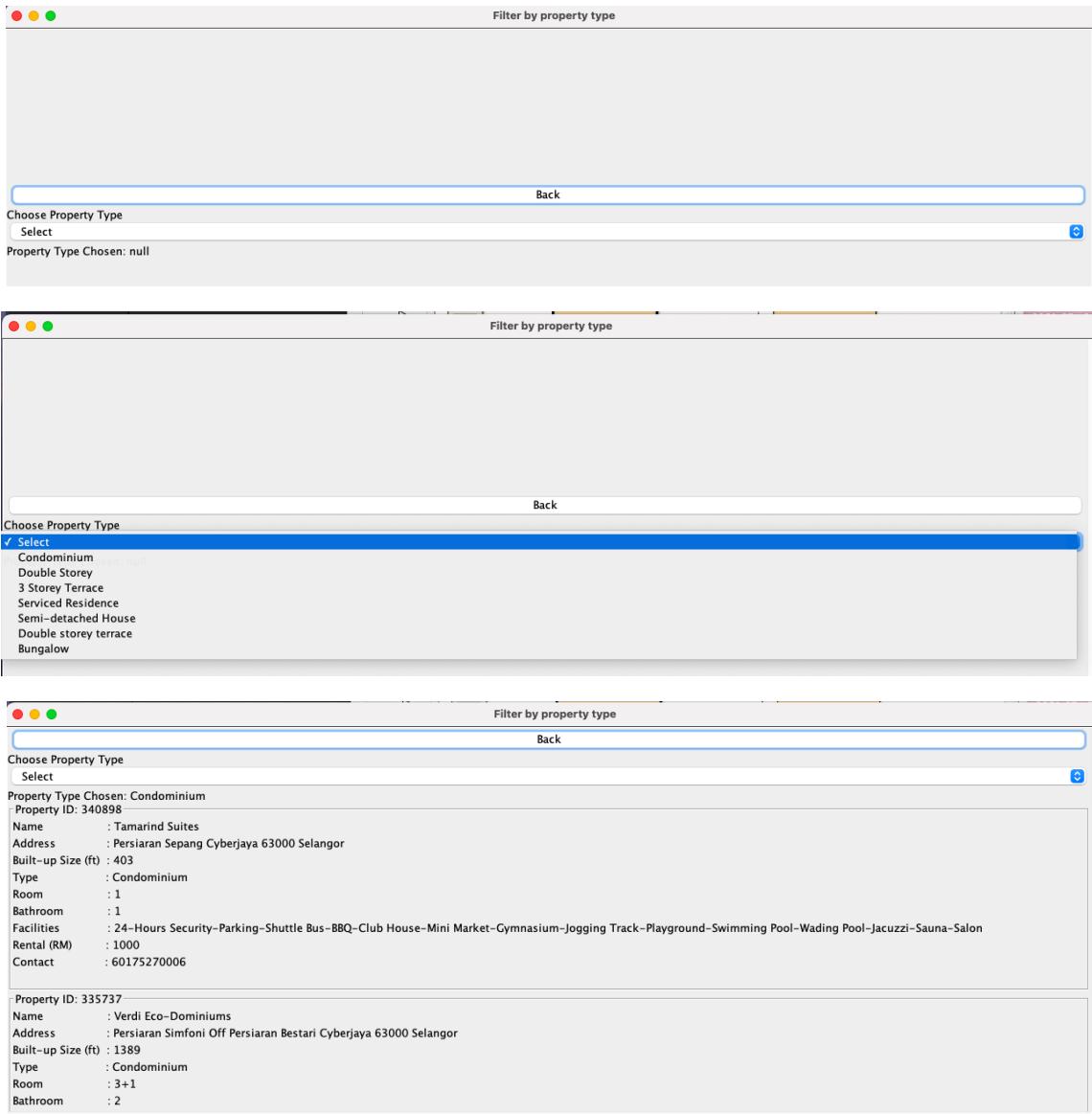
Choose your listing:

- List of Property According to Property Type**
- List According to Project etc.
- List According to Facilities
- Sort By Rental Rate
- Sort By Rental Price

Back

List of Property according to Property Type

If the agent chooses to list the property according to property type, the system then will ask the agent to choose the type of property wanted. For example, if the agent chooses Condominium as the property type wanted, the system will display the list of all condominiums available in the database.



List of Projects

After the agent selects 'List by Projects', the system will ask the agent to select the name of the project. For example, if the user selects 'Garden Residence', the system will list out all the properties available under the 'Garden Residence' Project.

Filter by Projects

Back

Choose Project

Select

Property ID: 860746
Name : Clover @ Garden Residence
Address : Garden Residence Cyberjaya 63100 Selangor
Built-up Size (ft) : 3800
Type : Semi-detached House
Room : 5+1
Bathroom : 6
Facilities : Jogging Track-Playground
Rental (RM) : 4000
Contact : 60193852202
Property ID: 290643
Name : Jacaranda Garden Residence
Address : Garden Residence 63100 Selangor
Built-up Size (ft) : 4541
Type : Bungalow
Room : 6
Bathroom : 6
Facilities : 24-Hours Security-Parking-BBQ-Club House-Gymnasium-Jogging Track-Playground-Swimming Pool
Rental (RM) : 8500

List of Facilities

If the agent chooses to list property by facilities, the user will be asked to select the type of facilities prepared according to the properties. For example, if ‘Parking’ is selected, the system will display all the properties that prepare parking spots.

Filter by Facility

Back

Choose Facility

Select

Select

- 24-Hours Security
- Parking
- Shuttle Bus
- BBQ
- Mini Market
- Gymnasium
- Jogging Track

Filter by Facility

Back

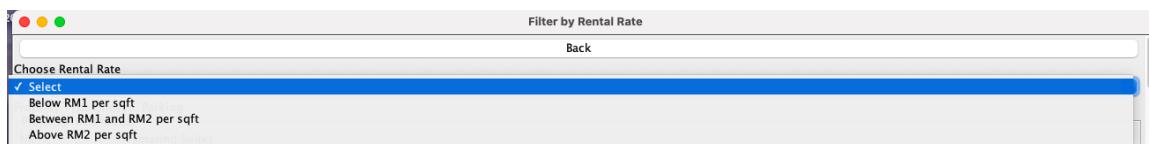
Choose Facility

Select

Facility chosen: Parking
Property ID: 399806
Name : Shumann Symphony Hills
Address : Persiaran Bestari Cyber 9 Cyberjaya 63000 Selangor
Built-up Size (ft) : 3132
Type : 3 Storey Terrace
Room : 5+1
Bathroom : 5
Facilities : 24-Hours Security-Parking-Shuttle Bus-BBQ-Mini Market-Gymnasium-Jogging Track-Playground-Swimming Pool-Sauna-Badminton Court
Rental (RM) : 3500
Contact : 60176284786
Property ID: 340898
Name : Tamarind Suites
Address : Persiaran Sepang Cyberjaya 63000 Selangor
Built-up Size (ft) : 403
Type : Condominium
Room : 1
Bathroom : 1
Facilities : 24-Hours Security-Parking-Shuttle Bus-BBQ-Club House-Mini Market-Gymnasium-Jogging Track-Playground-Swimming Pool-Wading Pool-Jacuzzi-Sauna-Salon

Sort by Rental Rate

When the agent selects to sort by rental rate, the system will ask the user to choose the rental rate for every square foot. For example, if the user chooses ‘above RM2 per sqft’, the system then will display all the properties available according to the wanted rate.



Choose Rental Rate

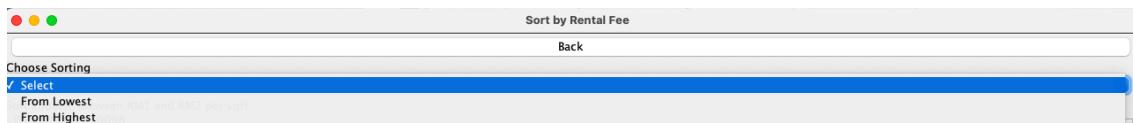
Property Type Chosen: Above RM2 per sqft

Property ID:	340898
Name	: Tamarind Suites
Address	: Persiaran Sepang Cyberjaya 63000 Selangor
Built-up Size (ft)	: 403
Type	: Condominium
Room	: 1
Bathroom	: 1
Facilities	: 24-Hours Security-Parking-Shuttle Bus-BBQ-Club House-Mini Market-Gymnasium-Jogging Track-Playground-Swimming Pool-Wading Pool-Jacuzzi-Sauna-Salon
Rental (RM)	: 1000
Contact	: 60175270006

Property ID:	409179
Name	: Kenwingston Square
Address	: Persiaran Bestari Cyberjaya 63000 Selangor
Built-up Size (ft)	: 450
Type	: Serviced Residence
Room	: 1
Bathroom	: 1

Sort by Rental Price

When the agent selects to sort by rental price, the system will ask the user to choose whether to sort the price from the lowest order (ascending order) or the highest order (descending order). For example, if the user chooses ‘From Lowest’, the system then will display all the properties available starting with the lowest price to the highest price.



Choose Sorting

Sort chosen: From Highest

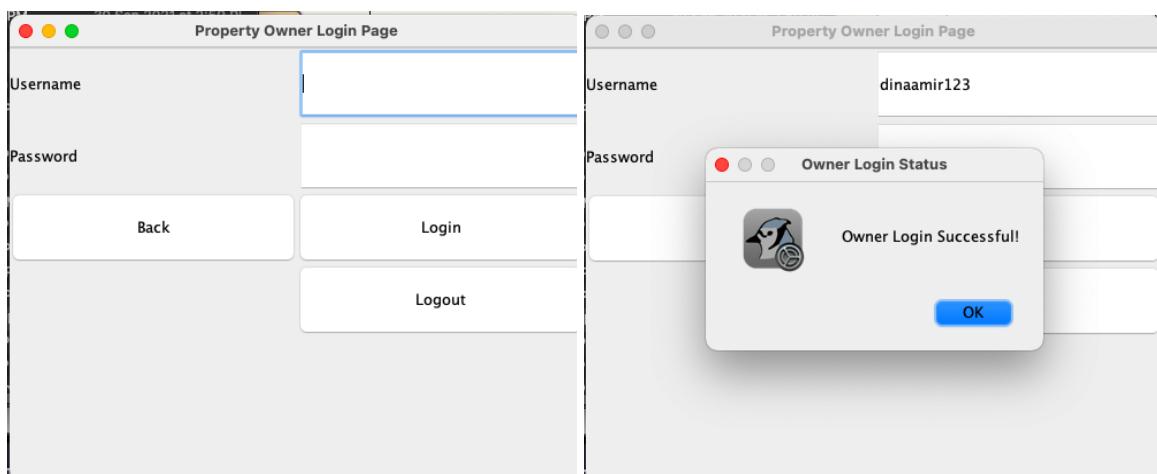
Property ID:	145141
Name	: Astonia II Sejati Residence
Address	: Persiaran Bestari Cyber 9 63000 Cyberjaya Selangor
Built-up Size (ft)	: 5950
Type	: Bungalow
Room	: 5+1
Bathroom	: 7
Facilities	: 24-Hours Security-Parking-Club House-Gymnasium-Jogging Track-Playground-Swimming Pool-Sauna
Rental (RM)	: 12000
Contact	: 60182626280

Property ID:	290643
Name	: Jacaranda Garden Residence
Address	: Garden Residence 63100 Selangor
Built-up Size (ft)	: 4541
Type	: Bungalow
Room	: 6
Bathroom	: 6
Facilities	: 24-Hours Security-Parking-BBQ-Club House-Gymnasium-Jogging Track-Playground-Swimming Pool

Property Owner

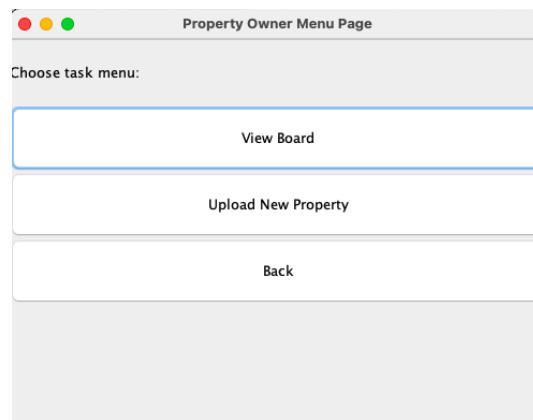
Property Owner Login Page

If the user is a registered property owner, the user can skip the registration process and click on the Login button in the Property Owner Profile Page and the system will direct the user to the Owner Login Page. In this page, the user must enter the registered username and password and the system will do the user validation at the back end. If the data match with the username and password entered, the user may successfully login into the system as a property owner.



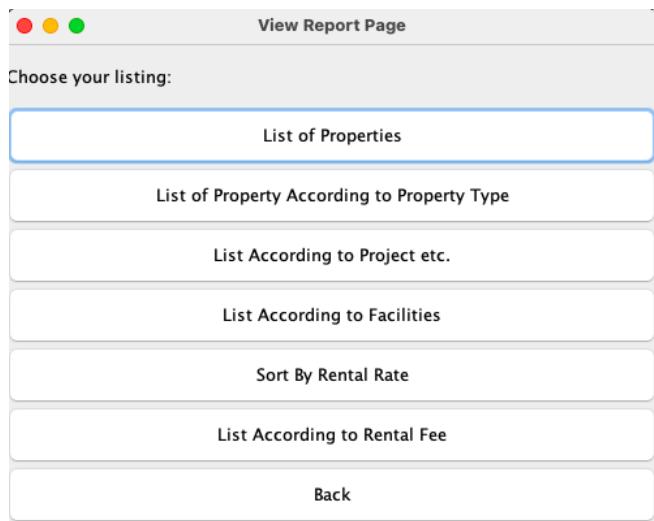
Property Owner Menu Page

After the property owner successfully logs in to their account, the system will direct the user to the Property Owner Menu Page.



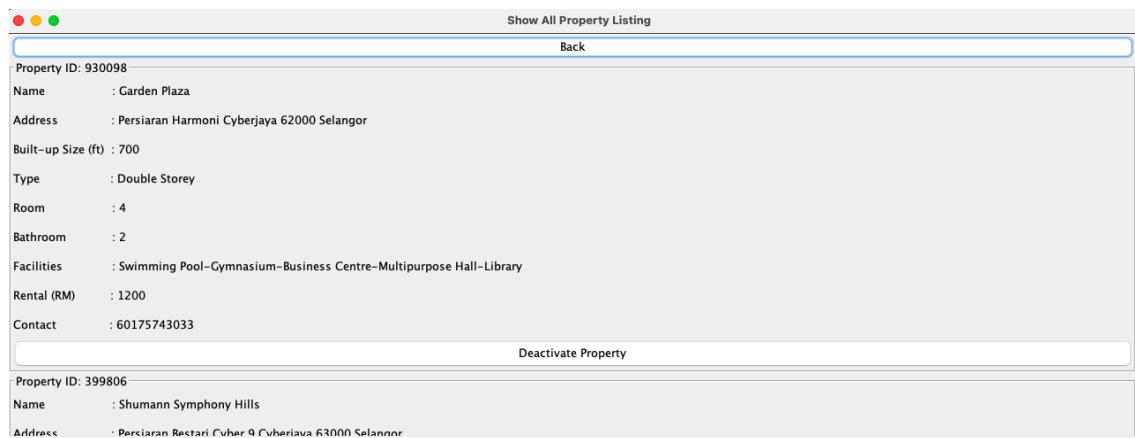
View Board Page

When the property owner clicks on the ‘View Report’ button from the Property Owner Menu Page, the system will direct the user to the View Report Page. In this page, the user can choose to list or sort the property list according to their own liking or need.



Search/List All Property Page

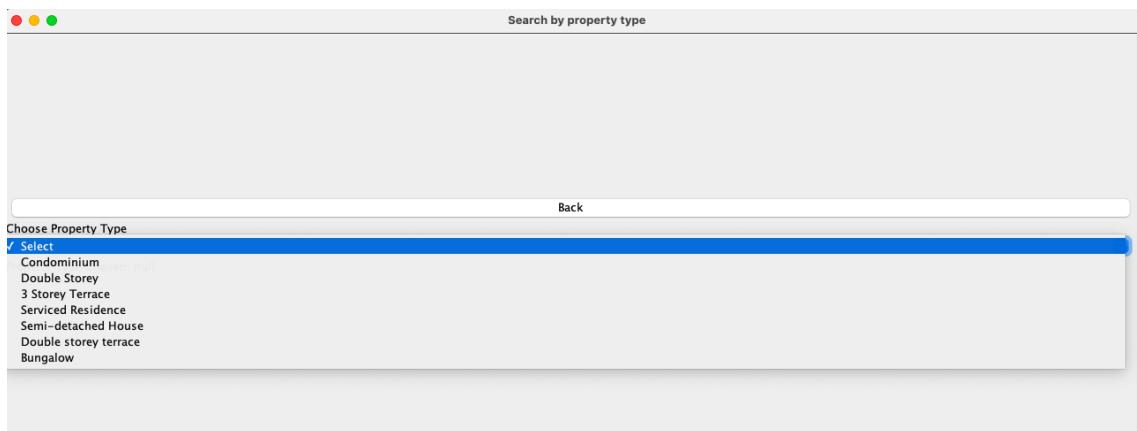
When the owner chooses the ‘Search Property’ button in the Menu Page, the system will direct the user to the Search Property Page.



List of Property according to Type or Category

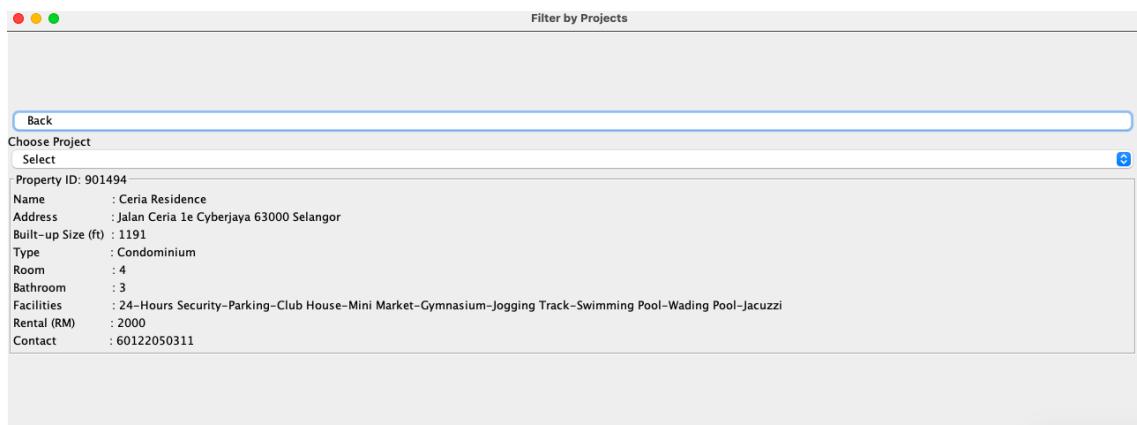
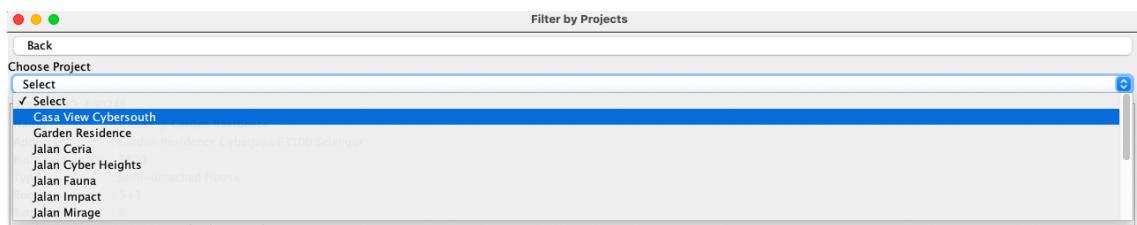
If the property owner chooses to list the property according to property type, the system then will ask to choose the type of property wanted. For example, if the owner chooses

Condominium as the property type wanted, the system will display the list of all condominiums available in the database.



List According to Projects

After the owner selects 'List by Projects', the system will ask to select the name of the project. For example, if the user selects 'Ceria Residence', the system will list out all the properties available under the 'Ceria Residence' Project.



List According to Facilities

If the owner chooses to list property by facilities, the user will be asked to select the type of facilities prepared according to the properties. For example, if ‘Gymnasium’ is selected, the system will display all the properties that prepare gymnasium as one of its facilities.

The screenshots illustrate the 'Filter by Facility' feature. The top screenshot shows a list of facilities available for selection. The bottom screenshot shows the results for 'Gymnasium' selected, displaying two properties: Shumann Symphony Hills (Property ID 930098) and Shumann Symphony Hills (Property ID 399806). Both properties are listed as having 'Gymnasium' as a facility.

List According to Rental Rate

When the owner selects to sort by rental rate, the system will ask user to choose the rental rate for every square foot. For example, if the user chooses ‘between RM1 and RM2 per sqft’, the system then will display all the properties available according to the wanted rate.

The screenshot illustrates the 'Filter by Rental Rate' feature. It shows a list of rental rate ranges for selection. The 'Between RM1 and RM2 per sqft' option is currently selected.

Filter by Rental Rate

Back

Choose Rental Rate

Select

Property Type Chosen: Between RM1 and RM2 per sqft

Property ID: 930098

Name	: Garden Plaza
Address	: Persiaran Harmoni Cyberjaya 62000 Selangor
Built-up Size (ft)	: 700
Type	: Double Storey
Room	: 4
Bathroom	: 2
Facilities	: Swimming Pool-Gymnasium-Business Centre-Multipurpose Hall-Library
Rental (RM)	: 1200
Contact	: 60175743033

Property ID: 399806

Name	: Shumann Symphony Hills
Address	: Persiaran Bestari Cyber 9 Cyberjaya 63000 Selangor
Built-up Size (ft)	: 3132
Type	: 3 Storey Terrace
Room	: 5+1
Bathroom	: 5

List According to Rental Fee/Price

When the agent selects to sort by rental price, the system will ask the user to choose whether to sort the price from the lowest order (ascending order) or the highest order (descending order). For example, if the user chooses ‘From Lowest’, the system then will display all the properties available starting with the lowest price to the highest price.

Sort by Rental Fee

Back

Choose Sorting

Select

From Lowest : Between RM1 and RM2 per sqft

From Highest

Sort by Rental Fee

Back

Choose Sorting

Select

Sort chosen: From Highest

Property ID: 145141

Name	: Astonia II Sejati Residence
Address	: Persiaran Bestari Cyber 9 63000 Cyberjaya Selangor
Built-up Size (ft)	: 5950
Type	: Bungalow
Room	: 5+1
Bathroom	: 7
Facilities	: 24-Hours Security-Parking-Club House-Gymnasium-Jogging Track-Playground-Swimming Pool-Sauna
Rental (RM)	: 12000
Contact	: 60182626280

Property ID: 290643

Name	: Jacaranda Garden Residence
Address	: Garden Residence 63100 Selangor
Built-up Size (ft)	: 4541
Type	: Bungalow
Room	: 6
Bathroom	: 6
Facilities	: 24-Hours Security-Parking-BBQ-Club House-Gymnasium-Jogging Track-Playground-Swimming Pool

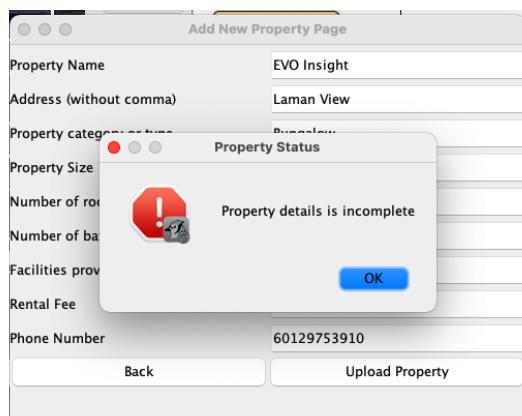
Add Property Page

When the property owner clicks on the ‘Add Property’ button in the Property Owner Menu Page, the system will direct the user to the Add New Property Page. In this page, the owner can fill in the new property details.

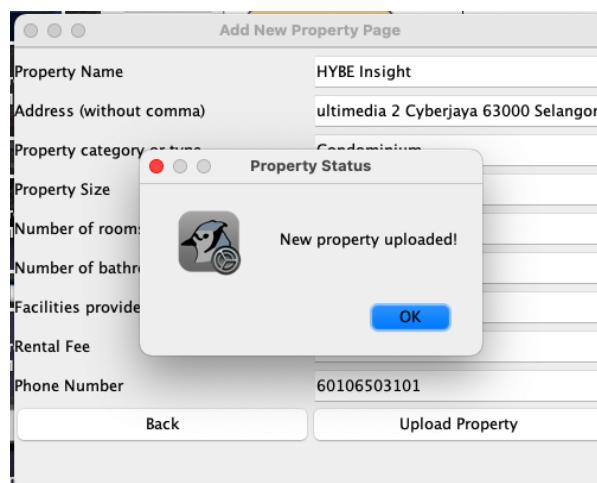
Add New Property Page

Property Name	<input type="text"/>
Address (without comma)	<input type="text"/>
Property category or type	<input type="text"/>
Property Size	<input type="text"/>
Number of rooms	<input type="text"/>
Number of bathrooms	<input type="text"/>
Facilities provided	<input type="text"/>
Rental Fee	<input type="text"/>
Phone Number	<input type="text"/>
<input type="button" value="Back"/> <input type="button" value="Upload Property"/>	

If some part of the details of the property are not filled, an error message will appear for the user to complete.



If the property owner fills the property details completely, a message will appear to notify the user that the new property is uploaded and saved in the database.



The new saved property is ready to be displayed in the ‘View Report’ section in the Owner Menu Page.

Property ID: 206755	
Name	: HYBE Insight
Address	: Persiaran Multimedia 2 Cyberjaya 63000 Selangor
Built-up Size (ft)	: 1360
Type	: Condominium
Room	: 7
Bathroom	: 3
Facilities	: Gymnasium
Rental (RM)	: 700
Contact	: 60106503101