Investor Application User Manual

1. Introduction

- The Investor Application automates administrative tasks for a property investment company in Melbourne, Australia.
- The application extracts the property information and performs currency exchange.
- The application displays property summaries (mean, std, 50%, min & max) and calculates average land size.
- The application visualizes property value distribution and analyzes annual sales trends by a histogram and line chart respectively.
- The Investor Application helps locate properties of specific prices in specific suburbs.

2. Main Menu

- Convert currency for property prices → This functionality converts property prices from Australian dollars to a target currency using an exchange rate provided by the user.
- Get suburb's property's summary → This functionality displays a summary of properties based on the number of bedrooms, bathrooms, and parking spaces in a given suburb.
- Discover average land size of suburb → This functionality calculates the average land size of properties in a specific suburb.
- Show property value distribution → This functionality visualizes the property value distribution as a histogram.
- Track annual property sales over time → This functionality calculates the number of properties sold each year and visualizes the sales trend as a line chart.
- Identify Property by Price → This functionality checks if a property of a specific price exists in a given suburb.
- Exit the application → This functionality exits the application based on user's wish.

3. Getting Started

To use the Investor Application, follow these steps:

- Please make sure you have Python v3.10, Numpy, Pandas and Matplotlib libraries installed in your machine.
- Download the Investor Application code files.

Running the Application

- Open a terminal or command prompt or any other IDE (eg. PyCharm)
- Navigate to the directory where the Investor Application code files are located.
- Run the main.py file using the command: `python main.py` in the terminal

4. User Guide

3.1 Currency Conversion (Option 1):

- Choose option 1 to convert property prices to your preferred currency.
- Enter the currency exchange rate when prompted.
- Ensure the exchange rate is a positive number and not zero.

3.2 Suburb Property Summary (Option 2):

- Opt for option 2 to obtain a summary of properties in a specific suburb.
- Enter the suburb name (e.g., Clayton, Burwood) or type 'all' for a summary of all suburbs.

3.3 Average Land Size (Option 3):

- Select option 3 to discover the average land size in a suburb.
- Enter the suburb name or 'all' to get the average land size across all suburbs.

3.4 Property Value Distribution (Option 4):

- Choose option 4 to visualize the distribution of property values in a suburb.
- Enter the suburb name and your local currency when prompted.

3.5 Annual Sales Trend Over Time (Option 5):

- Opt for option 5 to track the trend of property sales over the years.
- This provides insights into the historical performance of the property market.

3.6 Identify Property by Price (Option 6):

- Select option 6 to identify properties within a specific price range in a suburb.
- Enter the suburb name and your target price to find matching properties.

3.7 Exit the Application (Option 7):

- Choose option 7 to exit the application when you've completed your tasks.
- Confirm your choice by entering 'Y' for yes or 'N' for no.

4. Error Handling

- The Investor Application handles various exceptions and provides informative error messages.
- If an error occurs, the application will display an error message explaining the issue.

5. Conclusion

The Investor Application simplifies administrative tasks for property investment in Melbourne. It automates data extraction, currency exchange, property analysis, and visualization. By using this application, users can save time and effort in managing property investments.
Happy investing!

6. References

- GeeksforGeeks. (n.d.). Python Program for Binary Search. Retrieved[28th Aug 2023] from https://www.geeksforgeeks.org/python-program-for-binary-search/

- Let's Find Course. (n.d.). Insertion Sort Program in Python - Descending Order. Retrieved from https://letsfindcourse.com/coding-questions/insertion-sort-program-descending-order