Coursework 4 – London Property Marketplace

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Programming Practice and Applications

https://github.kcl.ac.uk/k20058818/Best-Group

(draft branch contains most recent commits)

A brief report of our GUI for exploring properties of London in Java.

GUI Description

Our GUI starts from the Main Controller class. Upon running the application, the user is present with a dark splash screen which introduces the brand, Airbnb Viewer. The application will then transit to the first panel where the user can begin interacting with the application. Panel 1 is essentially a welcome panel which contains informative labels to prompt the user to enter their ideal minimum and maximum price.

Navigation buttons, 'next' and 'previous' have been added to the bottom of each panel which makes the application easy to use and user friendly. If the user selects a 'from' price higher than the 'to' price, a dialogue box will be displayed prompting the user to enter the values correctly.

Until the user selects a valid price range, the "Previous" and "Next" buttons are disabled. After the user selects a valid price range by selecting the next button, the user can access the second panel which includes the map.

The map includes buttons displayed as circles where each circle acts as a London borough. The color of each circle represents how many properties there are in each borough. The darker the color, the more properties the borough has.

When the user selects one of the boroughs, the program shows the listings according to the borough. The user can see the listing, host name, price, number of reviews, and minimum nights of each property. If the user double clicks on one of the listings, the description of the property appears as well. After that, the user can return to the London Map and press the "Next" button to go to the Statistics panel.

On the Statistics panel, there is the tittle and the description of the panel as well as four rows of statistics. Each row has a text describing the type of statistic shown. All four rows have alternate statistics which can be accessed through the back-and-forth arrows.

Statistics Description

Other than the default statistics including average number of reviews per property, total number of available properties, number of entire home and apartments, and the most expensive borough, we have decided to add the following:

1. Average Coordinate
2. Most Expensive Property Value (GBP)
3. Borough with the Least Property Listings
4. Borough with the Most Property Listings

Functionality of the Fourth Panel

For our fourth panel, we decided to go with a more unconventional approach... Upon running the JavaFX program, the user is met with a splash screen that shows off the company logo. In the code, we were able to utilize stage styling by making the stage transparent, opting for a sleeker overall design of the software. This addition allows for the sneaky beaky loading of the data, inciting the illusion for the user that everything is loaded upon loading the map.

Unit Test Description

Property Class Testing:

Methods to test:

- getMinNights()
- getNumberOfReviews()
- getPrice()
- getHostName()
- getId()
- setHostName(String hostName)
- setId(String id)
- setMinNights(int minNights)
- setNumberOfReviews(int numberOfReviews)
- setPrice(int price)

Positive Test Results:

When given inputs expected to pass, all tests passed. As the get methods relied on the set methods to work also, we can say that all methods work properly when given inputs expected to pass.

Negative Test Results:

When given inputs expected to not work, all tests failed. All set methods failed tests where the inputted data type did not match that of the parameter.

When a get method is called without the variable relating to the method having been instantiated, no error is reported. Instead, the value returned will be null if the type is String, and 0 if the type is int.

Known Bugs/Problems

- The sizes of the panels are not exactly same. For example, the "Next" and "Previous" buttons in different panels do not have the same size.
- Re-adjustment of the stage doesn't flow well with the program.