JS Back-End Exam – Real Estate Agency

1. Application Overview

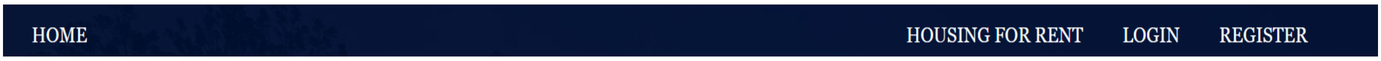
Get acquainted with the provided **HTML and CSS** and create an application for a **real estate agency**.

The visitors can **view** the **Home page** and **Housing for rent** catalog with available offers, they can also **register** with a **name**, **username**, and **password**, which will allow them to create their **own offers** for housing, **rent a home**(if the **current user** is **not** the **owner of the housing** offer and if there **are vacant housing**). Authors can edit or delete posts at any time.

2. Functional Requirements

Guest (not logged in)

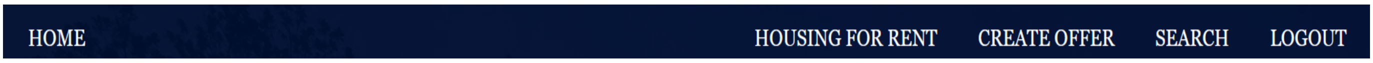
Guest navigation example:



The **application** should provide **Guest** (not logged in) users with the functionality to **login**, **register**, **view** the **Home** page, **Housing for rent** page and the **Details** page.

Users (logged in)

User navigation example:



The **application** should provide **Users** (logged in) with the functionality to:

- **View Home page and all other pages with logged-in navigation**
- **View Housing for rent**
- **Create a new housing offer [Create Offer]**
- **Access housing details page [Details]**
- **Renting a home (**if the **current user** is **not** the **owner of the housing** offer and if there **are vacant housing)**
- **Delete or Edit housing depending on user's authentication (only for owner of the current offer for housing)**

3. Database Models

The **Database** of the **Real Estate Agency** application needs to support **2 entities**:

User

- **Name - string (required),**
- **Username - string (required),**
- **Password - string (required)**

Housing

- **Name - string (required),**
- **Type - string ("Apartment", "Villa", "House") required,**
- **Year - number (required),**
- **City – string (required),**
- **Home Image - string (required),**
- **Property Description - string (required),**
- **Available pieces - number(required)**
- **Rented a home - a collection of Users (reference to the User model)**
- **Owner - object Id (reference to the User model)**

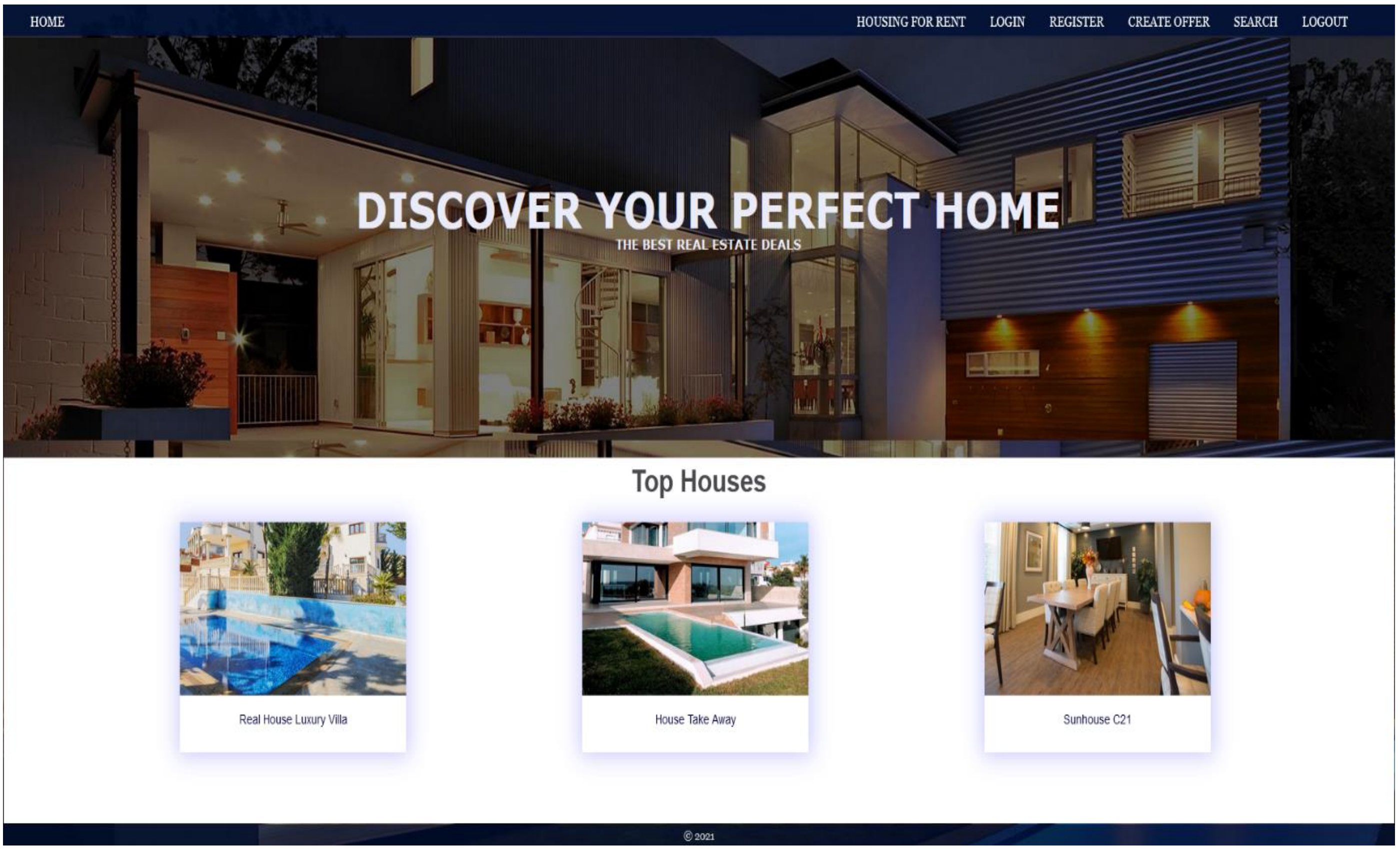
Note: When a user **rents a home**, their **id** is added to that collection (**Rented a home**)

Implement the entities with the **correct data types**.

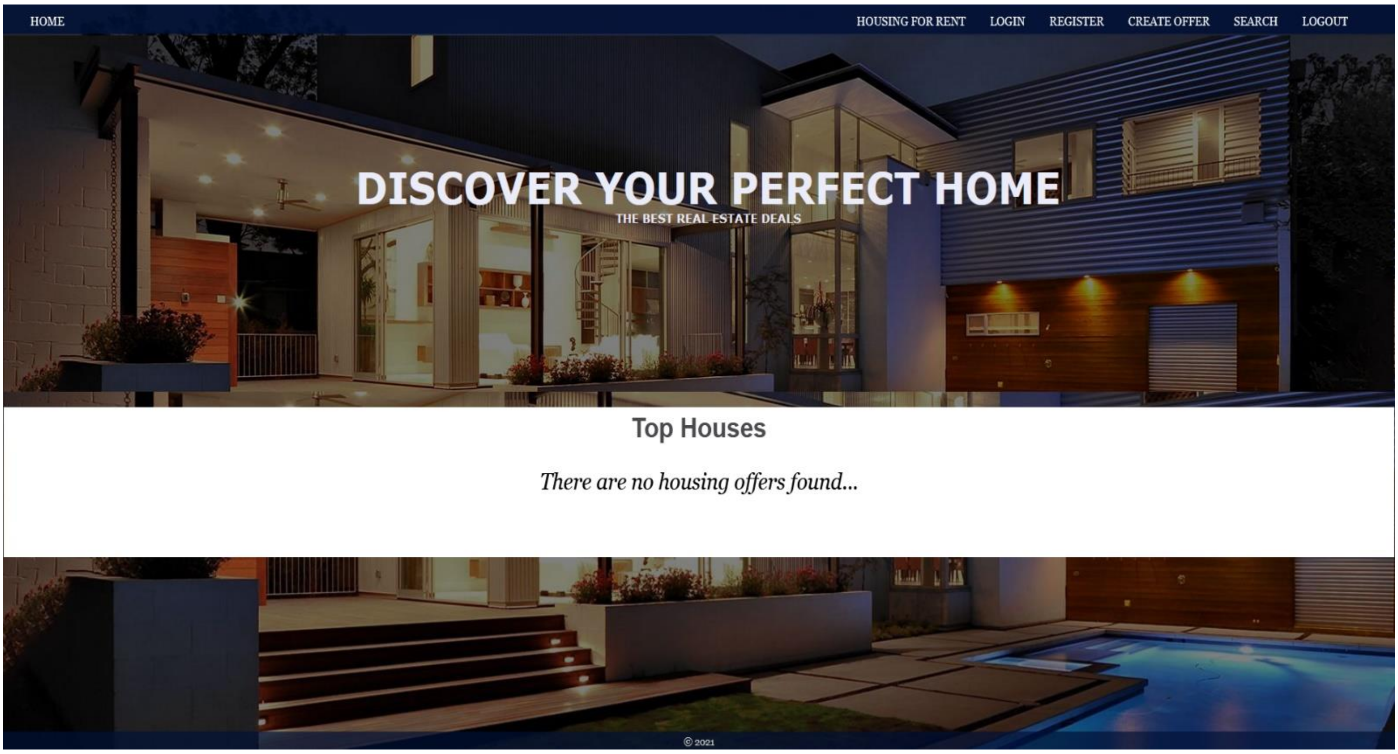
4. Application Pages (80 pts)

Home Page (For logged in users and logged-out users)

Visualize the **last 3 added housing offers**. Each offer must show information about the **home Image**, the **name**, as well as a page with **details** about the **specific housing** (the **[Detail] button** will be visible when the **mouse cursor** reaches the image of the **housing**).



If there are <u>**NO**</u> housing offers in the database yet, display **"`There are no housing offers found…`"**



DISCOVER YOUR PERFECT HOME

THE BEST REAL ESTATE DEALS

Top Houses

There are no housing offers found...

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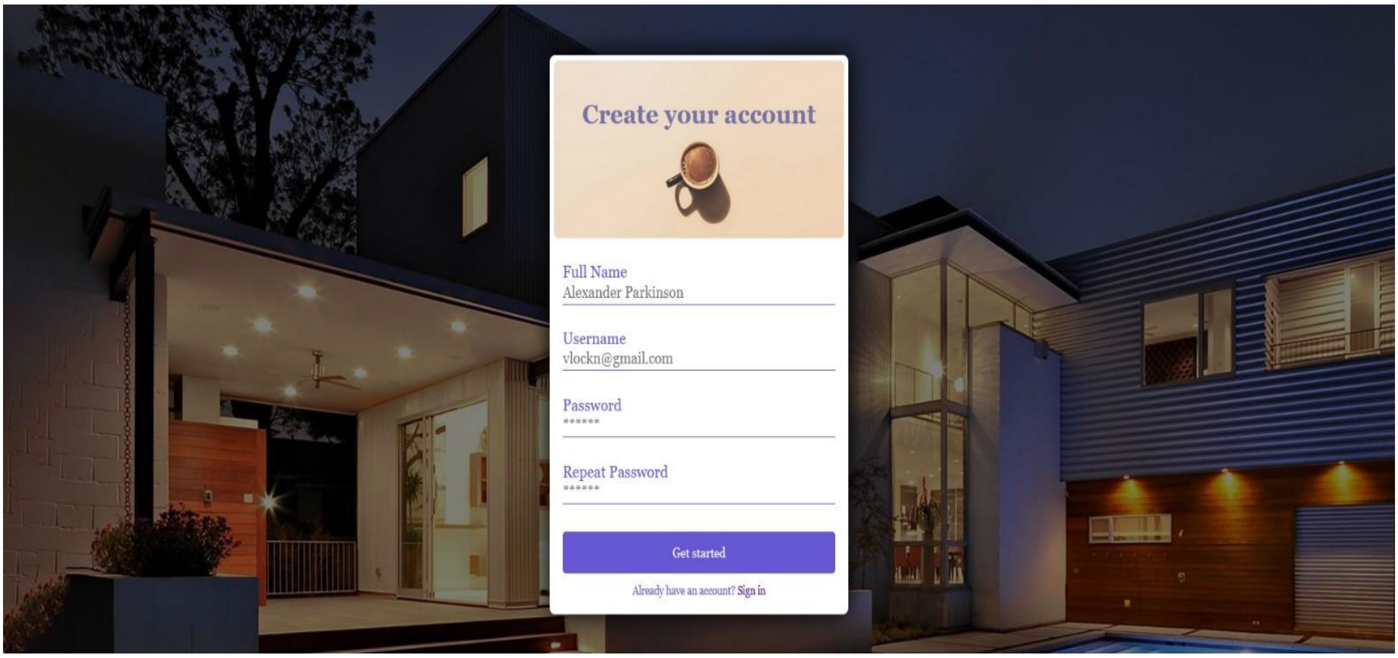
Register Page (Logged Out User)

Register a user inside the database with **name, username, and password**. **Password** inside the **database** must be hashed (**use bcrypt**) and both passwords **must match**! After successful registration, you should **redirect** to **Home page**.



Create your account

Full Name
Alexander Parkinson

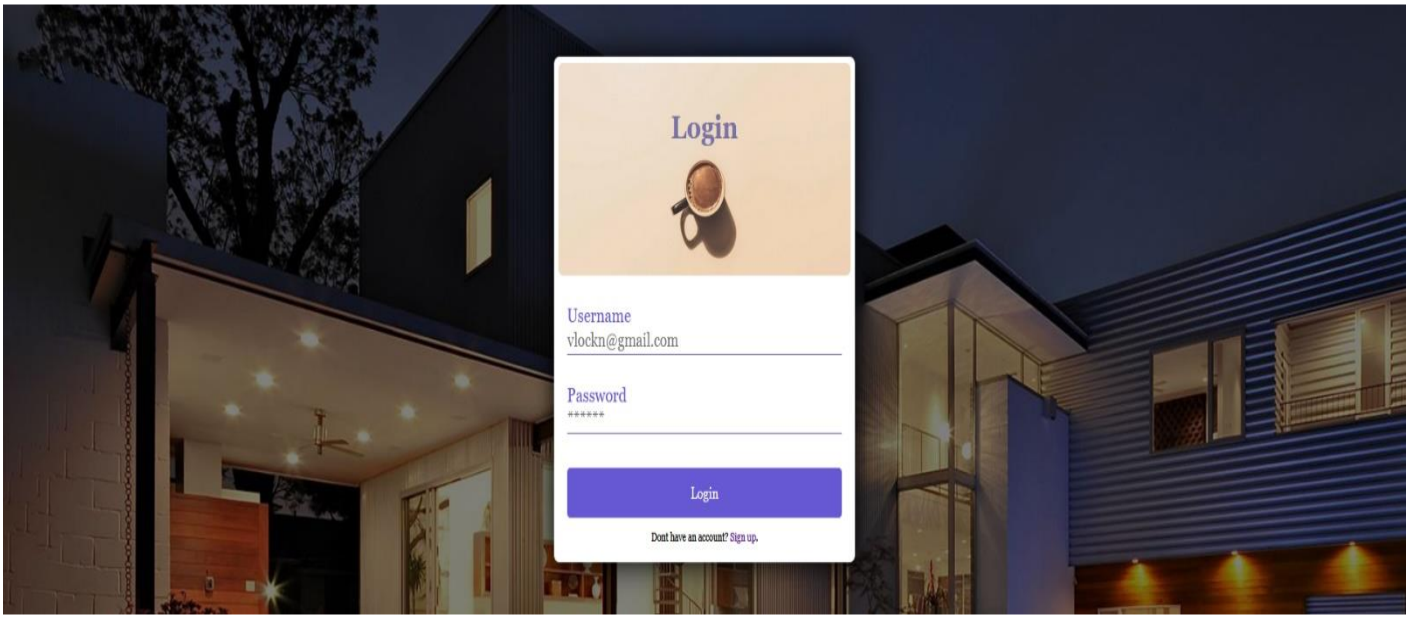
Username
vlockn@gmail.com

Password
******

Repeat Password
******

Login Page (Logged Out User) - (5 Pts)

Logging an already registered user with the correct **username** and **password**. After successful login, you should **redirect to Home page.**



Username
vlockn@gmail.com

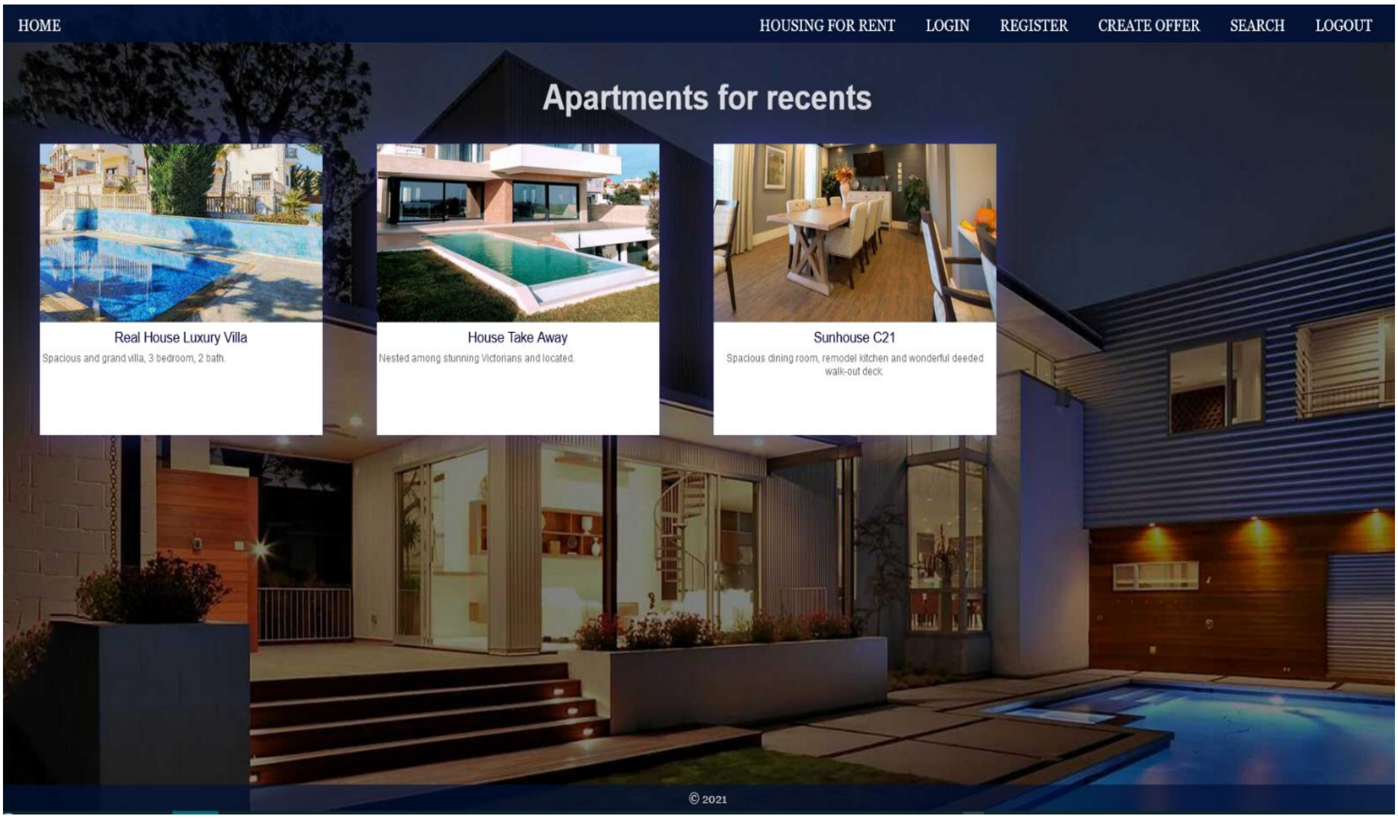
Password
******

Logout (logged in user)

The logout action is available to **logged-in** users. Upon success, clear any session information and **redirect** the user to **Home** page.

Housing for rent (For logged in users and logged out users)

List all housing offers. Each home must display information about the **home Image**, the **name**, the **description**, as well as a page with **details** about the **specific housing** (the **[Detail] button** will be visible when the **mouse cursor** reaches the image of the **housing**). As in the picture below:



Apartments for recents

Real House Luxury Villa
Spacious and grand villa, 3 bedroom, 2 bath.

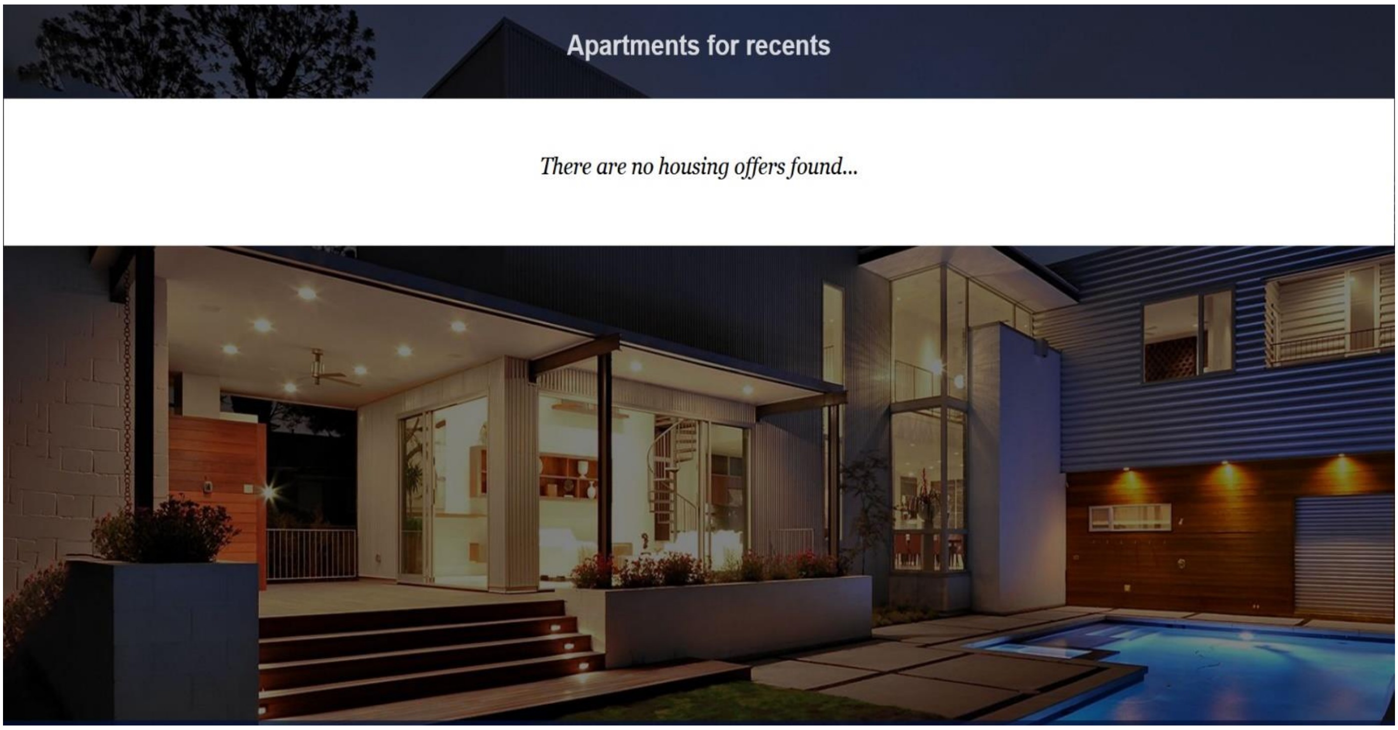
House Take Away
Nested among stunning Victorians and located.

Sunhouse C21
Spacious dining room, remodel kitchen and wonderful deeded walk-out deck.

© 2021

[**Details**] button should be a link to the **details page** for the current home.

If there are <u>**NO**</u> housing offers in the database yet, display **"`There are no housing offers found...`"**



There are no housing offers found...

Details Page - (for logged in users and logged out users)

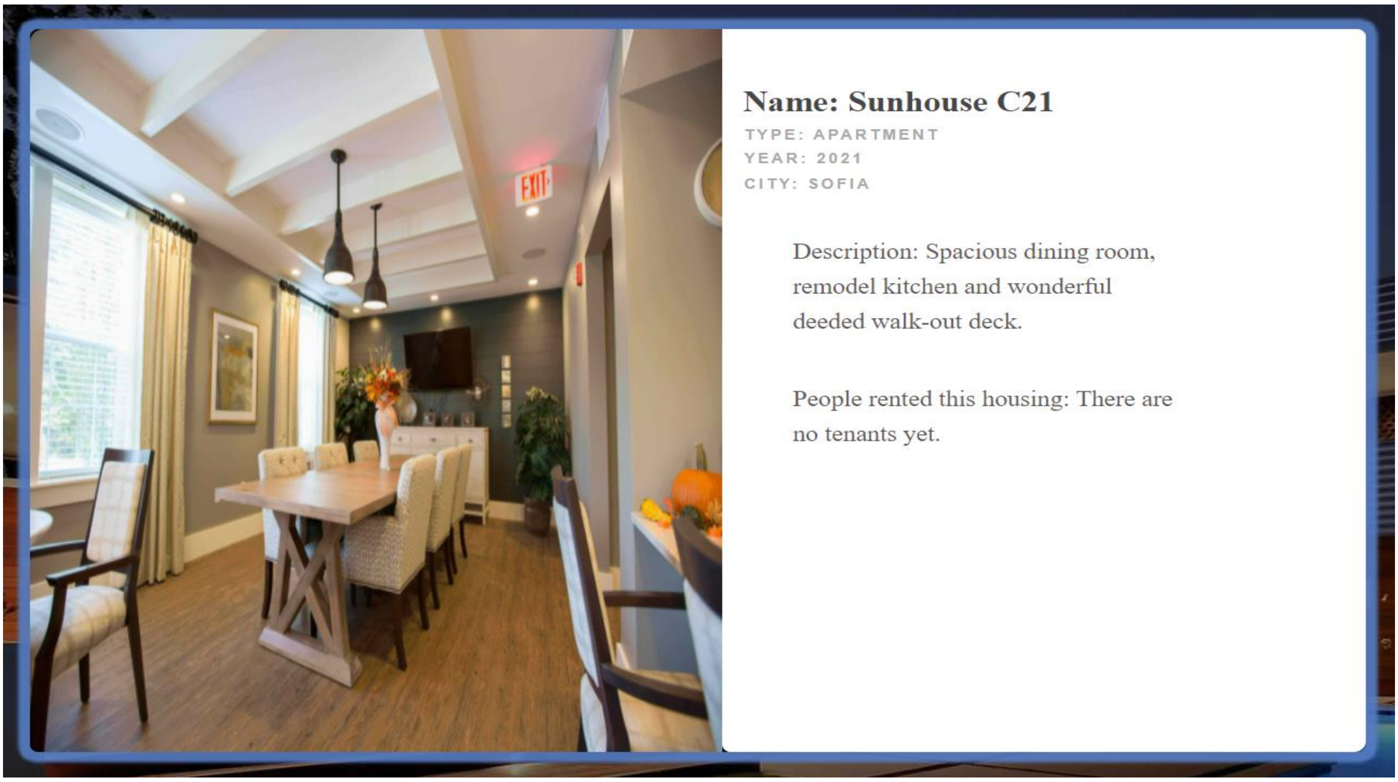
All users should be able **to see details** of the home. Clicking the **Details button** in the housing card should display the details page. If the currently registered user **is the creator** of the housing offer, the **Edit** and **Delete** buttons should be displayed, otherwise they **should not be available**.

Information about the housing:

- **Name**
- **Type**
- **Year**
- **City**
- **Home Image**
- **Description**
- **Available pieces**
- **People rented this housing**
  - If any, separate their names with **comma** and **space** ", "
  - If not, display **"There are no tenants yet.**
- **Buttons** (Depending the status of the currently logged in user)

Details Page (logged out users)

If there are **no logged** in user, **no buttons** should be displayed.



Name: Sunhouse C21

TYPE: APARTMENT

YEAR: 2021

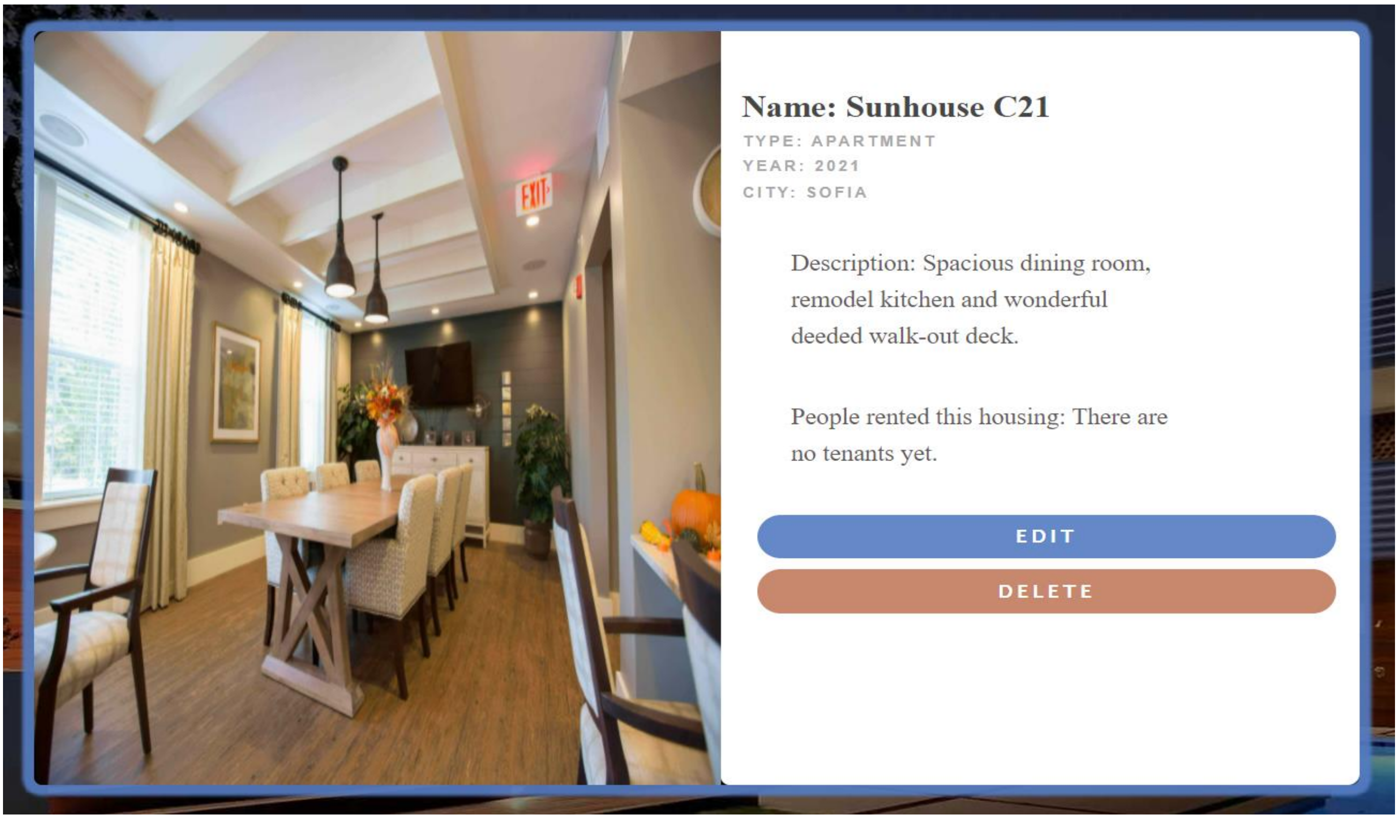
CITY: SOFIA

Description: Spacious dining room, remodel kitchen and wonderful deeded walk-out deck.

People rented this housing: There are no tenants yet.

Details Page (logged in user and creator of the current offer)

If the **currently logged-in** user is the **owner** (the user who **created the home offer**), he should see the **[Delete]** and **[Edit]** buttons.



Name: Sunhouse C21

TYPE: APARTMENT

YEAR: 2021

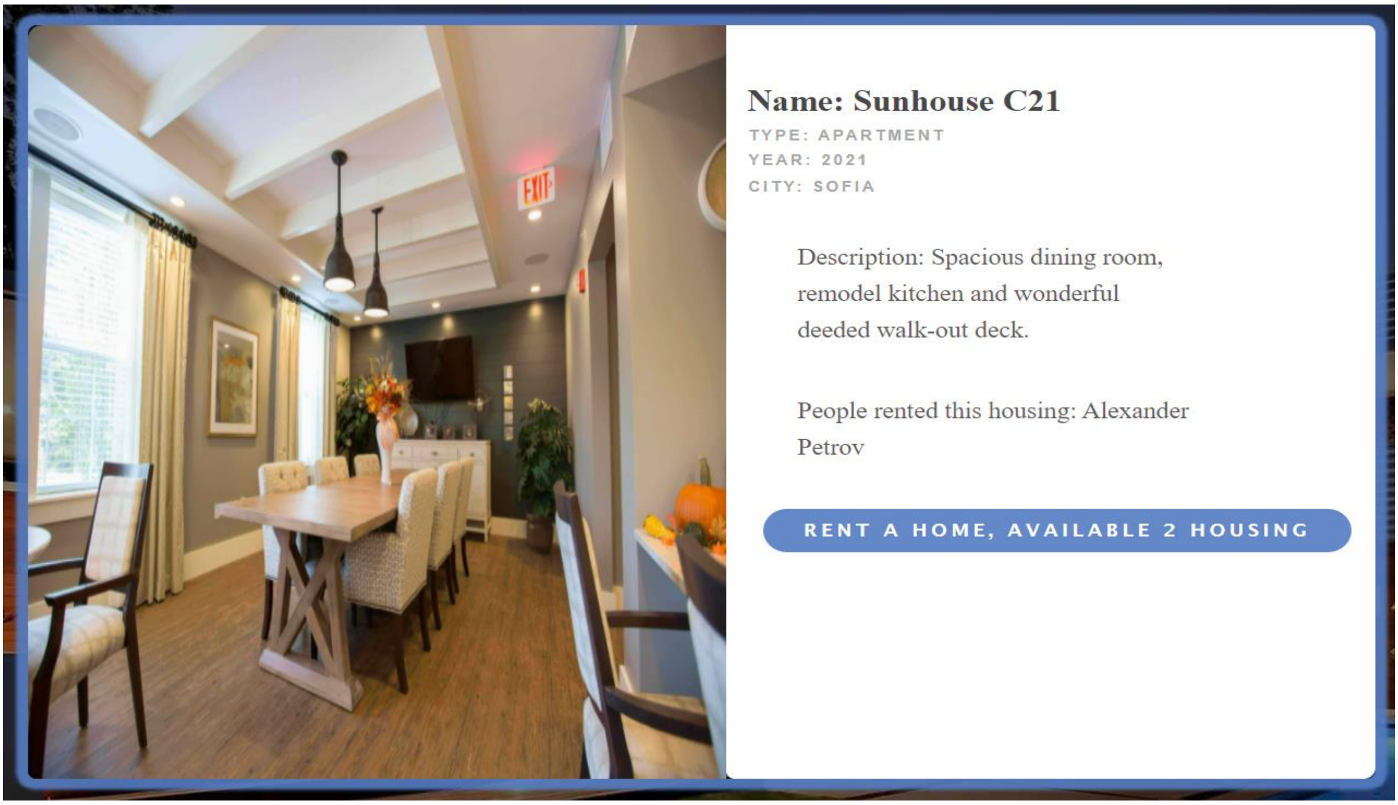
CITY: SOFIA

Description: Spacious dining room, remodel kitchen and wonderful deeded walk-out deck.

People rented this housing: There are no tenants yet.

Details Page (logged in user with available places)

If the currently logged in user is **not the owner** (a user who is not the creator of this housing offer) and has not rented that housing, he should see a button like [**Rent a home, available {available pieces} housing**]. If there is at least 1 place left.



Name: Sunhouse C21

TYPE: APARTMENT

YEAR: 2021

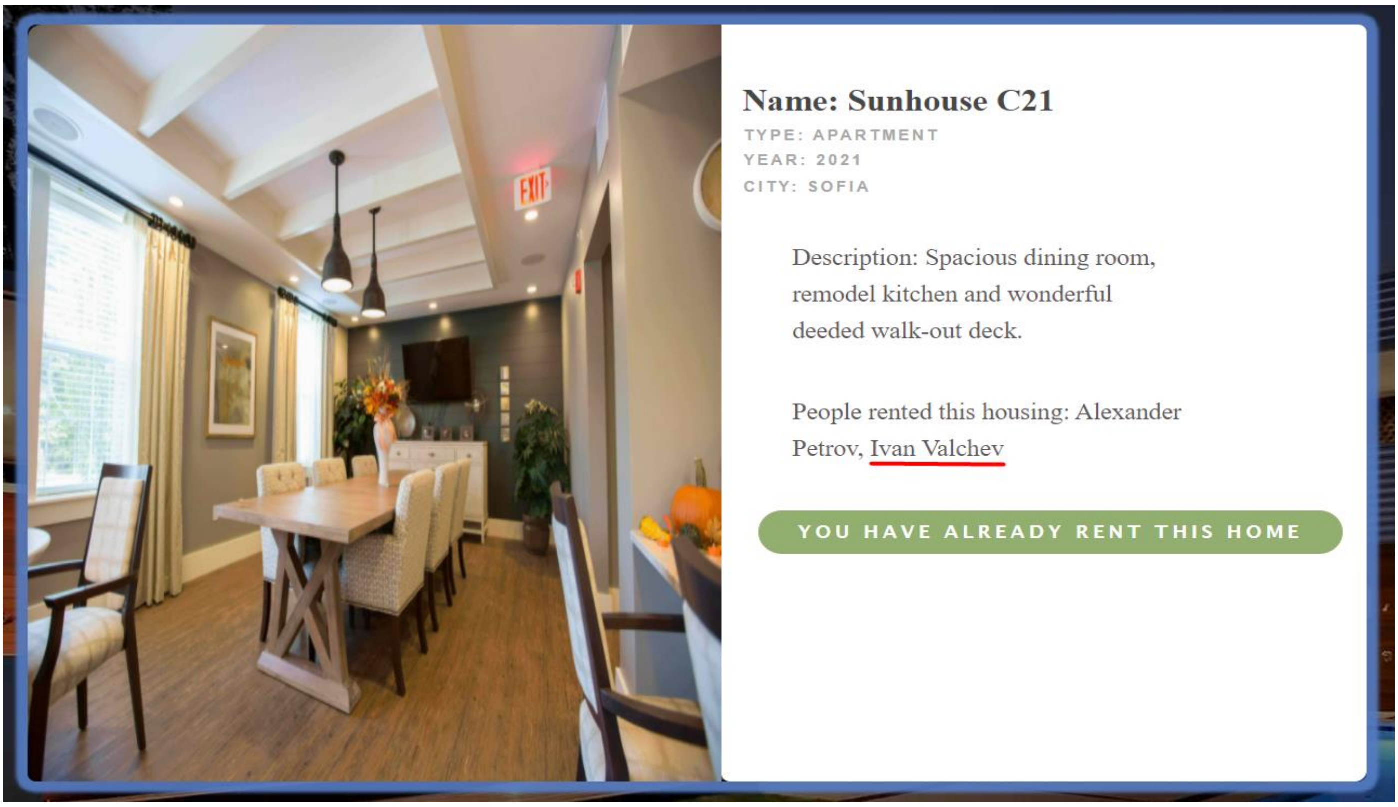
CITY: SOFIA

Description: Spacious dining room, remodel kitchen and wonderful deeded walk-out deck.

People rented this housing: Alexander Petrov

Details Page (logged in user already rented this housing)

If the currently logged in user **is not the owner** and has **already rented the current home**, he should see **[You have already rent this home].**



Name: Sunhouse C21

TYPE: APARTMENT

YEAR: 2021

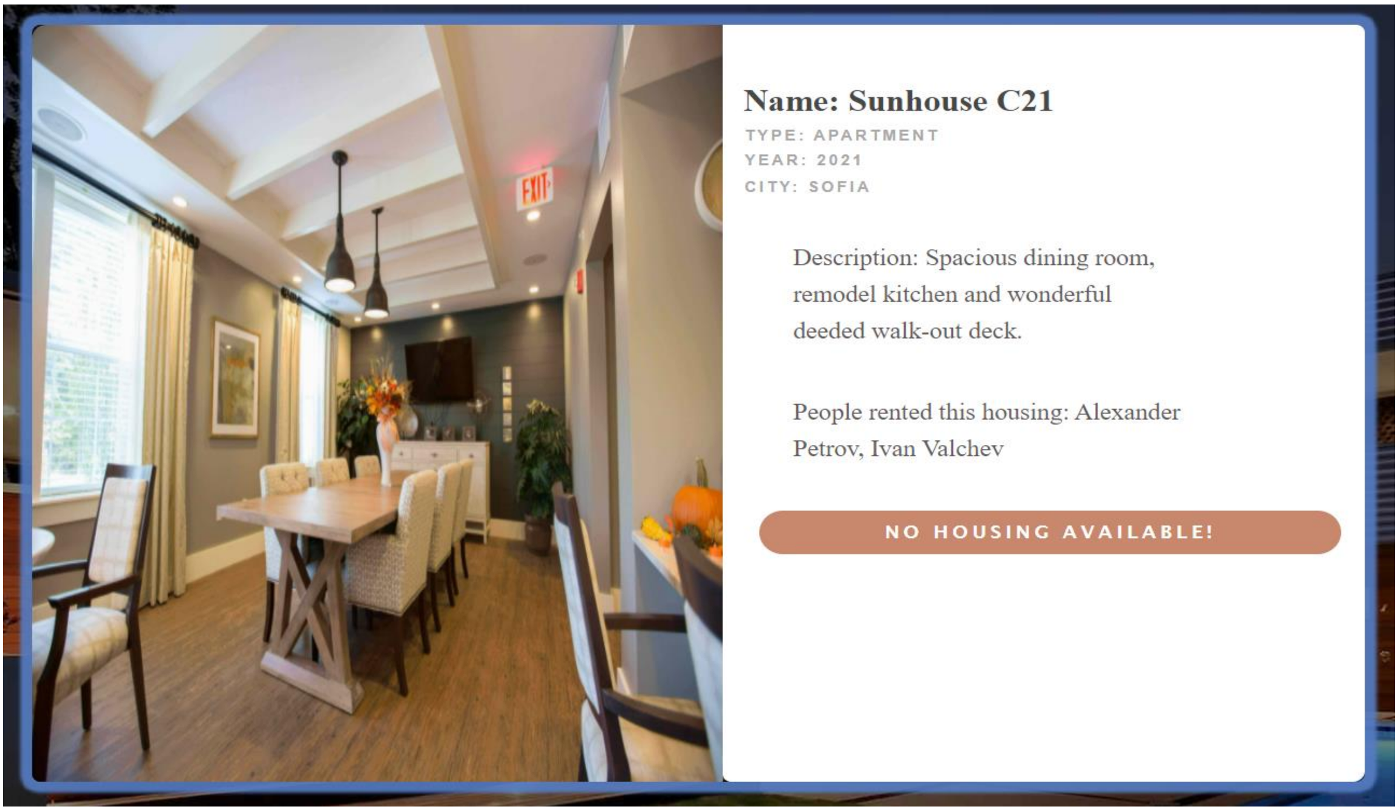
CITY: SOFIA

Description: Spacious dining room, remodel kitchen and wonderful deeded walk-out deck.

People rented this housing: Alexander Petrov, Ivan Valchev

Details Page (logged in user with no available pieces)

If the currently logged-in user is not **the owner** and there are **no available pieces** for rent housing, he should see the [**No Housing Available!**].



Name: Sunhouse C21

TYPE: APARTMENT

YEAR: 2021

CITY: SOFIA

Description: Spacious dining room, remodel kitchen and wonderful deeded walk-out deck.

People rented this housing: Alexander Petrov, Ivan Valchev

Rent Housing (logged in user which is not the current housing owner)

Any registered user who is **not** the current **owner** of the housing offer must be able **to rent a home** (if any).

If he manages to **rent successfully** the housing, his **userId** must be added to the collection of **Rented a home**, and the available pieces should be **reduced by 1** and **redirect** the user to the **Details** page for the current **housing offer**.

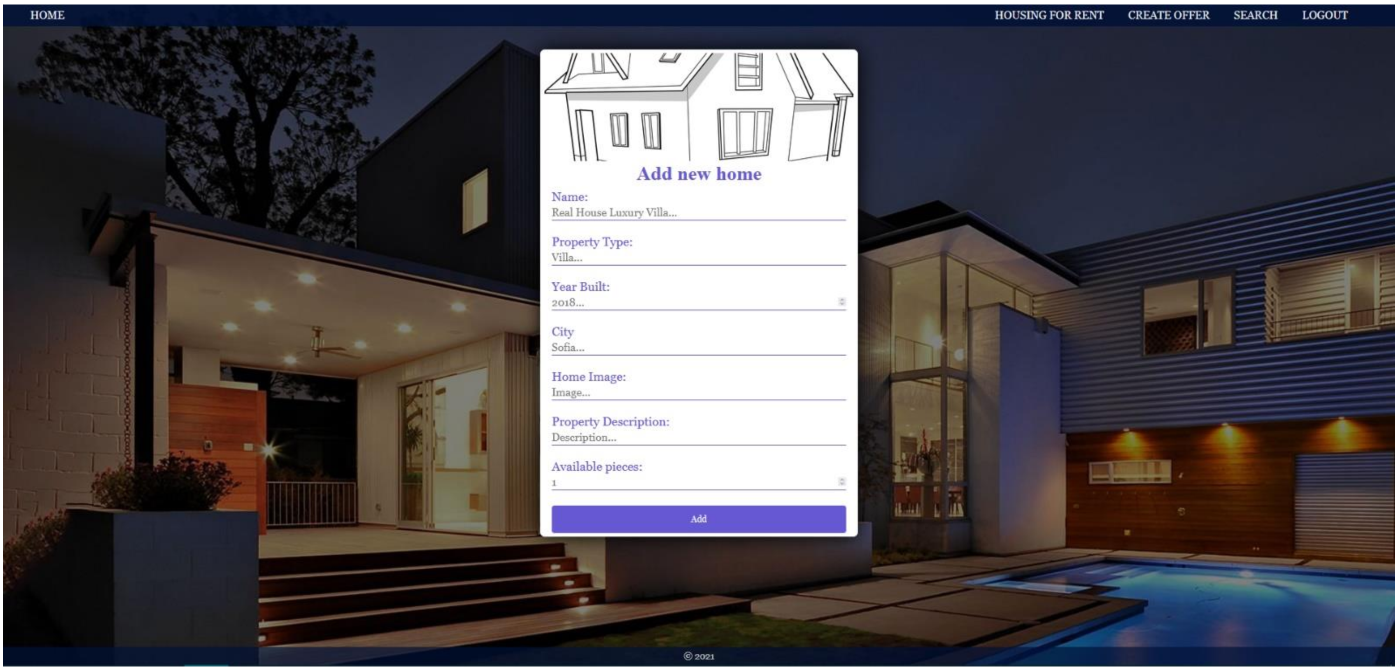
Then in the list-**People have rented this apartment**, the names of the tenants should be displayed, and the available pieces for the apartment should be reduced by 1 and redirect the user to the page with **details** of the **housing offer**.

If a user has once rented a current home, he should see "**You have already rent this home**" and in the list-**People have rented this apartment**, his name should be displayed.

If there are **no available pieces** for rent housing, he should see the "**No Housing Available!**".

Create Offer (Logged in User)

The **Create Offer** page is available to **logged-in users**. It contains a form for adding new home. Upon success, **redirect** the user to the **Housing for rent** page.



Add new home

Name: Real House Luxury Villa...

Property Type: Villa...

Year Built: 2018...

City Sofia...

Home Image: Image...

Property Description: Description...

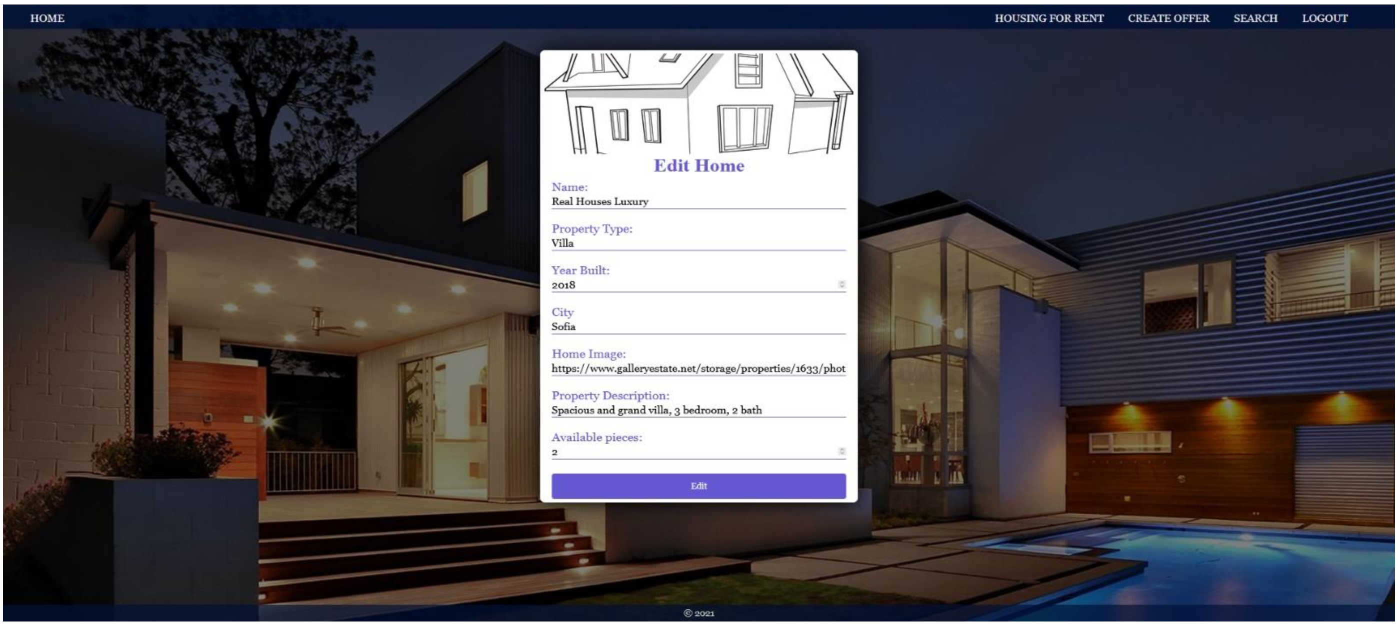
Available pieces: 1

Delete Home (logged in user and owner of the current offer for home)

Each **owner** of the housing offer must be able to click on the **[Delete]** button and **delete the current home** from the database and the user must be redirected to the **Housing for rent** page.

Edit Home (logged in user and owner of the current offer for home)

Each **owner** can edit their **housing offer**. Clicking the **[Edit]** button for a specific home on the details page should display the **Edit page**, all fields being populated with housing data. It contains a form with input fields for all relevant properties. If successful, redirect the user to the **current housing details page**.



Edit Home

Name: Real Houses Luxury

Property Type: Villa

Year Built: 2018

City Sofia

Home Image: https://www.galleryestate.net/storage/properties/1633/phot

Property Description: Spacious and grand villa, 3 bedroom, 2 bath

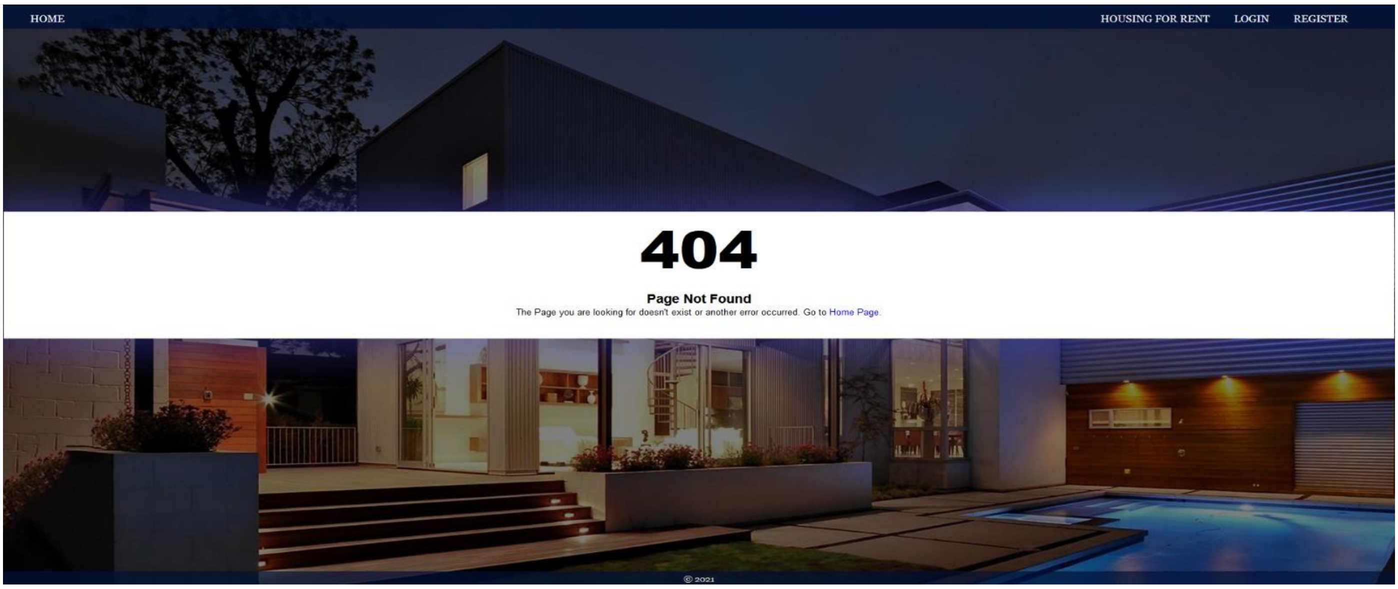
Available pieces: 2

5. Security Requirements (Routes Guards) - (10 Pts)

The **Security Requirements** are mainly **access** requirements. Configurations about which users can access specific functionalities and pages.

- **Guest** (not logged in) users can access **Home** page.
- **Guest** (not logged in) users can access **Login** page and functionality.
- **Guest** (not logged in) users can access **Register** page and functionality.
- **Guest** (not logged in) and **Users** (logged in) can access **Housing for rent page (Listed all homes)**.
- **Guest** (not logged in) can access the **Details** page without functionality.
- **Users** (logged in) can access **Home** page.
- **Users** (logged in) can access **Details** page and functionality.
  - **Users** (not home offer owner) can **Rent a house**.
  - **Users** (home offer owner) can **Edit** and **Delete** the current home
- **Users** (logged in) can access **Create Offer** page and functionality.
- **Users** (logged in) can access **Logout** functionality.

Use the following view for **invalid paths**:



404

Page Not Found

The Page you are looking for doesn't exist or another error occurred. Go to Home Page.

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6. Validation and Error Handling (10 Pts)

The application should **notify** the users about result of their actions.

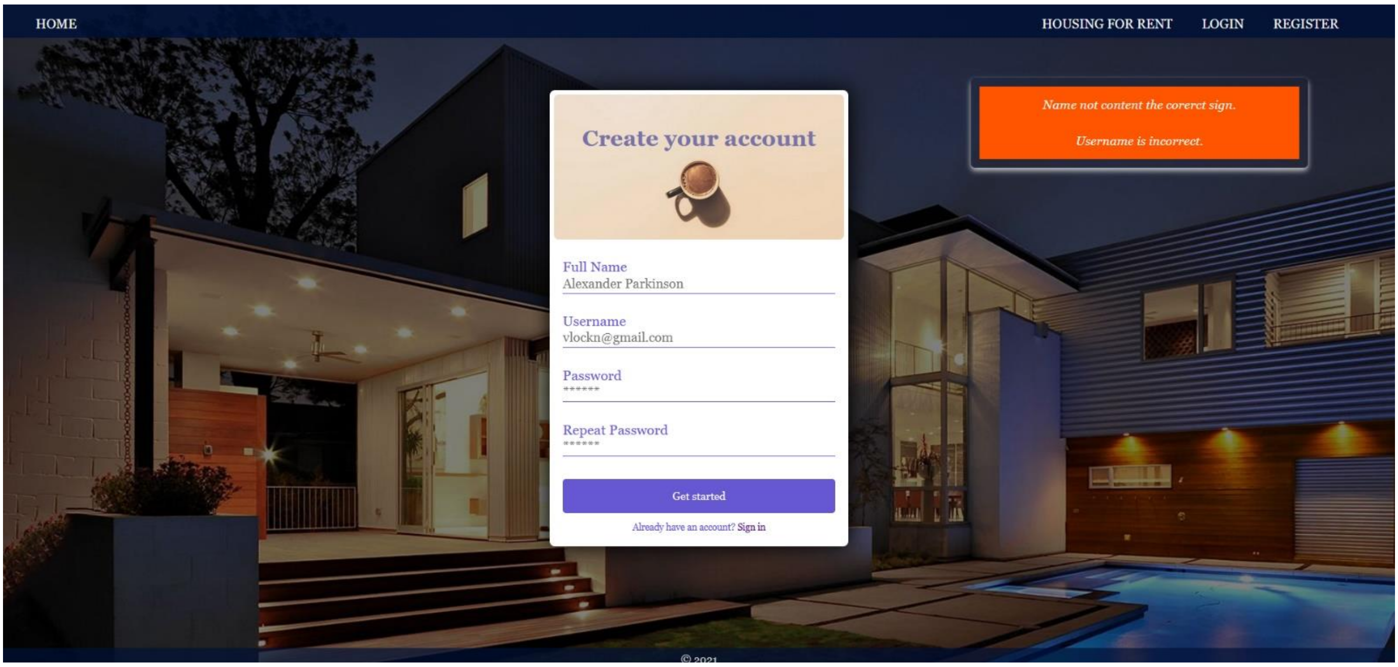
In case of error, you should display div with class "**errorContainer**"

You can choose to display the first error or all of them. You have complete freedom to choose the content of the error message you will display.

Login / Register

You should make the following validations:

- The **name** should be **in the following format ->** (firstname lastname) - "**Alexandur Petrov**"
- The **username** should be **at least 5 characters** long
- The **password** should be **at least 4 characters** long
- The **repeat password** should be **equal to the password**



Name not content the corerct sign.

Username is incorrect.

Create your account

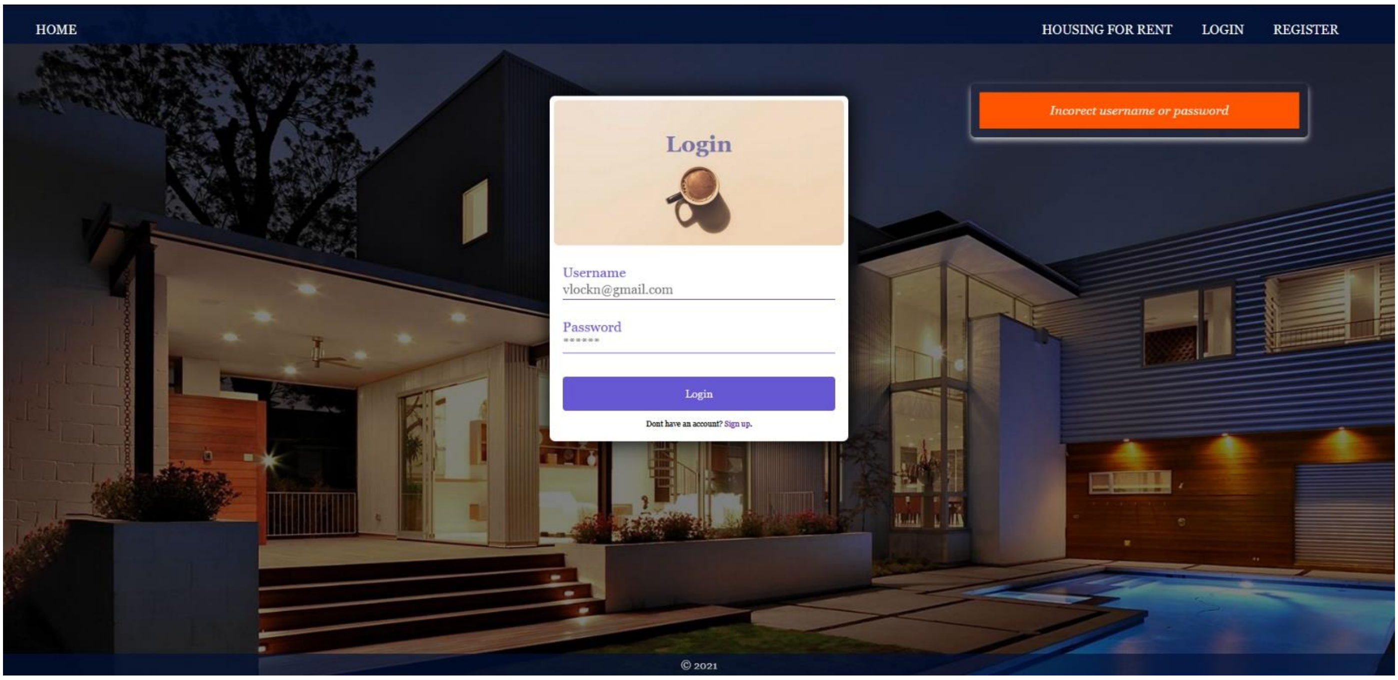
Full Name
Alexander Parkinson

Username
vlockn@gmail.com

Password
******

Repeat Password
******

Already have an account? Sign in



Incorrect username or password

Login

Username
vlockn@gmail.com

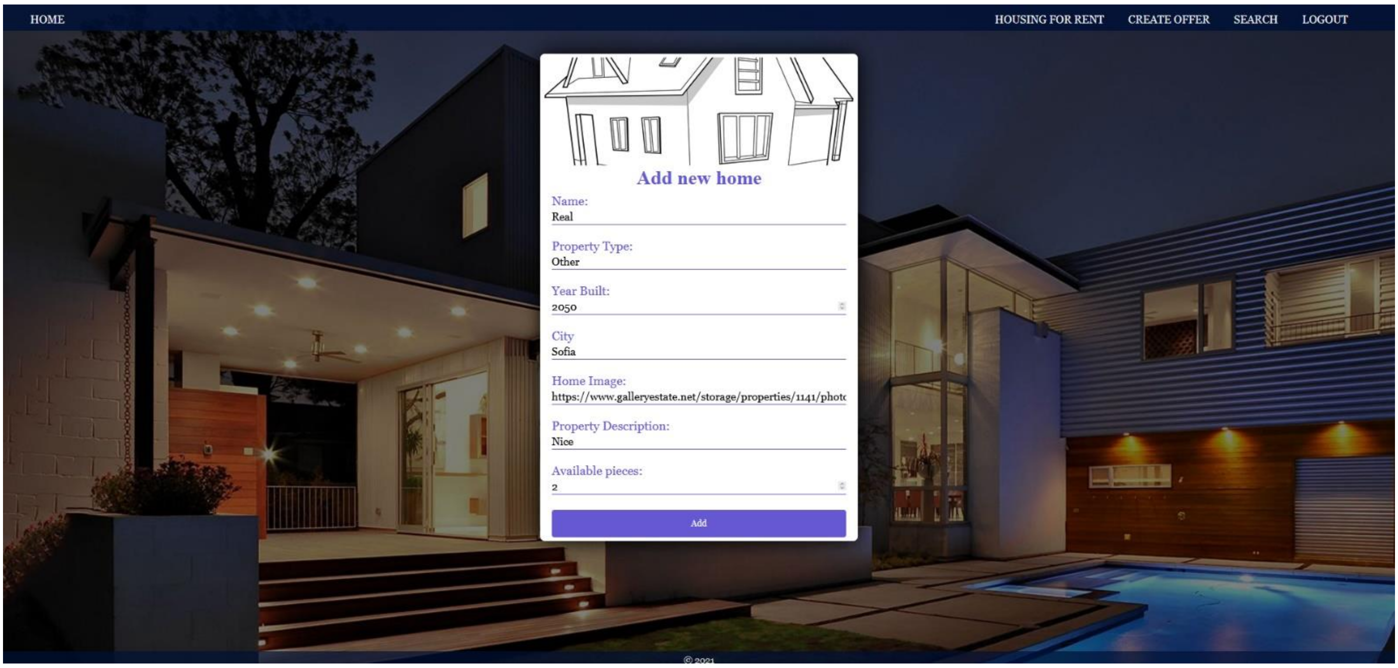
Password
******

Dont have an account? Sign up.

Housing

You should make the following validations while **creating** or **editing a home**:

- The **Name** should be **at least 6 characters**
- The **Year** should be between **1850 and 2021**
- The **City** should be **at least 4 characters** long
- The **Home Image** should starts with **http:// or https://**.
- The **Property Description** should be a maximum of **60 characters** long.
- The **Available Pieces** should be positive number **(from 0 to 10)**



Add new home

Name: Real

Property Type: Other

Year Built: 2050

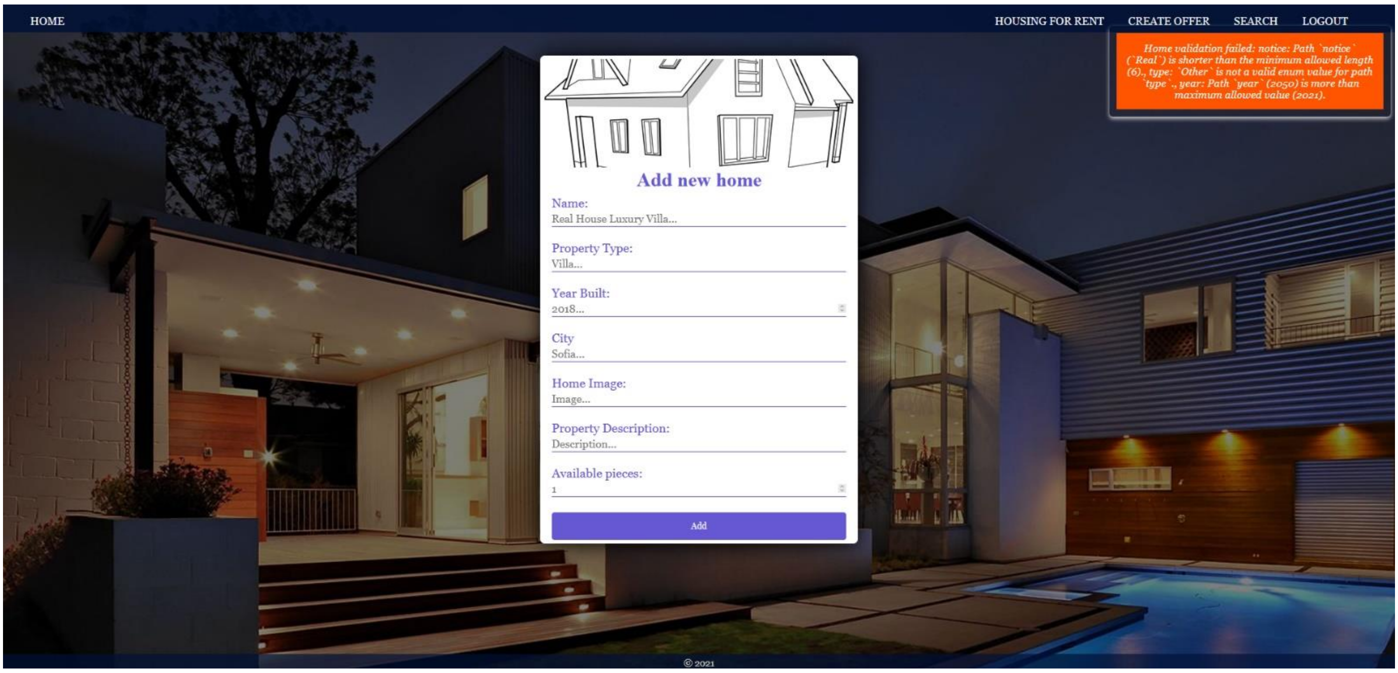
City Sofia

Home Image: https://www.galleryestate.net/storage/properties/1141/photc

Property Description: Nice

Available pieces: 2

Add



Home validation failed: notice: Path `notice` (`Real`) is shorter than the minimum allowed length (6)., type: `Other` is not a valid enum value for path `type`., year: Path `year` (2050) is more than maximum allowed value (2021).

Add new home

Name: Real House Luxury Villa...

Property Type: Villa...

Year Built: 2018...

City Sofia...

Home Image: Image...

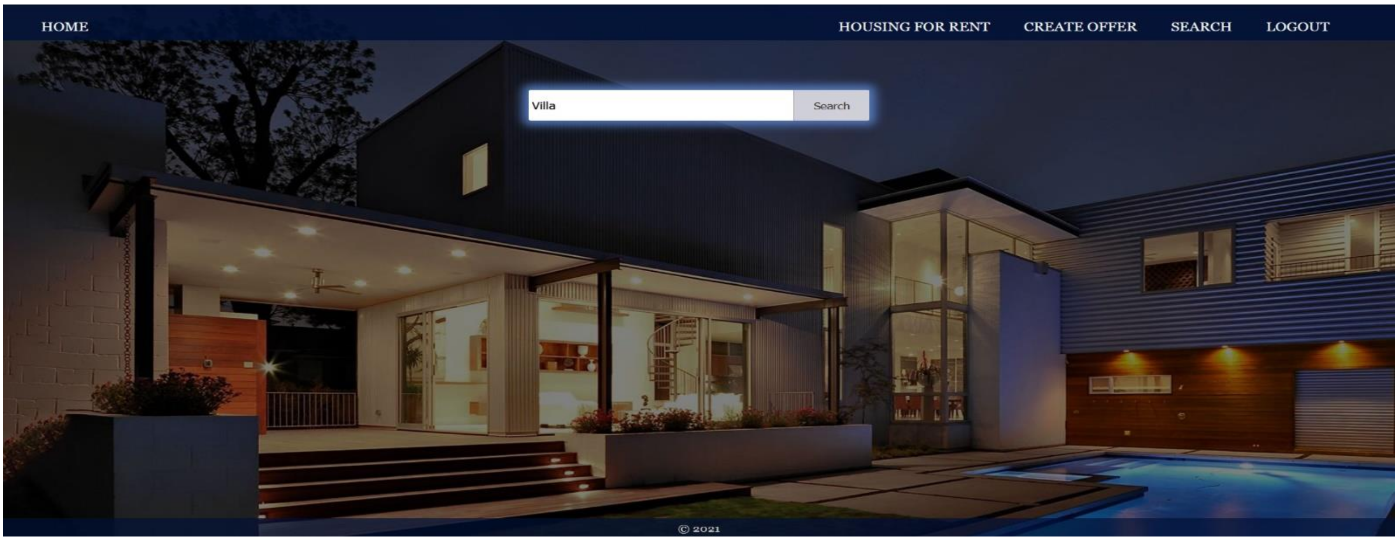
Property Description: Description...

Available pieces: 1

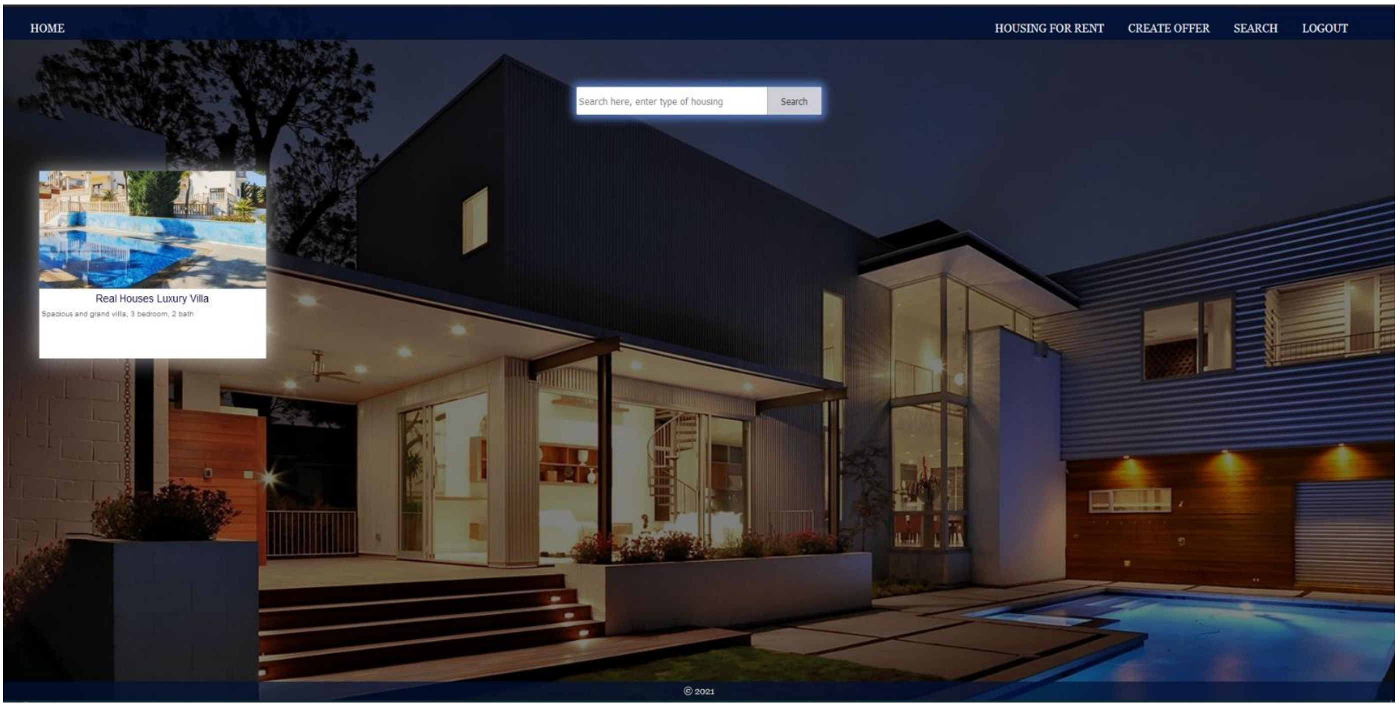
Add

* Bonus – Search (10 Pts)

Search **for housing**. Filter all **matches** by **housing type**, which includes a **search string** (case insensitive).



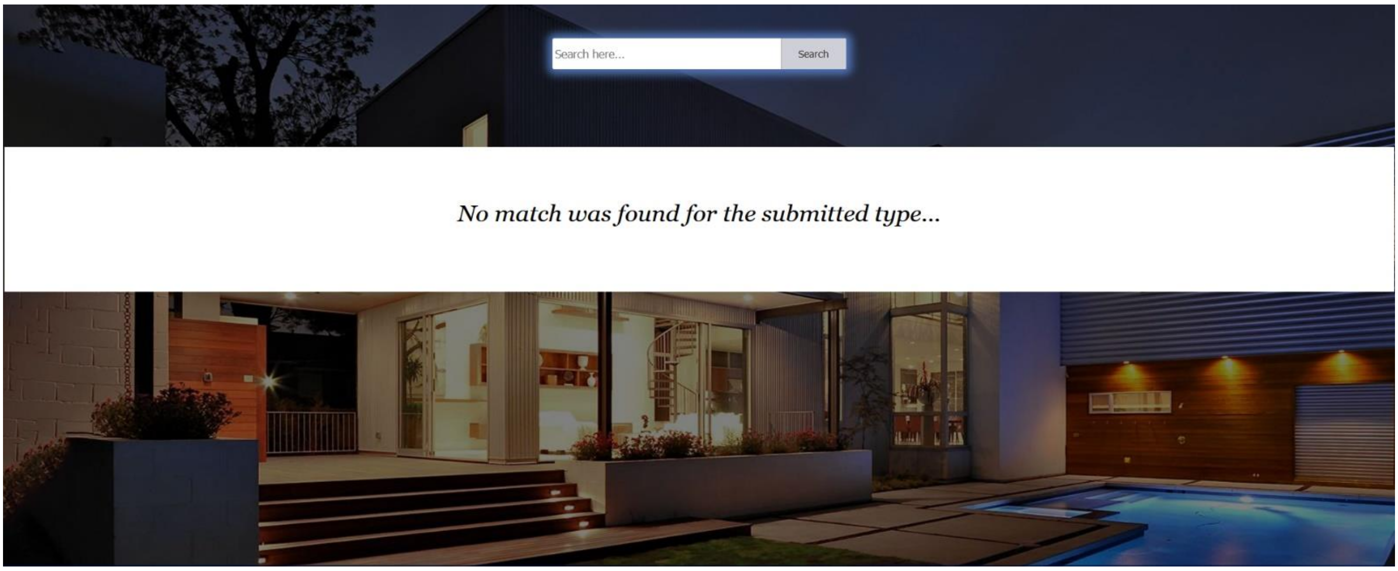
After click on **[Search]** button and If there are any matching matches from the search, show each of them.



Real Houses Luxury Villa

Spacious and grand villa, 3 bedroom, 2 bath

If there are **no** search matches, display:



No match was found for the submitted type...

GOOD LUCK! 😊