Financial Tracker

User Manual

Version 1.0
09/05/2022

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1.   Introduction

This User Manual (UM) provides the information necessary for users to effectively use the Financial Tracker.

1.1   Overview

This system is a terminal-based financial tracker written entirely in Python. The financial tracker was designed as a way for college students to keep track of their expenses and revenue as easily and as effectively as possible. The user access mode of the system is a command line interface. Because the system is run in the terminal, there are no special conditions with regards to device type. If the device has a terminal, then the system can be run. In addition to this, the user must have installed python3 beforehand and the tabulate package for python.

2.   Getting Started

2.1   Cautions & Warnings

As the system is used, a set of files will be created to manage the data flow. Please refrain from tampering with those files to ensure smooth running of the system.

Additionally, the system is case-sensitive and so any input provided must be in the appropriate form

2.2   Set-up Considerations

2.2.1   Install Python

To install Python, simply click this link and follow the instructions on the page:

 https://www.python.org/downloads/

2.2.2   Install Tabulate

Once Python has been installed, we need to install Tabulate, a python package that is used in the system. To do so, simply follow the instructions on this link:

https://pypi.org/project/tabulate/
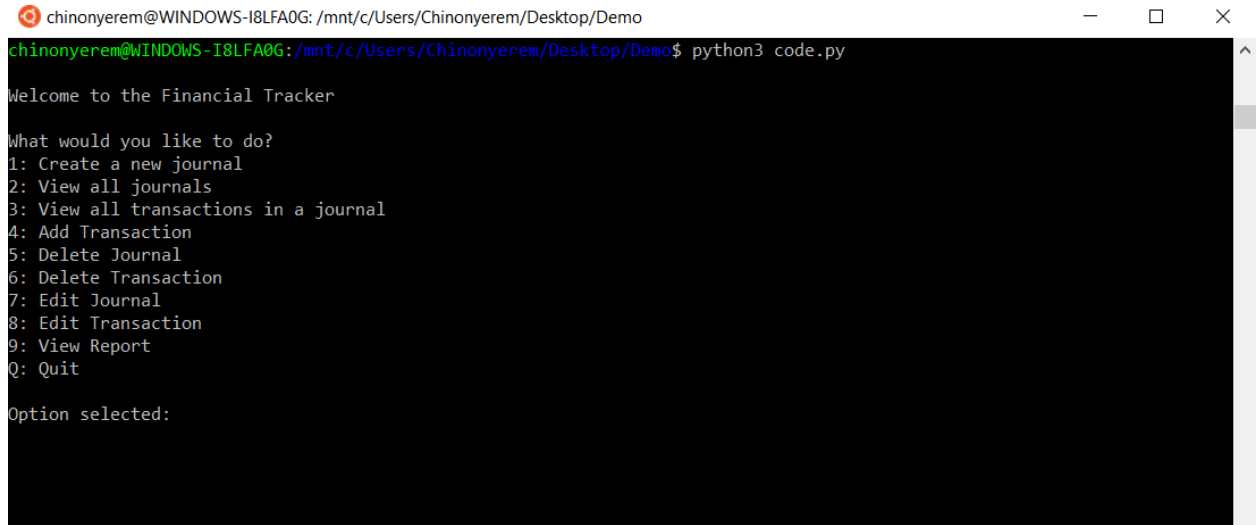
2.3   User Access Considerations

Users: as the target audience of the financial tracker is currently NYUAD students, the user category consists of NYUAD students. The users have access to all functionalities displayed in the main menu of the system.

2.4   Accessing the System

To access the system, the user must execute the python script. To do so,

1. Open the terminal
2. Navigate to the directory that the python script and associated files are located
3. Type the following command

    python3 code.py

4. Hit enter. Your screen should look like this:

Figure 1

2.5   System Organization & Navigation

The main menu is as shown in Figure 1. It consists of a list of options with numbers/letter corresponding to each option. To select an option, simply type in the number/letter corresponding to it and hit enter.

2.6   Exiting the System

To exit the system, upon navigating to the main menu, simply type in the letter "Q" and hit enter. Your operations will be saved in the files so that the changes made during runtime will be reflected even during the next running of the system.

Figure 2
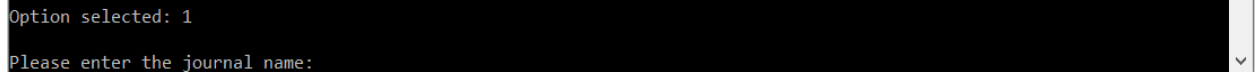
3.   Using the System

The following sub-sections provide detailed, step-by-step instructions on how to use the various functions or features of the Financial Tracker.

3.1   Create a New Journal

To create a new journal,
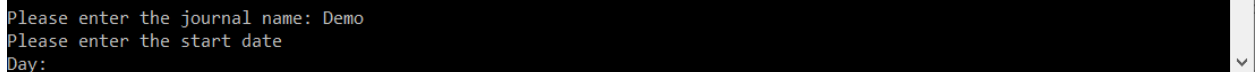
1. Navigate to the main menu, type in the number "1" and hit enter.

```
Option selected: 1

Please enter the journal name:
```

Figure 3.1

2. Type in what you'd like to name the journal and hit enter.

```
Please enter the journal name: Demo
Please enter the start date
Day:
```

Figure 3.2

3. To enter the start date, first enter the day and hit enter. Note that the valid input here must be numeric.

```
Day: 1
Month:
```

Figure 3.3

4. Then, type in the month and hit enter. Note that the valid input here is the month in string format e.g. January, February…December.

```
Month: May
Year:
```

Figure 3.4

5. Then, type in the year and hit enter. As with the day, the valid input here is also numeric.

```
Year: 2022
Please enter the end date
Day:
```

Figure 3.5

6. Repeat steps 3 to 5 for the end date.

```
Please enter the end date
Day: 31
Month: May
Year: 2022
Please enter a brief description of the journal:
```

Figure 3.6

7. Type in a description of the journal and hit enter.

```
Please enter a brief description of the journal: Demo for user manual

Success! Would you like to create a new transaction?
1: Yes
2: No

Option selected: _
```
Figure 3.7

8. Success! You've just created your first journal. If you would like to add a transaction, select option 1 and refer to section step 3 of section 3.4 for the tutorial. Otherwise, select option 2 and you will be redirected to the main menu.

```
Option selected: 2

What would you like to do?
1: Create a new journal
2: View all journals
3: View all transactions in a journal
4: Add Transaction
5: Delete Journal
6: Delete Transaction
7: Edit Journal
8: Edit Transaction
9: View Report
Q: Quit

Option selected:
```
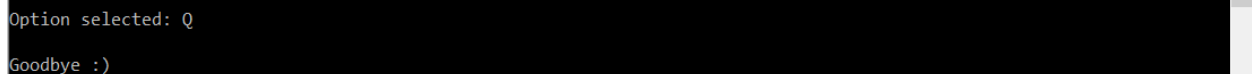Figure 3.8

3.2 View all Journals

To view all journals in the system, simply enter the number "2" and hit enter. The journals in the system should be displayed in a tabular format as shown below:

```
What would you like to do?
1: Create a new journal
2: View all journals
3: View all transactions in a journal
4: Add Transaction
5: Delete Journal
6: Delete Transaction
7: Edit Journal
8: Edit Transaction
9: View Report
Q: Quit

Option selected: 2

+------+-------------------------------+------------------+------------------+
|  ID  | Name                          | Start Date       | End Date         |
|------+-------------------------------+------------------+------------------|
|   1  | Spring Move In                | 20 January 2022  | 30 January 2022  |
|   2  | First Seven Weeks - Spring 2022 | 1 February 2022 | 28 February 2022 |
|   3  | Spring Break                  | 15 March 2022    | 22 March 2022    |
|   4  | Last Seven Weeks - Spring 2022 | 01 April 2022   | 30 April 2022    |
|   5  | Demo                          | 1 May 2022       | 31 May 2022      |
+------+-------------------------------+------------------+------------------+
```

Figure 4

3.3 View all Transactions in a Journal

To view all transactions in a journal:

1. Type in the number "3" and hit enter

```
Option selected: 3

+------+--------------------------------+----------------+------------------+
|  ID  | Name                           | Start Date     | End Date         |
|------+--------------------------------+----------------+------------------|
|   1  | Spring Move In                 | 20 January 2022 | 30 January 2022 |
|   2  | First Seven Weeks - Spring 2022 | 1 February 2022 | 28 February 2022 |
|   3  | Spring Break                   | 15 March 2022  | 22 March 2022    |
|   4  | Last Seven Weeks - Spring 2022 | 01 April 2022  | 30 April 2022    |
|   5  | Demo                           | 1 May 2022     | 31 May 2022      |
+------+--------------------------------+----------------+------------------+

Please enter the name of the journal:
```

Figure 5.1

2. The system displays a list of all existing journals. From this list, choose the journal whose transactions you'd like to view by typing in the name and hitting enter.

```
Please enter the name of the journal: Spring Move In
```

Figure 5.2

The list of transactions will be displayed as shown below and the system returns to the main menu automatically.

```
Please enter the name of the journal: Spring Move In

Transactions stored in Spring Move In:

+------+----------------+----------+
|  ID  | Category       |  Amount  |
|------+----------------+----------|
|   1  | Revenue        |    2000  |
|   2  | Transportation |     150  |
|   3  | Clothing       |     400  |
|   4  | Entertainment  |     200  |
|   5  | Groceries      |     185  |
|   6  | Housing        |     250  |
|   7  | Groceries      |      75  |
|   8  | Transportation |      50  |
+------+----------------+----------+
```

Figure 5.3

3.4 Add Transaction

To add a transaction:

1. Type in the number "4" and hit enter

```
Option selected: 4

+------+----------------------------------+------------------+------------------+
|  ID  | Name                             | Start Date       | End Date         |
|------+----------------------------------+------------------+------------------|
|   1  | Spring Move In                   | 20 January 2022  | 30 January 2022  |
|   2  | First Seven Weeks - Spring 2022  | 1 February 2022  | 28 February 2022 |
|   3  | Spring Break                     | 15 March 2022    | 22 March 2022    |
|   4  | Last Seven Weeks - Spring 2022   | 01 April 2022    | 30 April 2022    |
|   5  | Demo                             | 1 May 2022       | 31 May 2022      |
+------+----------------------------------+------------------+------------------+

Great! Please enter the name of the journal that the transaction will be stored in:
```

Figure 6.1

2. The system displays a table containing all existing journals. Select the journal you'd like to save the transaction in by typing in the name and hitting enter.

```
Great! Please enter the name of the journal that the transaction will be stored in: Demo

Is the transaction expenditure or revenue?
1: Expenditure
2: Revenue

Option selected:
```

Figure 6.2

3. Depending on the type of the transaction select either expenditure or revenue. If you select option 2, jump to step 5.

```
Option selected: 1

Select the category the transaction belongs to
1: Housing
2: Transportation
3: Dining
4: Clothing
5: Entertainment
6: Groceries
7: Travel
8: Other

Option selected:
```

Figure 6.3

4. Select the category that the expenditure belongs to by typing in the number that the option corresponds to and hitting enter.

```
Option selected: 3

Please enter the amount: _
```

Figure 6.4

5. Type in the amount of the transaction and hit enter. Please note that this field only accepts numeric values and that the currency used in UAE Dirhams (AED). However, simply enter the number itself.

```
Please enter the amount: 40

Success! What would you like to do?
1: Create another transaction
2: Return to main menu

Option selected:
```

Figure 6.5

6. Success! You've just created your first transaction. If you'd like to create another transaction within the same journal, select option 1. Else select option 2 to return to the main menu.

3.5   Delete Journal

To delete a journal:

1. Type in the number "5" and hit enter

```
Option selected: 5

+------+--------------------------------+------------------+------------------+
|  ID  | Name                           | Start Date       | End Date         |
|------+--------------------------------+------------------+------------------|
|    1 | Spring Move In                 | 20 January 2022  | 30 January 2022  |
|    2 | First Seven Weeks - Spring 2022| 1 February 2022  | 28 February 2022 |
|    3 | Spring Break                   | 15 March 2022    | 22 March 2022    |
|    4 | Last Seven Weeks - Spring 2022 | 01 April 2022    | 30 April 2022    |
|    5 | Demo                           | 1 May 2022       | 31 May 2022      |
|    6 | ToDelete                       | 14 February 2022 | 15 February 2022 |
+------+--------------------------------+------------------+------------------+

Please enter the name of the journal you want to delete:
```

Figure 7.1

2. The system displays a table containing all existing journals. Select the journal you'd like to delete typing in the name and hitting enter.

```
Please enter the name of the journal you want to delete: ToDelete

Success!
```

Figure 7.2

3. Congratulations! You've just deleted your first journal. The system automatically returns to the main menu.

3.6   Delete Transaction

To delete a transaction:

1. Type in the number "6" and hit enter

```
Option selected: 6

+------+-------------------------------+------------------+------------------+
|  ID | Name                          | Start Date       | End Date         |
|------+-------------------------------+------------------+------------------|
|    1 | Spring Move In                | 20 January 2022  | 30 January 2022  |
|    2 | First Seven Weeks - Spring 2022 | 1 February 2022 | 28 February 2022 |
|    3 | Spring Break                  | 15 March 2022    | 22 March 2022    |
|    4 | Last Seven Weeks - Spring 2022 | 01 April 2022   | 30 April 2022    |
|    5 | Demo                          | 1 May 2022       | 31 May 2022      |
+------+-------------------------------+------------------+------------------+

Please enter the name of the journal you want to delete the transaction from:
```

Figure 8.1

2. The system displays a table containing all existing journals. Select the journal that holds the transaction you want to delete by typing in the name and hitting enter.

```
Please enter the name of the journal you want to delete the transaction from: Demo

Transactions stored in Demo:

+------+------------+----------+
|  ID | Category   |   Amount |
|------+------------+----------|
|    1 | Dining     |       40 |
|    2 | Revenue    |      500 |
+------+------------+----------+

Please enter the ID of the transaction you want to delete:
```

Figure 8.2

3. The system displays a table containing all existing transactions within the journal that you selected. Select the transaction you'd like to delete by typing in the ID and hitting enter.

```
Please enter the ID of the transaction you want to delete: 2
```

Figure 8.3

4. Congratulations! You've just deleted your first transaction. The system automatically returns to the main menu.

3.7   Edit Journal

To edit a journal:

1. Type in the number "7" and hit enter

```
Option selected: 7

+------+----------------------------------+------------------+------------------+
|  ID  | Name                             | Start Date       | End Date         |
|------+----------------------------------+------------------+------------------|
|    1 | Spring Move In                   | 20 January 2022  | 30 January 2022  |
|    2 | First Seven Weeks - Spring 2022  | 1 February 2022  | 28 February 2022 |
|    3 | Spring Break                     | 15 March 2022    | 22 March 2022    |
|    4 | Last Seven Weeks - Spring 2022   | 01 April 2022    | 30 April 2022    |
|    5 | Demo                             | 1 May 2022       | 31 May 2022      |
+------+----------------------------------+------------------+------------------+

Please enter the name of the journal you would like to edit:
```

Figure 9.1

2. The system displays a table containing all existing journals. Select the journal that you want to enter by typing in the name and hitting enter.

```
Please enter the name of the journal you would like to edit: Demo

What would you like to edit?
1: Name
2: Start Date
3: End Date
4: Description

Option selected:
```

Figure 9.2

3. The system displays a list of options of which fields of the journal can be edited. Select a field by typing in the number corresponding to it and hitting enter. In this instance, we will be editing the name of the journal.

```
Option selected: 1

Enter the new value:
```

Figure 9.3

4. Type in the new value and hit enter.

```
Enter the new value: Edited Demo

Success!
```

Figure 9.4

5. Success! The system automatically returns to the main menu.

3.8   Edit Transaction

To edit a transaction:

1. Type in the number "8" and hit enter.

```
Option selected: 8

+------+--------------------------------+------------------+------------------+
|  ID  | Name                           | Start Date       | End Date         |
|------+--------------------------------+------------------+------------------|
|    1 | Spring Move In                 | 20 January 2022  | 30 January 2022  |
|    2 | First Seven Weeks - Spring 2022| 1 February 2022  | 28 February 2022 |
|    3 | Spring Break                   | 15 March 2022    | 22 March 2022    |
|    4 | Last Seven Weeks - Spring 2022 | 01 April 2022    | 30 April 2022    |
|    5 | Edited Demo                    | 1 May 2022       | 31 May 2022      |
+------+--------------------------------+------------------+------------------+

Please enter the name of the journal that the transaction to be edited is in:
```

Figure 10.1

2. The system displays a table containing all existing journals. Select the journal that holds the transaction you want to edit by typing in the name and hitting enter.

```
Please enter the name of the journal that the transaction to be edited is in: Edited Demo

Transactions stored in Edited Demo:

+------+------------+----------+
|  ID  | Category   |  Amount  |
|------+------------+----------|
|    1 | Dining     |      40  |
+------+------------+----------+

Please enter the ID of the transaction to be edited:
```

Figure 10.2

3. The system displays a table containing all existing transactions within the journal that you selected. Select the transaction you'd like to edit by typing in the ID and hitting enter.

```
Please enter the ID of the transaction to be edited: 1

What would you like to edit?
1: Category
2: Amount

Option selected:
```

Figure 10.3

4. The system displays a list of options of which fields of the transaction can be edited. Select a field by typing in the number corresponding to it and hitting enter. In this instance, we will be editing the category of the transaction.

Figure 10.4

5. The system displays a list of the possible categories. Select the new category by typing in the number that it corresponds to and hitting enter.

Figure 10.5

6. Success! The system automatically returns to the main menu.

3.9   View Report

To view the report, simply type in the number "9" and hit enter. The system displays a list of the transaction totals arranged by categories on a monthly basis, as shown below.

Figure 11

4.   Troubleshooting & Support

4.1   Error Messages

Error messages may be displayed when invalid input is entered into the system. The error messages are often descriptive and provide solutions to resolve the error.

4.2   Special Considerations

If experiencing problems with the Python package used (Tabulate), please refer to the documentation on the [website](#).

4.3   Support

For any issues, technical or otherwise, feel free to email the contacts listed in the table below with a description of the issue.

Table 1 - Support Points of Contact

Contact	Organization	Email	Role
Chinonyerem Ukaegbu	NYUAD	cou210@nyu.edu	Developer
Fatima Nadeem	NYUAD	fn2039@nyu.edu	Developer

Appendix A: Record of Changes

Table 2 - Record of Changes

Version Number	Date	Description of Change
1.0	11/05/2022	Created document

Appendix B: Glossary

Table 3 - Glossary

Term	Acronym	Definition
Journal	N/A	Collection of transactions
Transaction	N/A	Expense or revenue
Report	N/A	Collection of transactions arranged on a monthly basis

Appendix C: Referenced Documents

Table 4 - Referenced Documents

Document Name	Document Location and/or URL	Issuance Date

Appendix D: Approvals

The undersigned acknowledge that they have reviewed the User Manual and agree with the information presented within this document. Changes to this User Manual will be coordinated with, and approved by, the undersigned, or their designated representatives.

Table 5 - Approvals

Document Approved By	Date Approved
-- Name: Chinonyerem Ukaegbu, Developer - NYUAD	---------------------------- Date – 11/05/2022
-- Name: Fatima Nadeem, Developer - NYUAD	---------------------------- Date – 11/05/2022