

CPSC 304 Project Cover Page

Milestone #: 4

Date(DD/MM/YYYY): 1/12/23

Group Number: 40

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Maharaj Haider	94579901	m1c3e	mhaider0@student.ubc.ca
Kavyansh Bansal	67617654	s4a0d	kavyansheduv@gmail.com
Jean Lee	81824658	s9a9p	jean970039@gmail.com

By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

Project Description

Our project is a real estate listing viewing application. The user can search through listings as well as edit some information. Some additional information can also be viewed — see queries for details.

Changes

We changed ManagesListing to a one-to-many relationship (many real estate agents to one listing). Having just one agent per listing is very common, so having it this way simplifies some things and is easier to model.

Queries

(bolded are queries for the requirements)

Create tables - src/ca/ubc/cs304/sql/scripts/SQLScripts.java

Initial data - src/ca/ubc/cs304/sql/scripts/InitialData.java

INSERT - dynamically generated. The INSERT query for each type of entity can be found in its code: `src/ca/ubc/cs304/model/entity`

The screenshot shows the Oracle SQL Developer interface. On the left, there is a table view titled "CITY" with columns PROVINCE, NAME, and TAXRATE. The data includes rows for AB, QC, MB, BC, ON, and other entries. A yellow box highlights the text "Before Adding data City Table". On the right, the "Database" sidebar shows a tree structure of tables under the schema "ORA_BANSAL21", with "CITY" selected.

PROVINCE	NAME	TAXRATE
AB	Calgary	0.11
QC	Montreal	0.14
MB	Winnipeg	0.1
BC	Vancouver	0.08
ON	Toronto	0.1
ON	jaa	1
BC	Calgary	1
ON	London	1
ON	kavy	4

On screenshot below, click "Save"

The screenshot shows a Mac desktop with a "City Form" application window open. The form has fields for Province (NOVA_SCOTIA), Name (HALIFAX), and Tax Rate (30.4). Below the form is a message box saying "Success". In the background, a terminal window shows the command `insertData(EntityModel data, Integer id)`. At the bottom, a table view shows the CITY table with an additional row for NS (Nova Scotia) added. A yellow box highlights the text "After adding data NS is added to database".

insertData(EntityModel data, Integer id)
Similary all other tables will have data added

PROVINCE	NAME	TAXRATE
AB	Calgary	0.11
QC	Montreal	0.14
MB	Winnipeg	0.1
BC	Vancouver	0.08
ON	Toronto	0.1
ON	jaa	1
BC	Calgary	1
ON	London	1
NS	HALIFAX	1
ON	kavy	4

Queries below can all be found inside:

src/ca/ubc/cs304/database/DatabaseConnectionHandler.java

Drop tables - dropTablesIfExists()

Get largest id or create new - generateId()

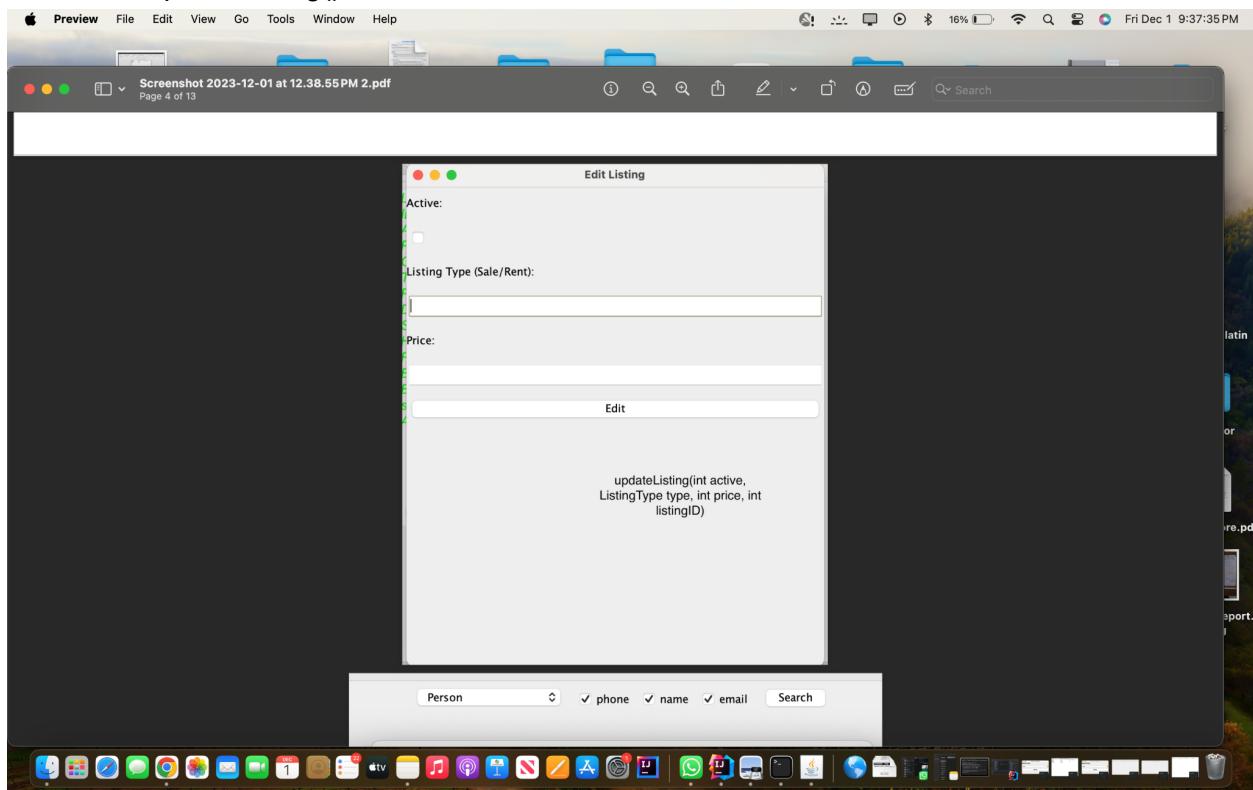
DELETE - deleteProperty()

The screenshot shows a Mac desktop environment. At the top, there's a menu bar with Apple, Preview, File, Edit, View, Go, Tools, Window, Help, and system status icons. Below the menu bar is a toolbar with various buttons like 'Search Listing', 'Find cheapest city to buy', and 'Delete Property'. A central window displays a table of cities and provinces. A yellow callout box highlights a row for 'kavy' with the text 'After adding data NS is added to database'. Below this table is a modal dialog titled 'Delete Property' with fields for Province (ONTARIO), City (Toronto), and Street Address (456 Elm St). A 'Delete' button is at the bottom. The desktop background shows a blurred image of a landscape.

Click "Delete"

This screenshot shows the same Mac desktop setup as the previous one. The real estate application window is still open, showing the 'Delete Property' dialog with the address 456 Elm St selected. In the foreground, a separate window for a database management system (DBMS) is active. It shows two tables: 'PROPERTY' and 'CITY'. The 'PROPERTY' table has four rows with data: 1. 456 Elm St, ON, Toronto, 2800002; 2. 2525 West Mall, ON, Toronto, 2800001; 3. 6331 Thunderbird Cres, AB, Calgary, 2800001; 4. 202 Birch St, MB, Winnipeg, 2800003. The 'CITY' table has three rows: 1. BC, 2. ON, 3. NS. A success dialog box from the DBMS is overlaid on the application window, stating 'Property deleted successfully.' with an 'OK' button. The DBMS interface includes a sidebar with database objects like HIRESCONTRACTOR, HIRESCREA, HOMEOWNER, LISTING, MAINTAINS, MANAGESLISTING, PAYS, PERSON, PROPERTY, REALESTATEAGENCY, REALESTATEAGENT, STRATA, PUBLIC, and Server Objects.

UPDATE - updateListing()



Click "Edit"

9:57



Today
9:54 PM

Edit



LIVE ▾

disable filter -> ▾

Enter listing id

disable filter -> ▾

sale

cheapest city to buy

Find cheapest city to rent

View no. of properties in



Listing View

Listing Info is below:

ID: 5000002

Address: 456 Elm St

Province: ONTARIO

City: Toronto

Type: SALE

Price: \$700000

DeveloperLicenseID: 2000002

Strata Id: 4000001

Homeowner Phone: 234 567 8901

Real Estate Agent Phone: 234 567 8901

Bedrooms: 3

Bathrooms: 2

sizeInSqft: 1500

Active: No



Back

Edit

9:57

48%

Today
9:54 PM

Edit



LIVE ▾

ListingsViewer

Edit Listing

Active:

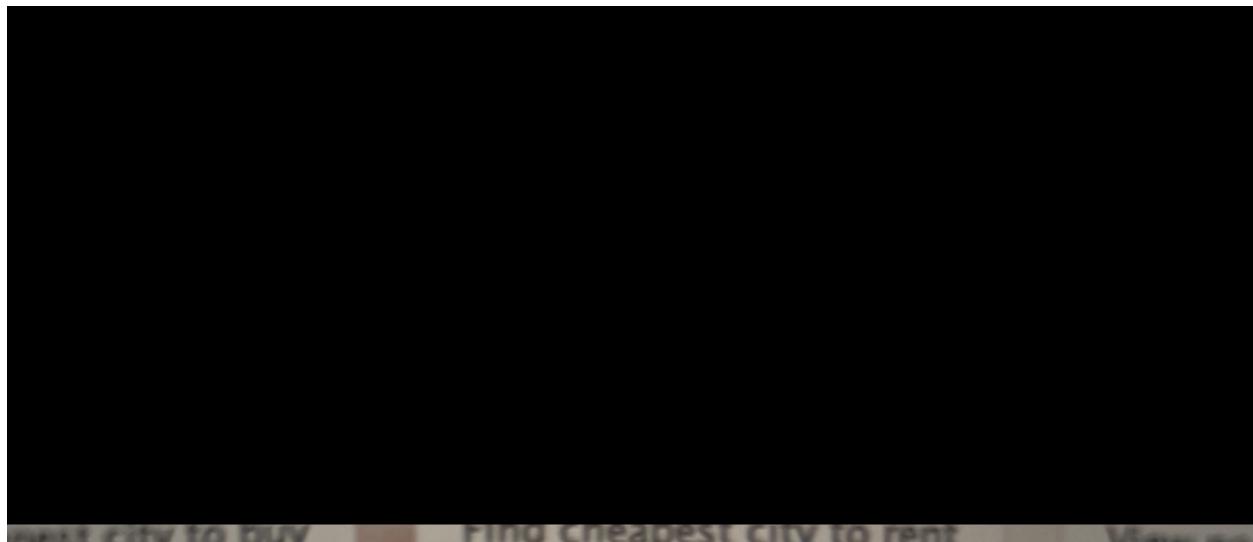
Listing Type (Sale/Rent): **Sale**

Price: **100000**

Edit

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s: 2
: 1500



apest city to buy Find Cheapest City to rent View it!



Listing View

Listing Info is below:

ID: 5000002

Address: 456 Elm St

Province: ONTARIO

City: Toronto

Type: SALE

Price: \$100000

DeveloperLicenseID: 2000002

Strata Id: 4000001

Homeowner Phone: 234 567 8901

Real Estate Agent Phone: 234 567 8901

Bedrooms: 3

Bathrooms: 2

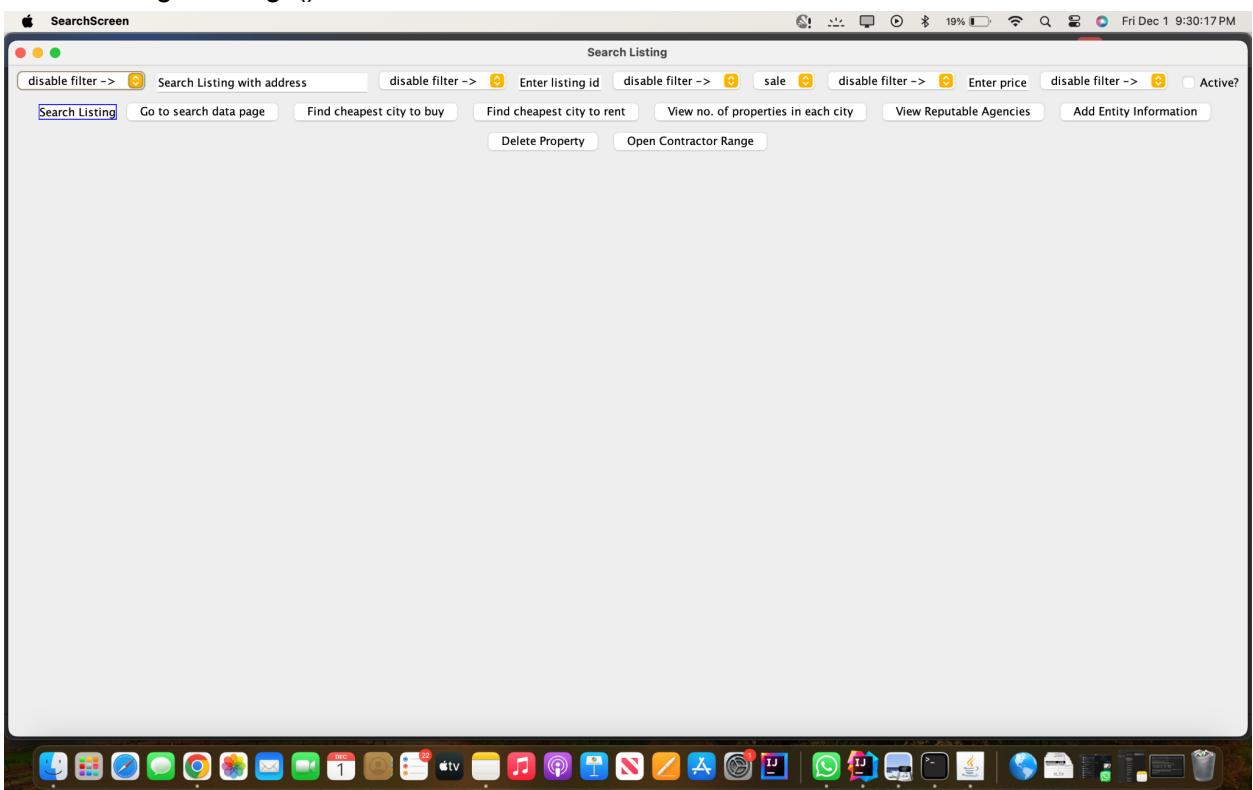
sizeInSqft: 1500

Active: No

Back

Edit

Selection - getListings()

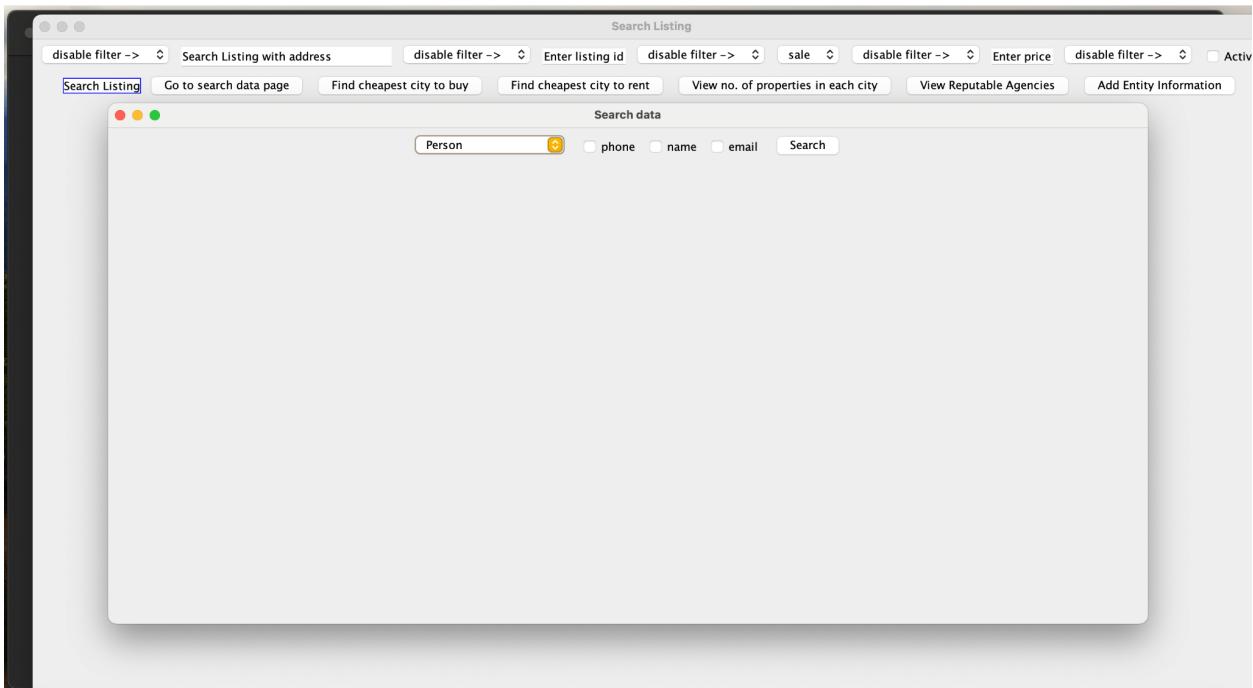


Click "Search Listing" after inputting search criteria in the top row

ID: 5000001 Address: 123 Main St Price: 500000	<input type="button" value="View"/>
ID: 5000002 Address: 456 Elm St Price: 700000	<input type="button" value="View"/>
ID: 5000003 Address: 2525 West Mall Price: 2500	<input type="button" value="View"/>
ID: 5000004 Address: 6331 Thunderbird Cres Price: 1000000	<input type="button" value="View"/>
ID: 5000005 Address: 202 Birch St Price: 3000	<input type="button" value="View"/>

getListings(List<String>
parameters)

Projection - projectData()



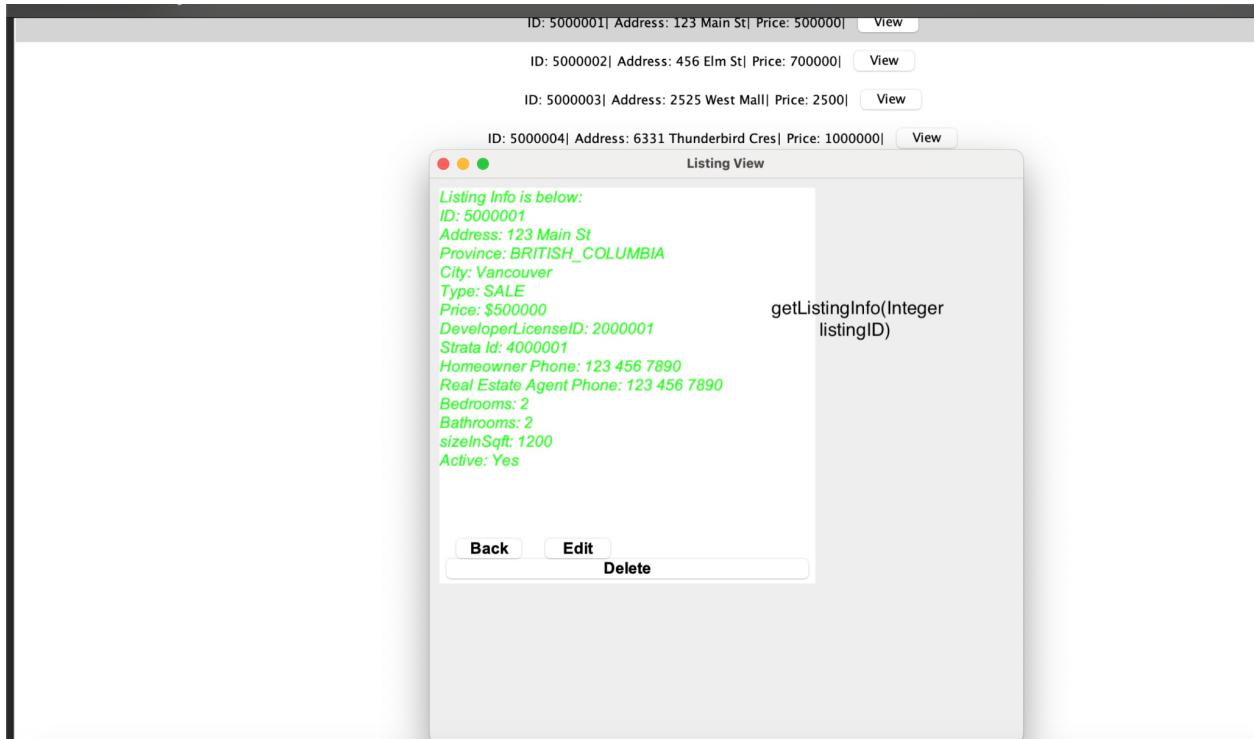
Select a table, select columns, and click “Search”

Person	<input type="checkbox"/>	<input checked="" type="checkbox"/> phone	<input checked="" type="checkbox"/> name	<input checked="" type="checkbox"/> email	Search
Database Results					
phone		name		email	
123 456 7890		John Doe		john.doe@email.com	
234 567 8901		Jane Smith		jane.smith@email.com	
345 678 9012		Bob Johnson		bob.johnson@email.com	
456 789 0123		Alice Brown		alice.brown@email.com	
164 551 5313		Alice Brown		alice23@name.com	
703 582 1740		Danny Brown		dan5@name.com	
849 284 0582		John Smith		josh@name.com	
195 588 7561		Russel Johnson		brussel@name.com	
getColumns(String table)					

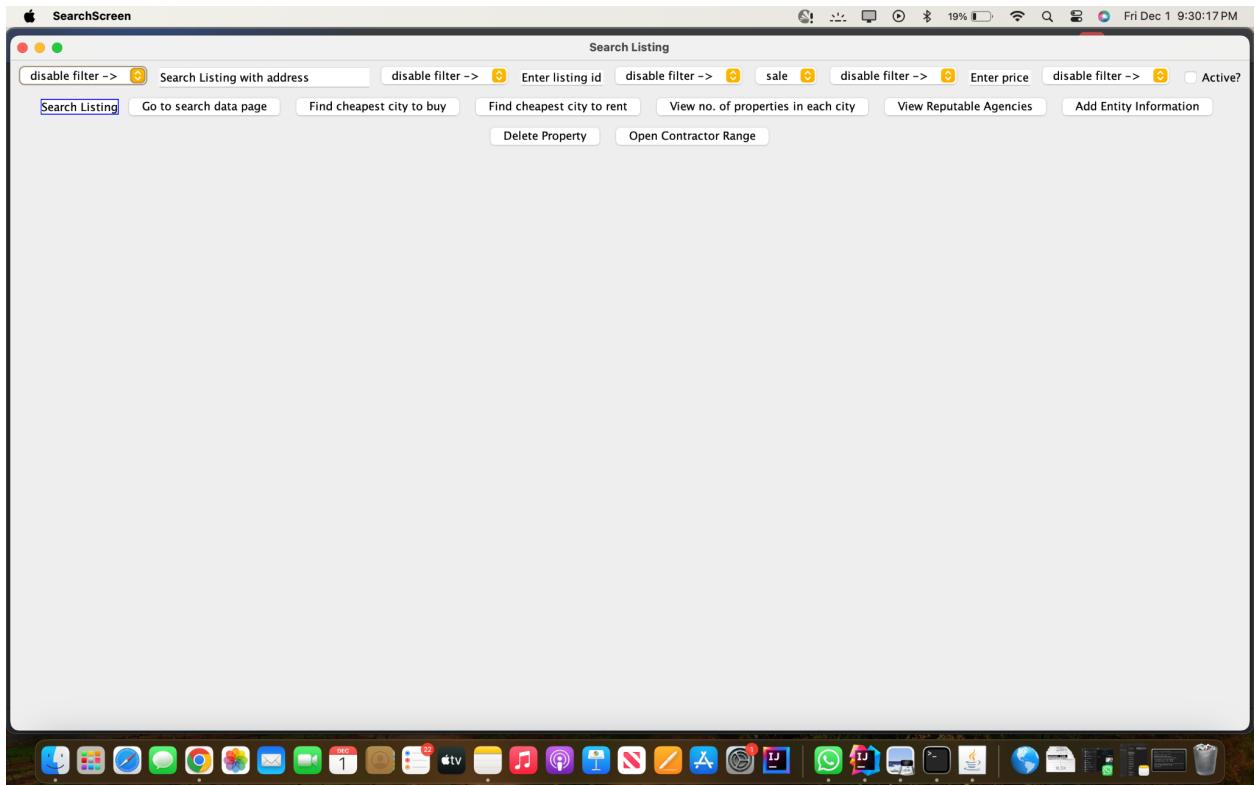
Join - getListingInfo()

ID: 5000001 Address: 123 Main St Price: 500000 View	
ID: 5000002 Address: 456 Elm St Price: 700000 View	
ID: 5000003 Address: 2525 West Mall Price: 2500 View	getListings(List<String> parameters)
ID: 5000004 Address: 6331 Thunderbird Cres Price: 1000000 View	
ID: 5000005 Address: 202 Birch St Price: 3000 View	

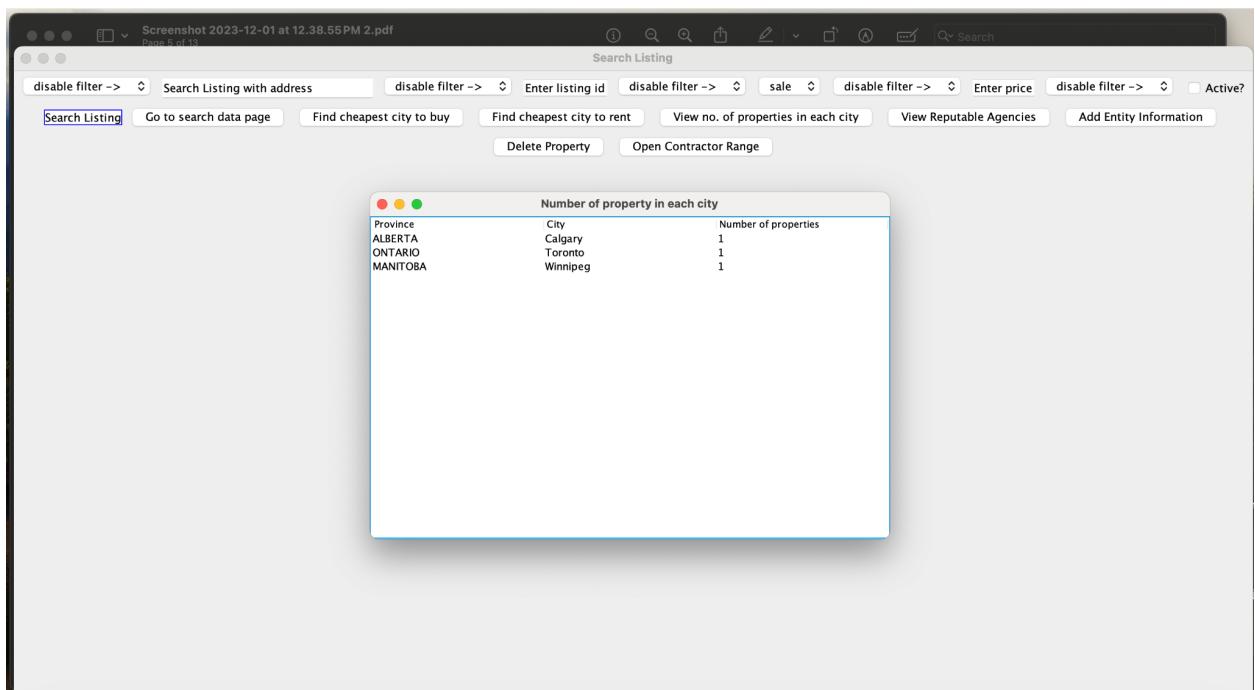
Click "View"



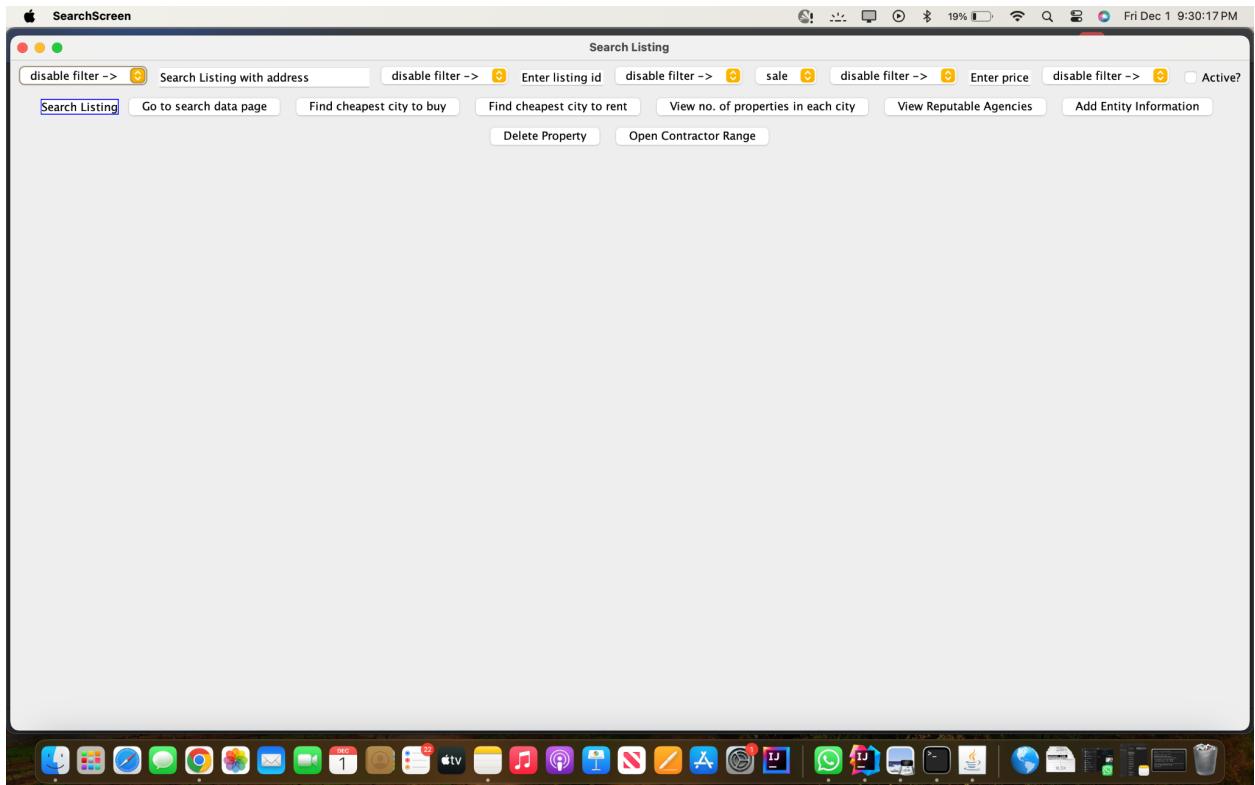
Aggregation with GROUP BY - getPropertyCountByCity()



Click “View no. of properties in each city”



Aggregation with HAVING - getReputableAgencies()

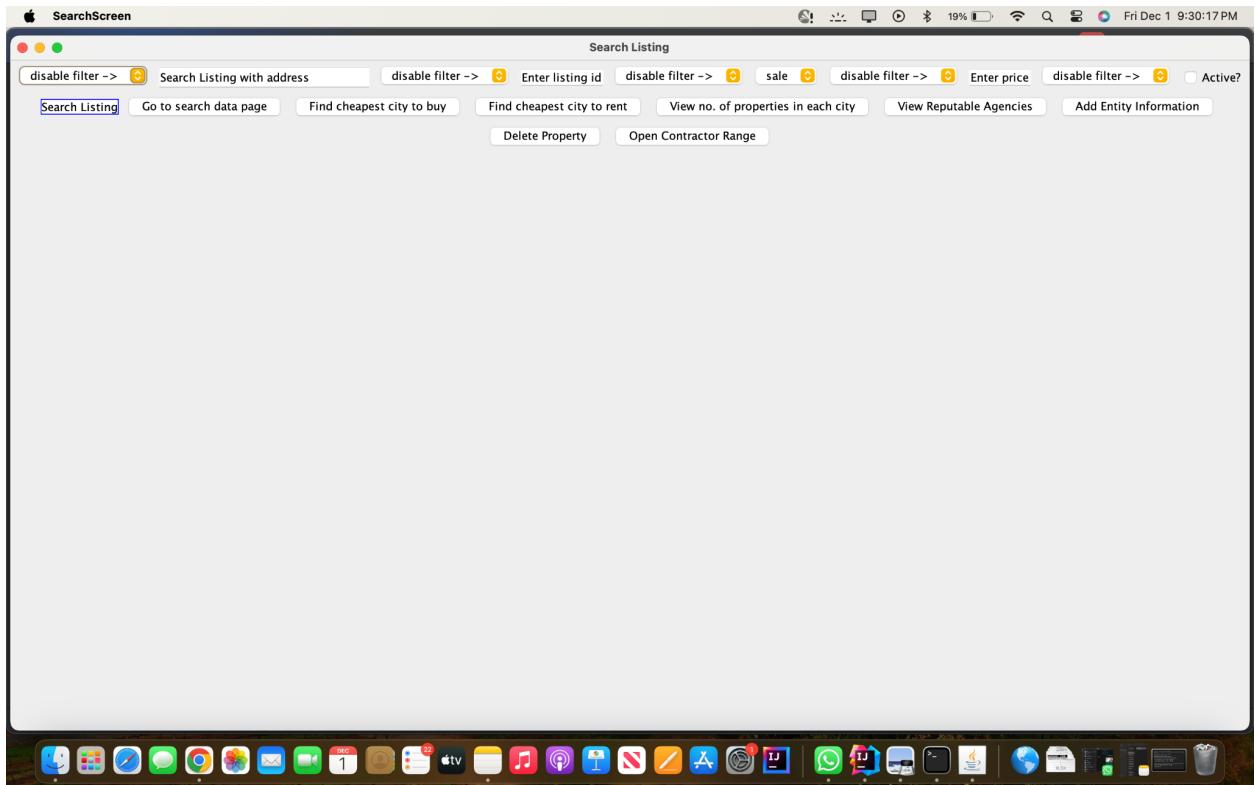


Click “View Reputable Agencies”

Reputable Agencies				
Agency ID	Agency Name	Rating	Agent Count	Avg Experience
1000001	ABC Realty	4.5	3	4.66666666666...
1000002	XYZ Realty	4.2	2	1.5

getReputableAgencies()

Nested Aggregation with GROUP BY - findCheapestCity()

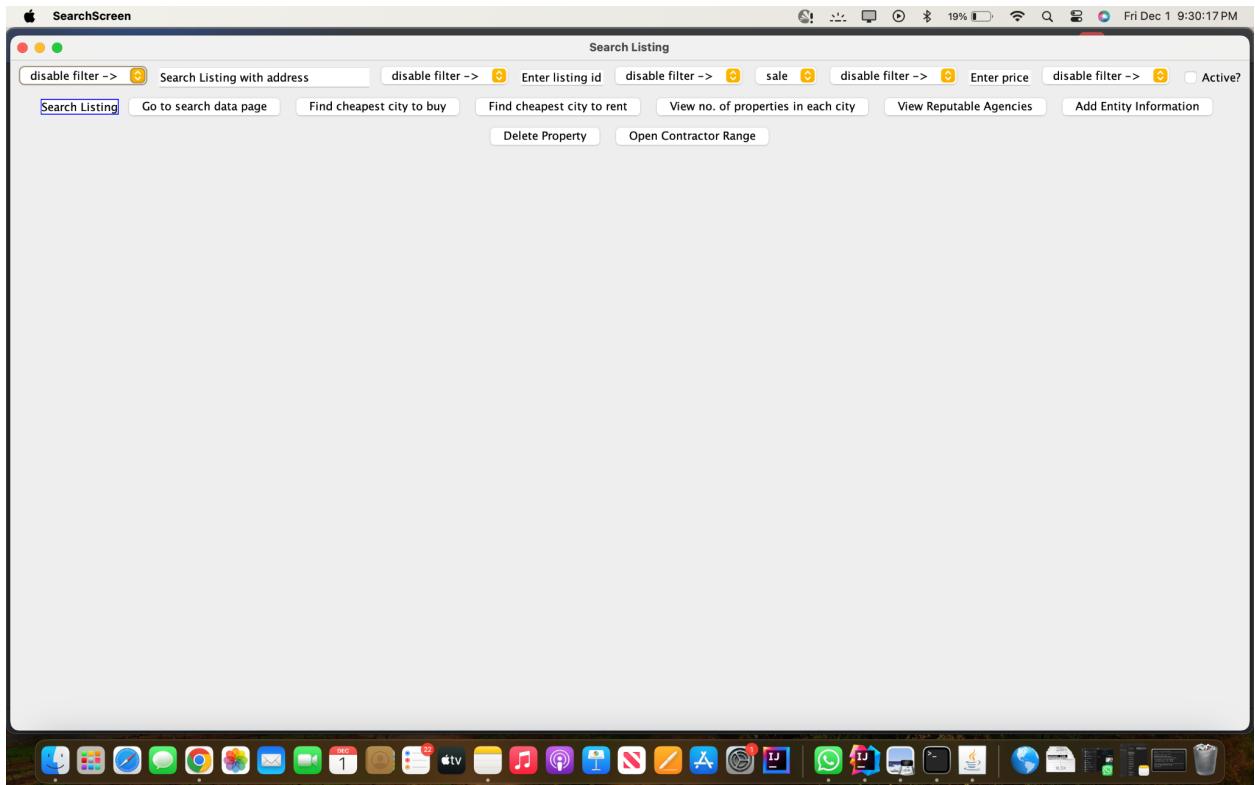


Click "Find cheapest city to buy/rent"

Cheapest city			
Province	City	Listing type	Average price per sqft
BRITISH_COLUMBIA	Vancouver	SALE	416.666666666667

findCheapestCity(ListingType listingType)

Division - findWideRangedContractors()



Click "Open Contractor Range"

Contractor ID 3000002	Contractor Name FixAll Construction	Province [ALBERTA, ONTARIO, MANITO... [1, 2, 1, 1]	Cities Involved
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