User manual

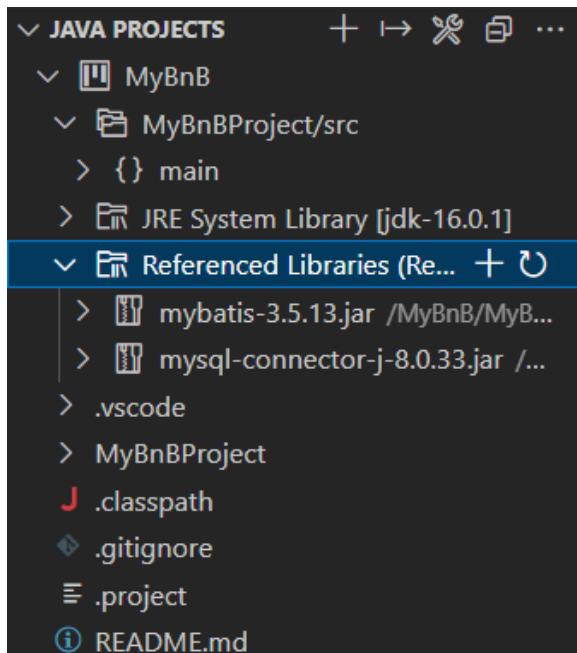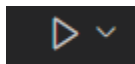## Setup

Before running the system, install and setup MySQL version 8 and Java version 17.

Using Visual Studio Code:
1. Install the "Extension Pack for Java" in vscode extension.
2. Navigate to the Referenced Libraries in the Java Projects view displayed below the Explorer view. Click the plus on Referenced Libraries and add all the jar files located in folder MyBnB\MyBnBProject\lib.
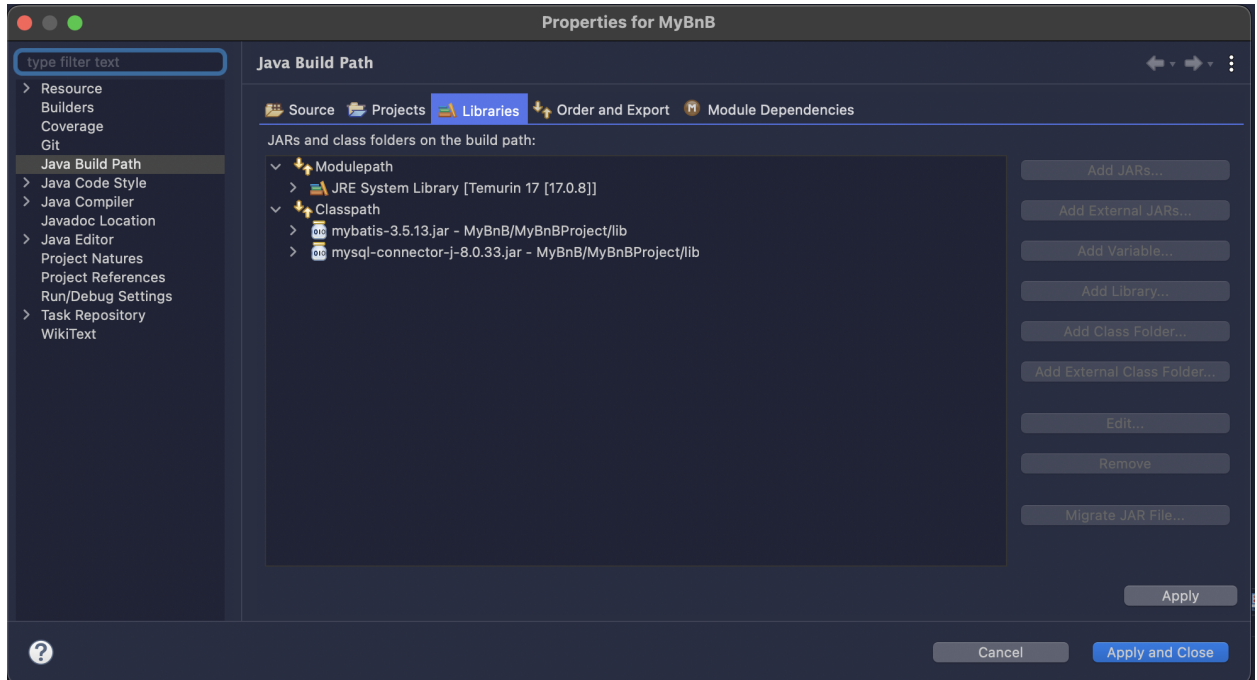

3. Click on the Run Java button on the top right side of the screen to run the system.

Using Eclipse:
1. Go to File > Import Projects from File System on the topmost toolbar.
2. For the "Import source", navigate to the directory holding the MyBnB folder and click on MyBnB.

3. Right click on the project folder (MyBnB) > Build Path > Configure Build Path > Libraries, and if the mybatis-3.5-13.jar or the mysql-connector-j-8.0.33.jar doesn't already exist in the Classpath folder, add them by clicking on them through navigating in the directory.

4. Click on the Run App button on the toolbar under the window, and click on Console on the set of tabs at the base of the window.

Instructions

Startup:
On running the application, the user will be prompted to enter the login credentials for their MySQL instance. When setting up MySQL for the first time, the user will have to create a root user with or without a password. For the username, enter "root". If the root user has no password, simply hit enter without typing anything. If the root user has a password, enter the password (note: the password is hidden from sight when typing).

Next, follow the instructions and select different options to explore different features of the application.

Creating a User Account:
The user will be prompted for a SIN, password, name, address, birthdate and occupation, but only the SIN and password are mandatory to create an account. If you do not want to fill out the other fields, simply hit enter and it will take you to the next.

Signing in:
When prompted for the password, it is important to note that spaces matter.

Creating a Listing:
The console will ask the user for a type of listing, address and amenities. There will be a helpful tip for what amenities to put down if the user does not know what popular amenities should be added to the listing.

Deleting a Listing:
On deletion, all active bookings for that listing will be canceled.

Adding Availabilities:
The user will be prompted to choose a listing from the listings they host, and then prompted for an interval of dates to add an availability to. If this date range includes a booking, the console will print out the issue and restart the prompts from the beginning. If the date range is free of bookings, the console will then prompt the user to add a price per day.

Changing Availability Price:
If a renter has already booked within the date range that the user wants to change the price of the availability of, the renter will be notified of the changes.

Searching for Listings:
There are multiple options to search for listings (search by exact address, coordinates, and postal code), and once the user does, they can choose to view the comments of a listing or book one.

Adding Comments:
The console will prompt the user for a rating and comment, but the rating or comment is not mandatory. Hit enter to move to the next field.

Report of Total Number of Bookings in a Date Range:

The user will be prompted to enter a date range, from date and to date. Note that the from date must be the same or before the to date. Then, the user will be prompted to choose the report by either city (total number of bookings in each city) or postal code (total number of bookings in each postal code) by entering "c" or "p" respectively.

Report of Renters Ranked by the Number of Bookings in a Date Range:
The user will be prompted to enter a date range, from date and to date. Note that the from date must be the same or before the to date. Then, the user will be prompted if they want the report by city (number of listings booked by each renter in each city) by entering "y" for yes or "n" for no.

Report of Total Number of Listings:
The user will be prompted to enter "c", "cc", or "ccp" and select the report by country (total number of listings in each country), by country and city (number of listings in each country and city), or by country, city, and postal code (number of listings in each country, city and postal code) respectively.

Report of Hosts Ranked by Total Number of Listings:
The user will be prompted to enter "c" or "cc" and select the report by country (number of listings hosted by each host in each country) or by country and city (number of listings hosted by each host in each country and city) respectively.

Report of Hosts with listings more than 10% of the total number of listings:
The user is shown the result of the hosts with more than 10% of the total number of listings in each city and country.

Report hosts and renters with the largest number of cancellations within a year:
The user will be prompted to enter a year. The value must be an integer value.

Report the most popular noun phrase in the comments for each listing:
The user is shown the result of the popular noun phrase of each listing.

NOTE: If instructions for a feature do not appear here, that is because they are self-explanatory enough during the process that any additional instructions or notes would be redundant.

Information to Note

System Limitations:
- Originally, the system should run a report that presents the set of most popular noun phrases associated with each listing. But, the system is implemented such that it reports the most popular noun phrase (that consist of mostly 2 words) in the comments for each listing.
- There is no way to check if the postal code is an actual postal code or a random string the length of a postal code since different countries have different postal code requirements, and hard-coding them all would be inefficient.

Possible Improvements:
- The report for the most popular noun phrases should be more flexible by considering noun phrases with one word or more than two words.
- Have a feature that displays all the listings so the users can easily find listings if they do not know the address and coordinates of the listing.
- Add a feature to view all availabilities for a listing, so that it is more clear what dates the host can change the price/availability of.
- Make the UI more reactive to changes and differences in screen size, nicer looking and change it from a text-based interface to a GUI.