Test cases of the Personal Finance Tracker

1) Add Transaction

   1st :- Enter the amount

```
Personal Finance Tracker
        Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): 1
Enter the amount: abc
Invalid amount. Please try again!
Enter the amount: ./23
Invalid amount. Please try again!
Enter the amount: -90
Amount must be greater than zero. Please try again!
Enter the amount: 0
Amount must be greater than zero. Please try again!
Enter the amount: 7200
Enter category:
```

- This is working as expected.
- when entering the amount it handles all the possible user errors (User enters 0, negative number or a string)

   2nd :- Category

```
1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): 1
Enter the amount: abc
Invalid amount. Please try again!
Enter the amount: ./23
Invalid amount. Please try again!
Enter the amount: -90
Amount must be greater than zero. Please try again!
Enter the amount: 0
Amount must be greater than zero. Please try again!
Enter the amount: 7200
Enter category: uber
Enter date (YYYY-MM-DD):
```

- Category can be anything and if the user types in capitals it will convert to lower case letters automatically and then it goes to the next input

3rd:- Date

```
Enter your choice (1-7): 1
Enter the amount: abc
Invalid amount. Please try again!
Enter the amount: ./23
Invalid amount. Please try again!
Enter the amount: -90
Amount must be greater than zero. Please try again!
Enter the amount: 0
Amount must be greater than zero. Please try again!
Enter the amount: 7200
Enter category: uber
Enter date (YYYY-MM-DD): s
Invalid date. Please enter a valid date in this format YYYY-MM-DD
Enter date (YYYY-MM-DD): 31-10-2023
Invalid date. Please enter a valid date in this format YYYY-MM-DD
Enter date (YYYY-MM-DD): 2023/12/31
Invalid date. Please enter a valid date in this format YYYY-MM-DD
Enter date (YYYY-MM-DD): 2023-10-31
Transaction added successfully.
```

- Working as expected,
- Handled the errors including entering a string and wrong date format (DD-MM-YYYY)
- If user inputs a string or a number or any other character it will display an invalid input message and asks the user to input the date in proper format

2) View Transactions

```
Enter your choice (1-7): 2
Category: uber
1. amount: 7200.0, date: 2023-10-31

Category: groceries
1. amount: 1875.0, date: 2024-02-03

Category: table
1. amount: 5800.0, date: 2024-01-24

Category: utilities
1. amount: 750.0, date: 2024-02-10

Category: food
1. amount: 2500.0, date: 2023-10-19

Category: rent
1. amount: 35000.0, date: 2024-03-25

Category: fees
1. amount: 75000.0, date: 2024-01-25

2. amount: 75000.0, date: 2024-03-25


   Personal Finance Tracker
         Main Menu
```

- This works as expected separated by category and with the indexes.
- it shows all the transactions with the indexes of that specific transaction. In here I have taken the content from the text file as well
- Both user inputs and the text file content will be shown in here

3) Update a Transaction

```
Enter your choice (1-7): 3
Category: uber
1. amount: 7200.0, date: 2023-10-31

Category: groceries
1. amount: 1875.0, date: 2024-02-03

Category: table
1. amount: 5800.0, date: 2024-01-24

Category: utilities
1. amount: 750.0, date: 2024-02-10

Category: food
1. amount: 2500.0, date: 2023-10-19

Category: rent
1. amount: 35000.0, date: 2024-03-25

Category: fees
1. amount: 75000.0, date: 2024-01-25

2. amount: 75000.0, date: 2024-03-25

Enter category of the transaction to update: FOOD
Enter the transaction index you want to update: 1
Current transaction: Amount: 2500.0, Date: 2023-10-19
Enter the new amount:
```

```
Enter category of the transaction to update: FOOD
Enter the transaction index you want to update: 1
Current transaction: Amount: 2500.0, Date: 2023-10-19
Enter the new amount: 4300
Enter the new date (YYYY-MM-DD): 2023-10-21
Are you sure you want to update? (yes/no): yes
Transaction updated successfully!

   Personal Finance Tracker
         Main Menu
```

```
Enter category of the transaction to update: pickme
Category not found.
Enter category of the transaction to update: 8
Category not found.
Enter category of the transaction to update: uber
Enter the transaction index you want to update: 2
Invalid transaction index.
Enter category of the transaction to update:
```

```
Enter category of the transaction to update: rent
Enter the transaction index you want to update: 1
Current transaction: Amount: 35000.0, Date: 2024-03-25
Enter the new amount: 24
Enter the new date (YYYY-MM-DD): 2020-20-20
Are you sure you want to update? (yes/no): no
Update cancelled successfully!

   Personal Finance Tracker
          Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7):
```

- This is working as expected without errors, The errors have been handled.
- when the user inserts a correct index, user can update the transaction and it will be saved .
- It does not matter if the user enters in capital it will automatically convert into lowercase so that issue is also been handled.
- If the user enters a category and an index which is not suitable it shows a invalid message and asks the user to enter again until the user enters a correct category and index
- Before saving user can cancel it or save it, if user cancels it goes back to main menu

4) Delete a Transaction

```
Enter your choice (1-7): 4
Category: groceries
1. amount: 1875.0, date: 2024-02-03

Category: table
1. amount: 5800.0, date: 2024-01-24

Category: utilities
1. amount: 750.0, date: 2024-02-10

Category: food
1. amount: 2500.0, date: 2023-10-19

Category: rent
1. amount: 35000.0, date: 2024-03-25

Category: fees
1. amount: 75000.0, date: 2024-01-25

2. amount: 75000.0, date: 2024-03-25

Enter category of the transaction to delete: Food
Enter the transaction index you want to delete: 1
Are you sure you want to delete? (yes/no): yes
Transaction deleted successfully!!




Enter category of the transaction to delete: uber
Category not found.
Category: groceries
1. amount: 1875.0, date: 2024-02-03

Category: table
1. amount: 5800.0, date: 2024-01-24

Category: utilities
1. amount: 750.0, date: 2024-02-10

Category: food
Category: rent
1. amount: 35000.0, date: 2024-03-25

Category: fees
1. amount: 75000.0, date: 2024-01-25

2. amount: 75000.0, date: 2024-03-25

Enter category of the transaction to delete:
```

```
Enter category of the transaction to delete: table
Enter the transaction index you want to delete: 1000
Invalid transaction index.
Category: groceries
1. amount: 1875.0, date: 2024-02-03

Category: table
1. amount: 5800.0, date: 2024-01-24

Category: utilities
1. amount: 750.0, date: 2024-02-10

Category: food
Category: rent
1. amount: 35000.0, date: 2024-03-25

Category: fees
1. amount: 75000.0, date: 2024-01-25

2. amount: 75000.0, date: 2024-03-25

Enter category of the transaction to delete: |
```

```
Enter category of the transaction to delete: food
No transactions available for this category.
Category: groceries
1. amount: 1875.0, date: 2024-02-03

Category: table
1. amount: 5800.0, date: 2024-01-24

Category: utilities
1. amount: 750.0, date: 2024-02-10

Category: food
Category: rent
1. amount: 35000.0, date: 2024-03-25

Category: fees
1. amount: 75000.0, date: 2024-01-25

2. amount: 75000.0, date: 2024-03-25

Enter category of the transaction to delete: |
```

```
Enter category of the transaction to delete: table
Enter the transaction index you want to delete: 1
Are you sure you want to delete? (yes/no): no
Cancelled successfully!!

  Personal Finance Tracker
          Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7):
```

- This works as expected, all the possible errors have been handled.
- When deleting a transaction user gets to input the category and an index of that transaction which user wants to delete and before deleting it will confirm again with the user
- but if the user enters a category and an index which is not there in the list or any other character it shows an invalid message and asks the user to enter the category and index again until user enters a correct one.
- And if user deletes a transaction in category and afterwards when the user enters the same category it shows "No transactions available to delete"

5) Display expenses summary

```
Enter your choice (1-7): 5

Your Expenses Summary:

You have spent a total amount of  Rs.1875.0 for the groceries

You have spent a total amount of  Rs.5800.0 for the table

You have spent a total amount of  Rs.750.0 for the utilities

You have spent a total amount of  Rs.0 for the food

You have spent a total amount of  Rs.35000.0 for the rent

You have spent a total amount of  Rs.150000.0 for the fees

  Personal Finance Tracker
          Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): |
```

- When the user enters the option no.5 user will get a summary of all the expenses user entered and the content of the text file. If there is nothing it shows nothing

6) Get Transactions from the text file

```
   Personal Finance Tracker
          Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): 6

Text file content added successfully!

   Personal Finance Tracker
          Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7):




Enter your choice (1-7): 6

Text file content already exists.

   Personal Finance Tracker
          Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): |
```

- If user wants to add bulk content using a text file, user can select option no.6 in the menu and it will be added
- and if user enters the same option again it won't be duplicated because it will check line by line if the content is already added

7) Exit

```
Text file content already exists.

   Personal Finance Tracker
           Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): 7
All Transactions are saved to JSON file.
Exiting from the program...
```

- When user enters no.7, it will exit from the program by printing "Exiting from the program..." and "All Transactions are saved to the JSON file."
- and all the transactions will be saved in a JSON file if user added any transactions.

8) Menu

```
   Personal Finance Tracker
           Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): a
Invalid choice. Please enter a number.
```

```
   Personal Finance Tracker
         Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): ;//
Invalid choice. Please enter a number.

   Personal Finance Tracker
         Main Menu




   Personal Finance Tracker
         Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): 8
Invalid choice. Please choose a number from 1 to 7.

   Personal Finance Tracker
         Main Menu

1. Add a Transaction
2. View all Transactions
3. Update a Transaction
4. Delete a Transaction
5. Display the expenses Summary
6. Get Transactions from the text file
7. Exit

Enter your choice (1-7): 1
Enter the amount:
```

- In the menu if the user enters anything other than a number between (1-7) it will display an error message and asks the user to enter again. This option works as expected and the errors have been handled.