**Finance Tracker Documentation**

**By :** Ranuth Dassanayaka

**University :** Informatics Institute of Technology

**Course :** Computer Science

**Module :** Software Development 1

**Date :** 28/04/2024

**Abstract**

This document presents the documentation for the Finance Tracker project developed as the coursework for SD1 Part 3. This is a python based CRUD featured application which was made for the purpose of making the user’s life easier now even has a GUI made by tkinter library and it has made user’s user experience more and more effective.

**Introduction**

This address the need of storing the user’s transactions and monitor them. The user doesn’t have to remember every transaction he made or write the transactions he made in a log book. This doesn’t take any physical space to store and effective as well. And with the new GUI we got some more features. Users can now search their transaction thought the GUI by category, date and amount and also they can sort transactions as well.

**System Overview**

* This application consists several components:
* Data Management : Manage user income and expense.
* Reports : Generate a report of every transaction he made and a summary of income & expenses user made with specific and detailed information.
* GUI : Letting users search and sort transactions for more user experience.

**Features and Functionality**

* Add transactions -> Allow users to add income or expense type transactions by the category(Description of a transaction).
* Update transactions -> Allow users to update already existing transactions.
* Delete transactions -> Allow users to delete a transaction which recorded already.
* Transaction tracking -> Keep a track of transactions user made throughout the time period it will give a summary for transaction the user did.
* Search Functionality -> This new feature lets the user to search for a transaction which is recorded from all three data types. (category, amount and date). The user can prompt whatever the data type he/she wants and this search function will output results.
* Sort Functionality -> This new feature also let the users to sort the transactions in Ascending and Descending orders by all three data types as the functionality above.

1. Category Sort :- Sorts the transactions by the entered category in the order of Alphabet.

2. Date Sort :- First it sorts the transactions by the category and make a group by it and then sort the transactions in those each groups by the date.  
  
 3. Date Amount :- First it takes the sum of all the transactions in each category and then sort all the transactions ascendingly and descendingly by the category

**Implementation Details**

* File handling - Used JSON to store and retrieve user data.
* Exception Handling - Ensures that the program run smoothly without any errors.
* Loops and conditions - Make sure that the code is bug free and iterative when needed.
* Dictionaries - Used for storing and manipulating financial transactions
* Functions - It gives a better functionality, readability, structure and reusability as well.
* GUI – It gives user a better user experience and it’s more efficient for the user with Search and Sort functionalities.

**User Manual**

* Launch the application and then select which ever option you need service of. Then enter the asking inputs and boom the application will do everything for you. You just have to follow the instructions of the application.
* If you want to import a already existing file to the program. You just have to copy the file to the same folder where the system exists and then go for the Read from a file feature and enter the file name. And boom the application will do everything for you.
* And when you launch the application a screen will pop up showing an Interface for the transactions added via the CLI.
* In there you can search a transaction by category, date and amount.
* Also by the buttons right next to the search and back is responsible for handling the sorting functionality of this program.

1 -> Adding a transaction

2 -> Viewing the existing transactions

3 -> Updating an existing transaction

4 -> Deleting an existing transaction

5 -> Displaying the summary of the transaction the user did

6 -> Import transaction from an external file

7 -> Exiting the program

In GUI

Search Button -> To search a transaction

Sort Buttons -> To sort transaction in the way you need.

Back Button -> Takes you back to all the transaction recorded from the selected sort or searched transactions.

**Conclusion**

In conclusion, the Finance Tracker program provides an effective solution for managing personal finances. Its user-friendly interface, coupled with powerful features, makes it a valuable tool for individuals seeking to gain control over their financial management.