

DBMS - Fall 2023 (Final Project)

Website for a Real Estate Agency

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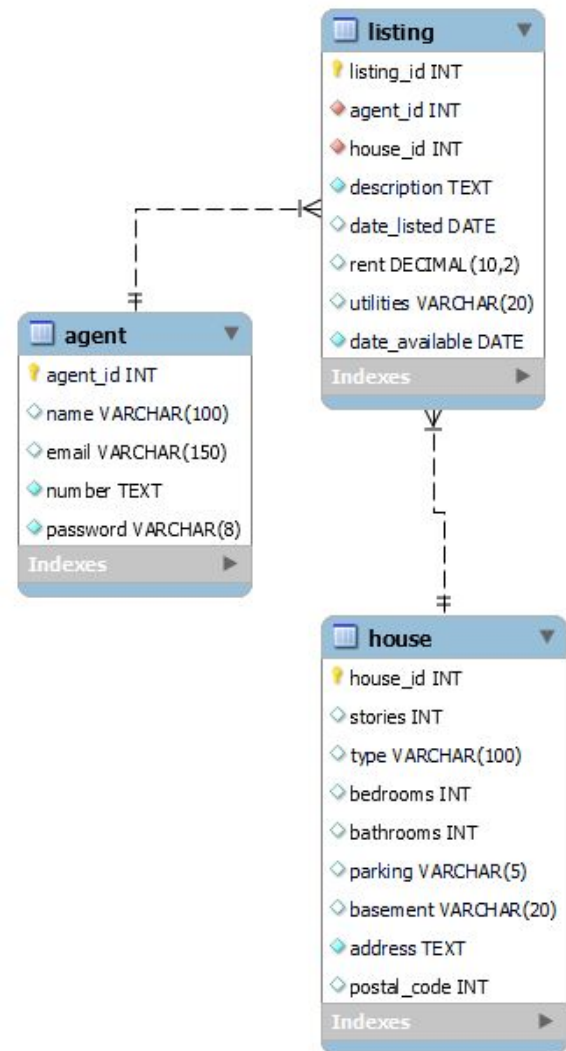


Main Purpose

The intention of this project is to create a website for a real estate agency that allows the agents under that agency to access and manipulate their current house listings

DB Schema & Server Side Error-handling

- The creation of these tables was done with the appropriate constraints added and tailored for each attribute where it's needed
- This ensured server-side error handling





Main Functionalities (CRUD)

The main functionalities of this project are comprised of the following:

The real estate agent with a unique agent ID will be able to

- Login
- View the listings (associated with their specific agent ID)
- Search those listings
- Update these listings
- Add to these listings
- Delete from these listings


Login Page

Sign in

localhost:3000/login

localhost:3000/login

Welcome to ANA Real Estate Agents' Portal!



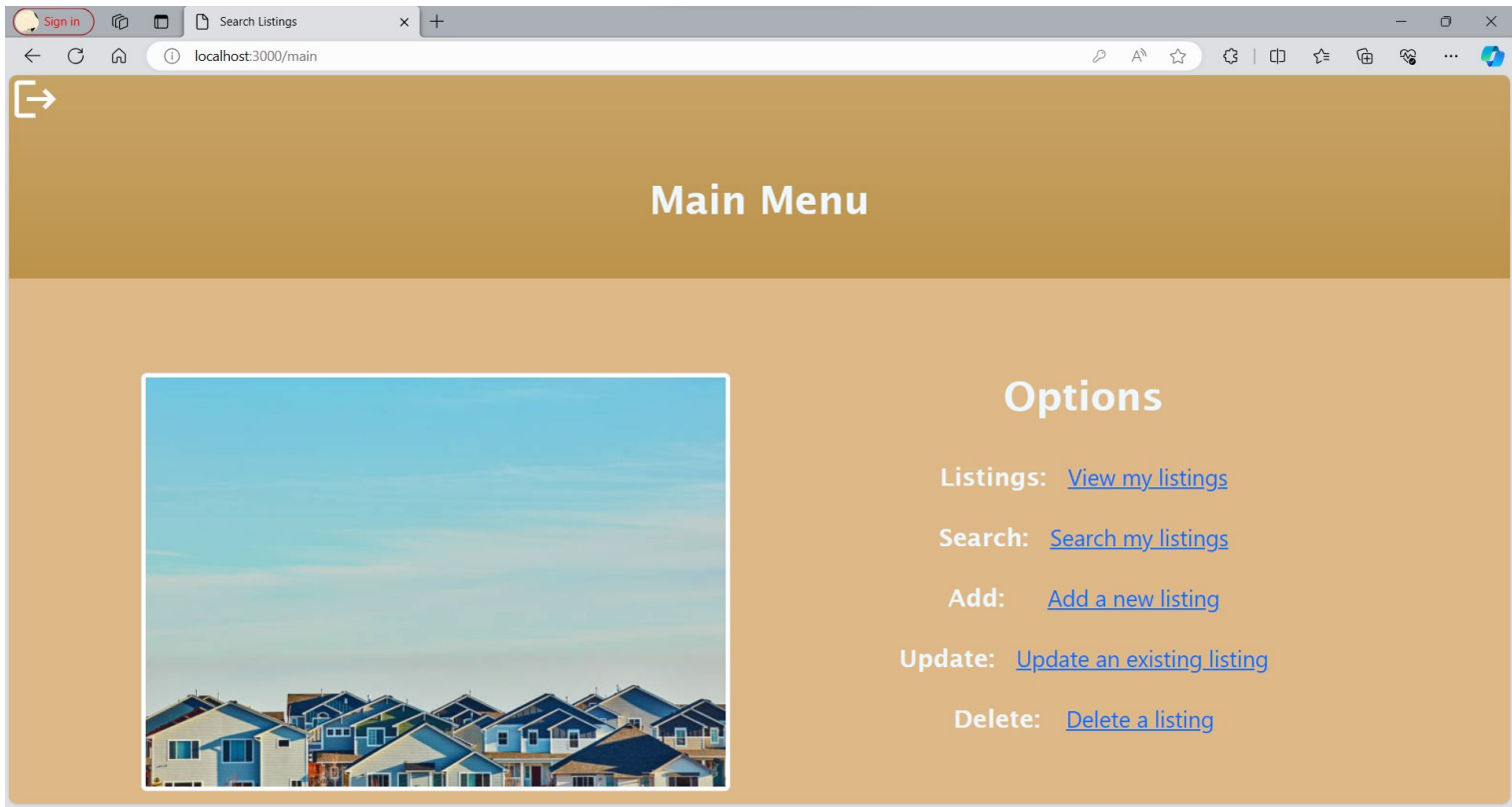
Please Log in to continue

Username:

Password:

Log in

Main Menu





View Listings

Sign in

localhost:3000/listings

localhost:3000/listings





LISTING_ID	HOUSE_ID	ADDRESS	POSTAL_CODE	DESCRIPTION	DATE_LISTED	RENT	UTILITIES	DATE_AVAILABLE
1759	9102	3333 Cabell Road, Philadelphia, PA	19154	2 Bedroom 1 Bath complete remodel. Updated kitchen: center island, New cabinets, New appliances, Granite counter tops. Great views of the backyard from the kitchen and breakfast room windows! Remodel and new appliances 2023. Open concept. Vaulted Living area. Tall baseboards through out, and New Luxury Vinyl plank flooring. New windows to help keep your utility bills down, hot water heater. HVAC recently services and new AC outside unit (condenser) installed. Large backyard. Close to Six Flags, Hurricane Harbor, Globe Life Field, AT&T stadium, and more! Great Location!	Tue Nov 14 2023 00:00:00 GMT-0500 (Eastern Standard Time)	3789	landlord	Sat Nov 18 2023 00:00:00 GMT-0500 (Eastern Standard Time)
3548	5678	2222 Aldine Street	19136	Welcome home to this brand new bi-level condo on Aldine! This condo is perfectly positioned to access all	Tue Oct 24 2023 00:00:00	3789	tenant	Tue Nov 07 2023 00:00:00 GMT-0500

View Listings (continued)

Sign in

localhost:3000/listings



Search Listings

The screenshot shows a web browser window with a single tab titled "Search Listings". The address bar displays "localhost:3000/search". The page has a brown background and a white home icon in the top-left corner. The main heading is "Search a Listing". Below this, there is a section titled "Search by description" with the prompt "Enter a desired keyword or phrase:". This section contains a white text input field and a dark gray "Go" button. At the bottom of the page, there is a section titled "Search by Postal Code".

Sign in

Search Listings

localhost:3000/search

Home

Search a Listing

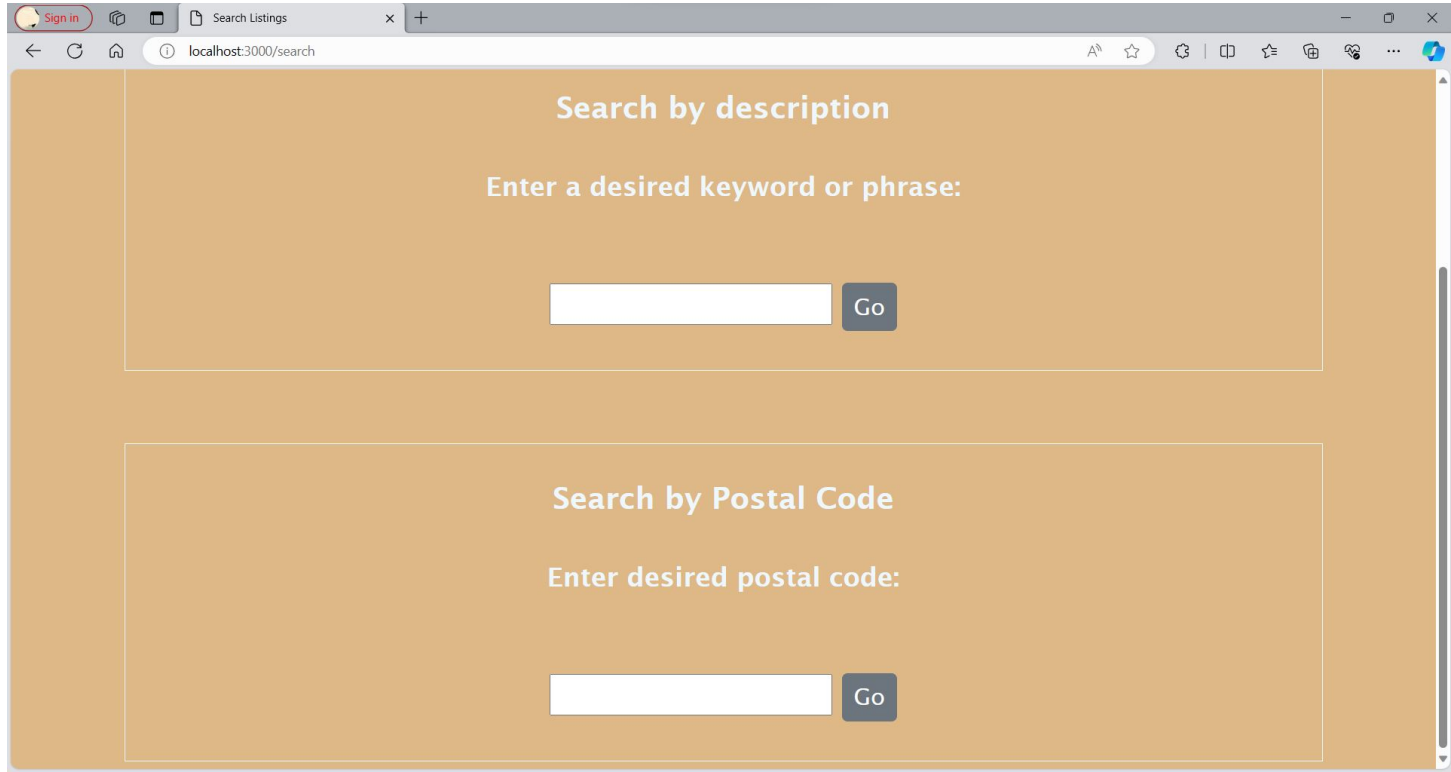
Search by description

Enter a desired keyword or phrase:

Go

Search by Postal Code

Search Listings (continued)



The screenshot shows a web browser window with the address bar displaying `localhost:3000/search`. The page has a light orange background and contains two search sections. The first section, titled "Search by description", prompts the user to "Enter a desired keyword or phrase:" and includes a text input field and a "Go" button. The second section, titled "Search by Postal Code", prompts the user to "Enter desired postal code:" and also includes a text input field and a "Go" button.

Search Listings

localhost:3000/search

Search by description

Enter a desired keyword or phrase:

Go

Search by Postal Code

Enter desired postal code:


Go

Search Results

Sign in

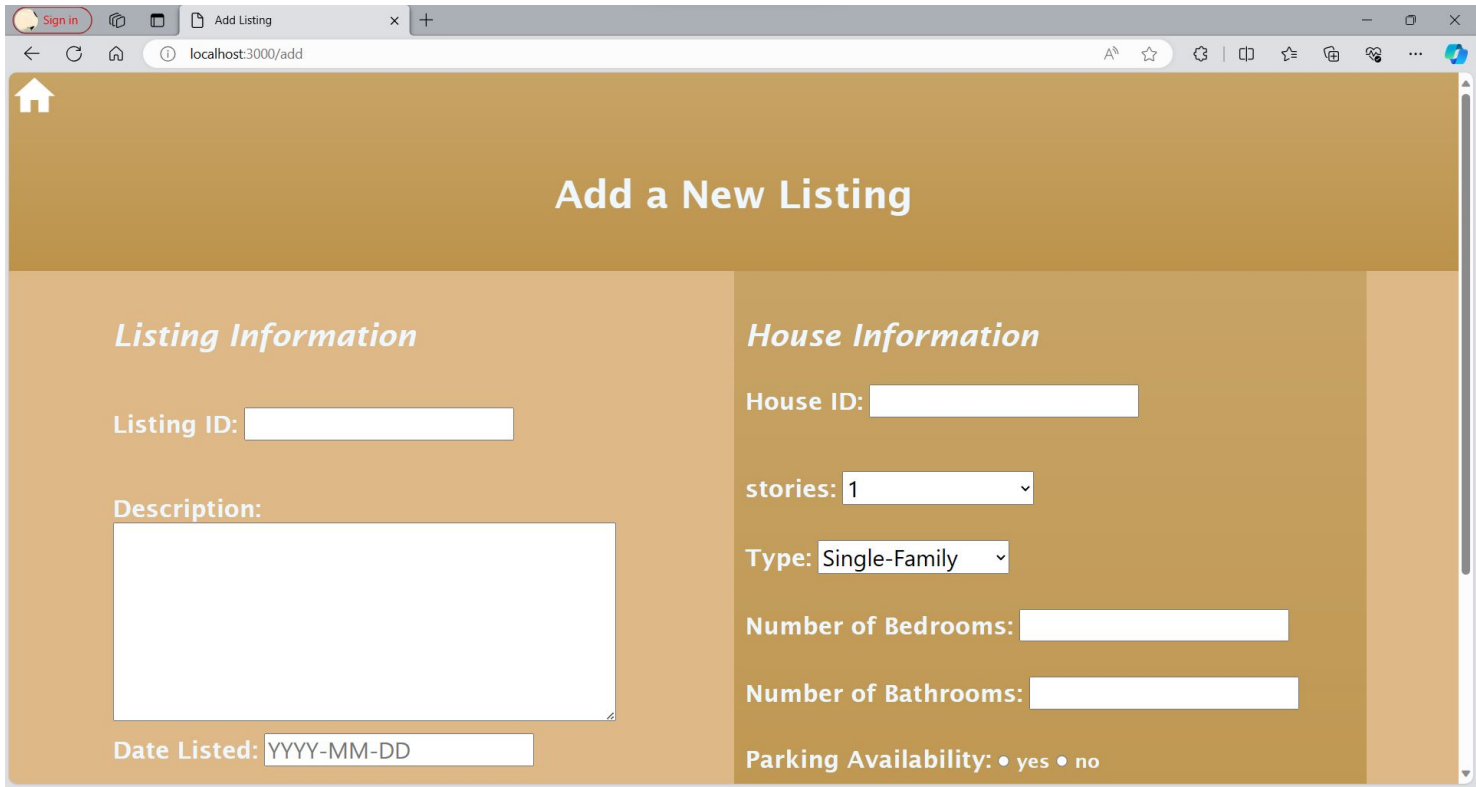
localhost:3000/search

localhost:3000/search



LISTING_ID	HOUSE_ID	ADDRESS	POSTAL_CODE	DESCRIPTION	DATE_LISTED	RENT	UTILITIES	DATE_AVAILABLE
8217	1234	1111 Market Street, Philadelphia, PA	19103	Beautiful 2 bedroom, 2 bath end-unit townhouse available starting in 2024. ALL UTILITIES INCLUDED. 2 PARKING SPOTS Newer washer, dryer, and kitchen appliances. The open layout features hardwood floors t/o, new recessed LED lighting, crown molding, and lots of natural light. The open kitchen has a breakfast bar, subway tile backsplash, and pendant lighting. The dining room, private balcony, pantry, and laundry room complete the main living area. The master bedroom has new hardwood floors, is also located on the main floor and has a large walk-in closet with custom shelving. The 1st fl bedroom includes a built-in shelving unit, plenty of storage, and a private full bathroom. Each level has its own luxurious, full bathroom with	Wed Sep 06 2023 00:00:00 GMT-0400 (Eastern Daylight Time)	2456	landlord	Mon Jan 01 2024 00:00:00 GMT-0500 (Eastern Standard Time)

Add Listing



Sign in

Add Listing

localhost:3000/add

Add a New Listing

Listing Information

Listing ID:

Description:

Date Listed:

House Information

House ID:

stories:

Type:

Number of Bedrooms:

Number of Bathrooms:

Parking Availability: ☐ yes ☐ no

Add Listing (continued)

Sign in

Add Listing

localhost:3000/add

Listing ID:

Description:

Date Listed:

Rent:

Utilities are the Responsibility of: ☐ tenant ☐ landlord

Date Available:

House ID:

stories:

Type:

Number of Bedrooms:

Number of Bathrooms:

Close
Parking Availability: ☐ yes ☐ no

Parking Availability:

Address:

Postal Code:

Submit



Update Listing

A screenshot of a web browser window. The browser's address bar shows 'localhost:3000/update'. The page has a dark blue header with a home icon and the title 'Update a Listing'. Below the header is a light blue box containing the text 'The Listing to be updated' and 'Enter the Listing ID of the listing you want to update:'. A text input field is positioned below this text. At the bottom of the page, another light blue box is partially visible with the text 'The desired update'.

Sign in

Update Listings

localhost:3000/update

Home

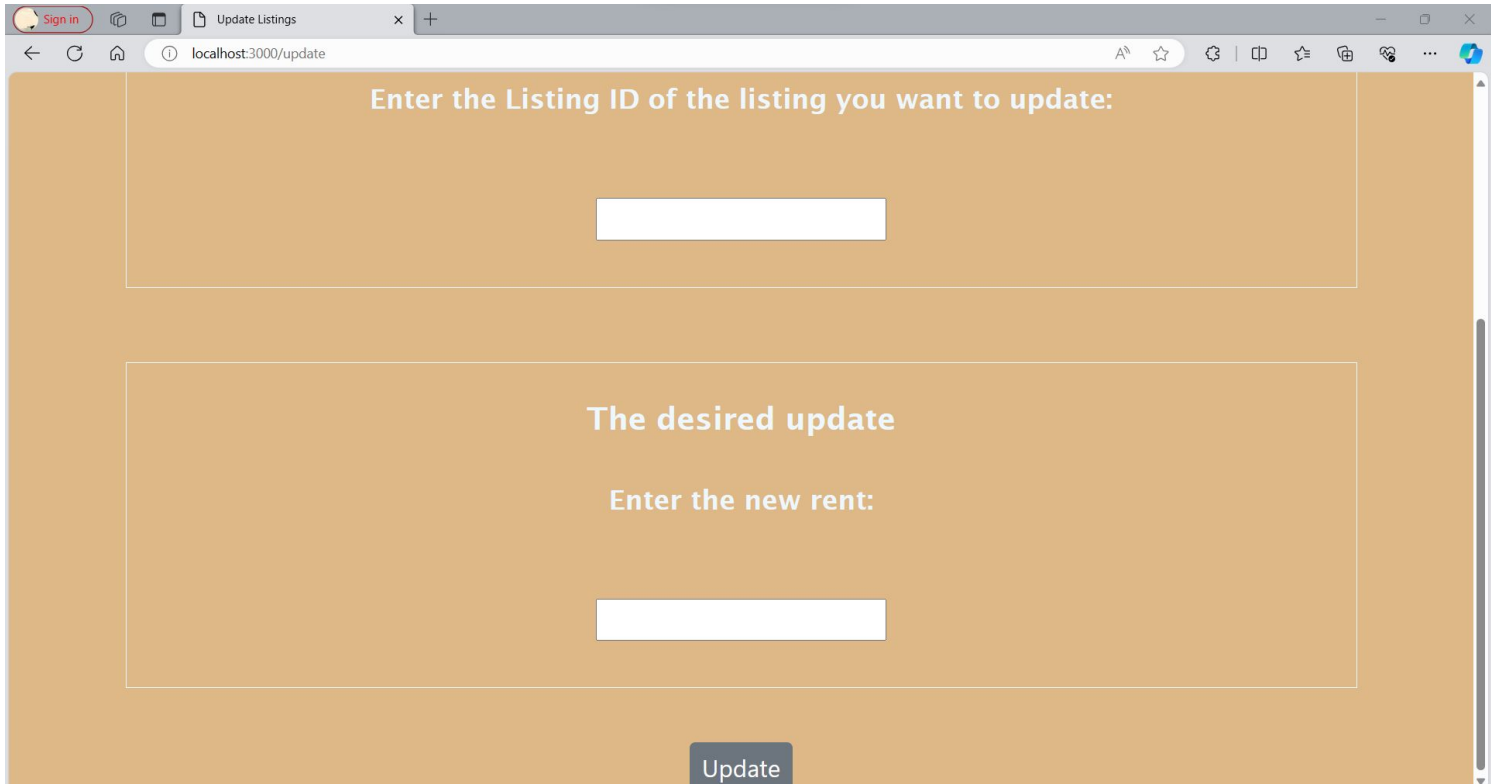
Update a Listing

The Listing to be updated

Enter the Listing ID of the listing you want to update:

The desired update

Update Listing (continued)



A screenshot of a web browser window displaying a form for updating a listing. The browser's address bar shows 'localhost:3000/update'. The page has a light orange background and contains two main sections. The first section, titled 'Enter the Listing ID of the listing you want to update:', features a single text input field. The second section, titled 'The desired update', includes the text 'Enter the new rent:' followed by another text input field. At the bottom center of the form is a dark blue button labeled 'Update'. The browser window includes a 'Sign in' button in the top left corner and standard navigation icons.

Sign in

Update Listings

localhost:3000/update

Enter the Listing ID of the listing you want to update:

The desired update

Enter the new rent:

Update



Delete Listing

A screenshot of a web browser window. The browser's address bar shows 'localhost:3000/delete'. The page has a dark brown header with a white home icon on the left and the title 'Delete a Listing' in the center. Below the header is a light brown main content area. Inside this area is a white-bordered box containing the text 'The Listing to be deleted' and 'Enter the Listing ID of the listing you want to delete:'. Below this text is a white input field. At the bottom of the page is a red 'Delete' button.

Sign in

Delete a Listing

localhost:3000/delete

Home

Delete a Listing

The Listing to be deleted

Enter the Listing ID of the listing you want to delete:

Delete



General Features Specifics

- Login
 - Session tracking
 - Has a variable (usernameID) to store the agent ID for session tracking
 - When logging in, agent ID is stored
 - When agent logs out, usernameID is set back to null
 - **If** without a login preceding, the pages are accessed using get (/main, /listings, /search, /update, /delete..), **then** no listing results will show and no edits can be done to jeopardize the database (every attempt to do so will result in a fail). This is since usernameID will be null and not initialized with an agentID
- Icons
 - Added logout, home, and search icons to redirect agents instead of links
- Viewing the Listings
 - A view listings page is dynamically generated, and the listings shown in it are tailored to the specific agent logged in, using usernameID = agentID

General Features Specifics (Cont'd)

Note: all of the following are tailored to take into account usernameID = agentID

- Searching
 - Multiple search types are available: agent can search by a keyword in description or by zip code, or both!

A search result page is dynamically generated

- Adding
 - The agent can add a new listing along with the new house associated with that listing
 - The agent can add a new listing associated with an existing house in the database
- Updating
 - The agent can update a listing's rent using its ListingID
- Deleting
 - The agent can delete a listing using its ListingID to indicate a listing has gone off-market
 - The house is kept in the database in case the agent is wants to relist it

An add/update/delete confirmation page is displayed



Error Handling Features Specifics

- Incorrect Login Data
 - If login is unauthorized or non-correct data is entered, redirects to unauthorized access page
- Adding Went wrong
 - If there is an error with adding a listing, redirects user to an add fail page that tells the agent something went wrong
 - If adding listing with a new house fails but adding the house succeeds, server will send a query to delete the newly added house from the database (the house shouldn't be added without the listing)
- Nonsensical Data
 - For all pages: when nonsensical data is entered, **redirects** agent **to a fail page** telling them something went wrong and to try again, and the faulty edits are not done to the backend.
 - For the search page: shows a blank list in the search result page
- Blank Fields
 - For all pages: If fields are left blank, **does the same thing** as entering nonsensical data
 - For the search page: shows a list of all the listings of the currently logged-in agent in the search result page (as if they searched by nothing! and just viewed the listings)



Ranking Statement

Member 1: Adrienne Loc

My teammate and I agree that I handled 50% of the overall project. My specific tasks included:

- I coded all the sql statements & DB creation (MySQL Workbench work)
- I coded all of the CSS and done the whole formatting (background colors, styles, buttons..) of all of the HTML pages
- Nodejs: login, listings, add, update

Member 2: Nadin Musallam

My teammate and I agree that I handled 50% of the overall project. My specific tasks included:

- I suggested the initial structure of the 3 entity DB schema (ER & Relational model)
- I coded the whole basic structure of all of the HTML pages, all of the forms, as well as the confirmation of failure or success pages
- Nodejs: search, delete, plus the first parts of the .js file(setting up the HTTP server, the mysql connection, accessing files, the basic get requests routing table)