FINANCE MANAGER – A JAVA CONSOLE APPLICATION

PROJECT SUMMARY

The **Finance Tracker** is a console-based Java program designed to help users record and monitor their financial transactions using simple text-based commands.
It allows users to log incomes and expenses, categorize them, view summaries, and store data in a relational database for persistence.
Since it runs entirely in the console, the application is lightweight, fast, and platform-independent — suitable for both personal use and as a learning project in Java database integration.

OBJECTIVES

Transaction Tracking – Record and categorize all income and expense entries.

Expense Analysis – Generate summaries to identify spending patterns.

Accessibility – Make the software easy to run and maintain without advanced technical skills.

GOAL

The goal of this project is to deliver a simple yet powerful financial tracking tool that helps users a straightforward solution to monitor and control their personal finances, leading to better money management and informed decision-making.

APPROACH

DESIGN PHASE

Planned a simple command- driven menu system.

To create a database schema with tables for users, transactions and categories.

DEVELOPMENT

Implemented core Java classes for adding, viewing and deleting transactions.

Built reporting features to show income/expenses total and balances.

TESTING

Verified correct handling of positive/negative values.

Tested invalid inputs for menu options and transaction entries.

TECH STACK

PROGRAMMING LANGUAGE: JAVA (CORE)

DATABASES: MYSQL

INTERFACE: CONSOLE/COMMAND LINE

DEVELOPMENT TOOLS: INTELLIJ IDEA, VISUAL STUDIO CODE

VERSION CONTROL: GIT & GITHUB

HOW TO RUN

OPTION 1- USING INTELLIJ IDEA

Clone the project from GitHub : https://github.com/NaveenDevX/finance-tracker-java

Open IntelliJ IDEA → `File → Open` → Select the project folder.

Set up MySQL and run the provided SQL script to create tables.

Update database credentials in `dbConfig.java`.

Run the `Main.java` file — follow the console menu prompts.

OPTION 2- USING VS CODE

Install **Java Extension Pack** from the VS Code Marketplace.

Clone the project and open the folder in VS Code.

Set up MySQL and execute the SQL script to create tables.

Update database credentials in `dbConfig.java`.

Open `Main.java` and click **Run**.

RESULTS

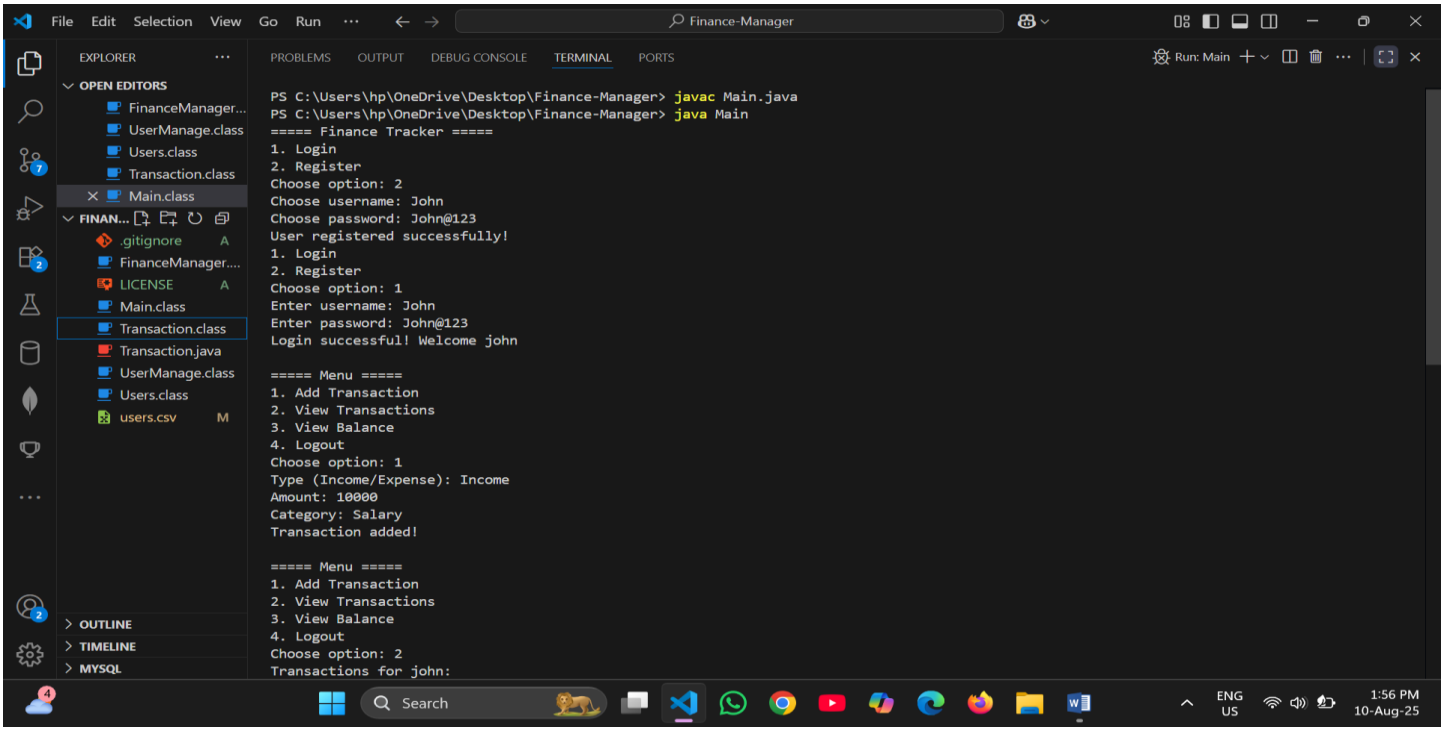
Successful User Registration & Login: New users can register and then log in successfully, with invalid login attempts correctly rejected.

Transaction Management: Users can add expense or income entries with type, amount, and category — confirmed by “Transaction added!” messages.

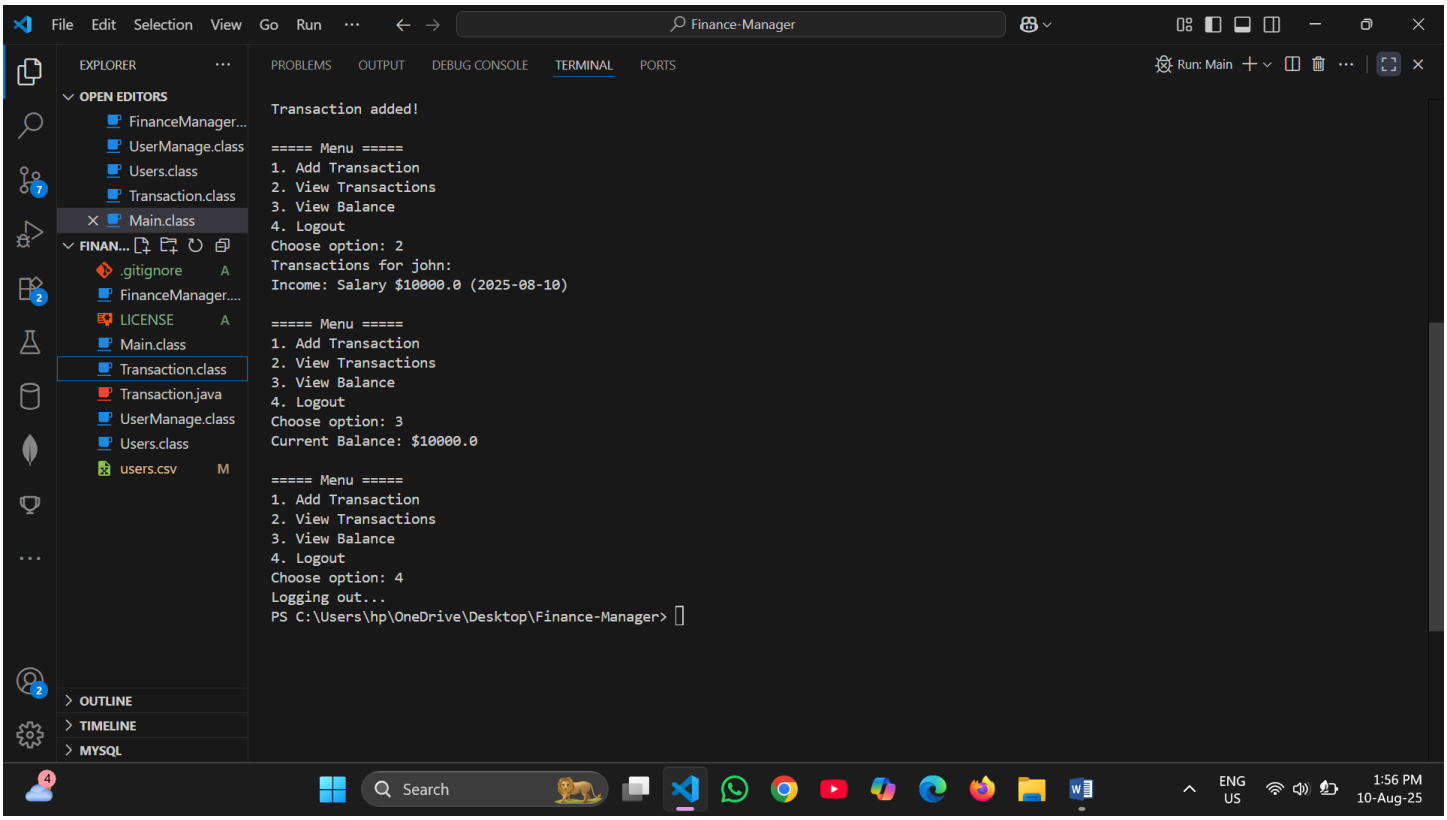
Seamless Menu Navigation: The menu reappears after each action, enabling smooth navigation for adding, viewing, and checking balances without restarting.

SCREENSHOTS

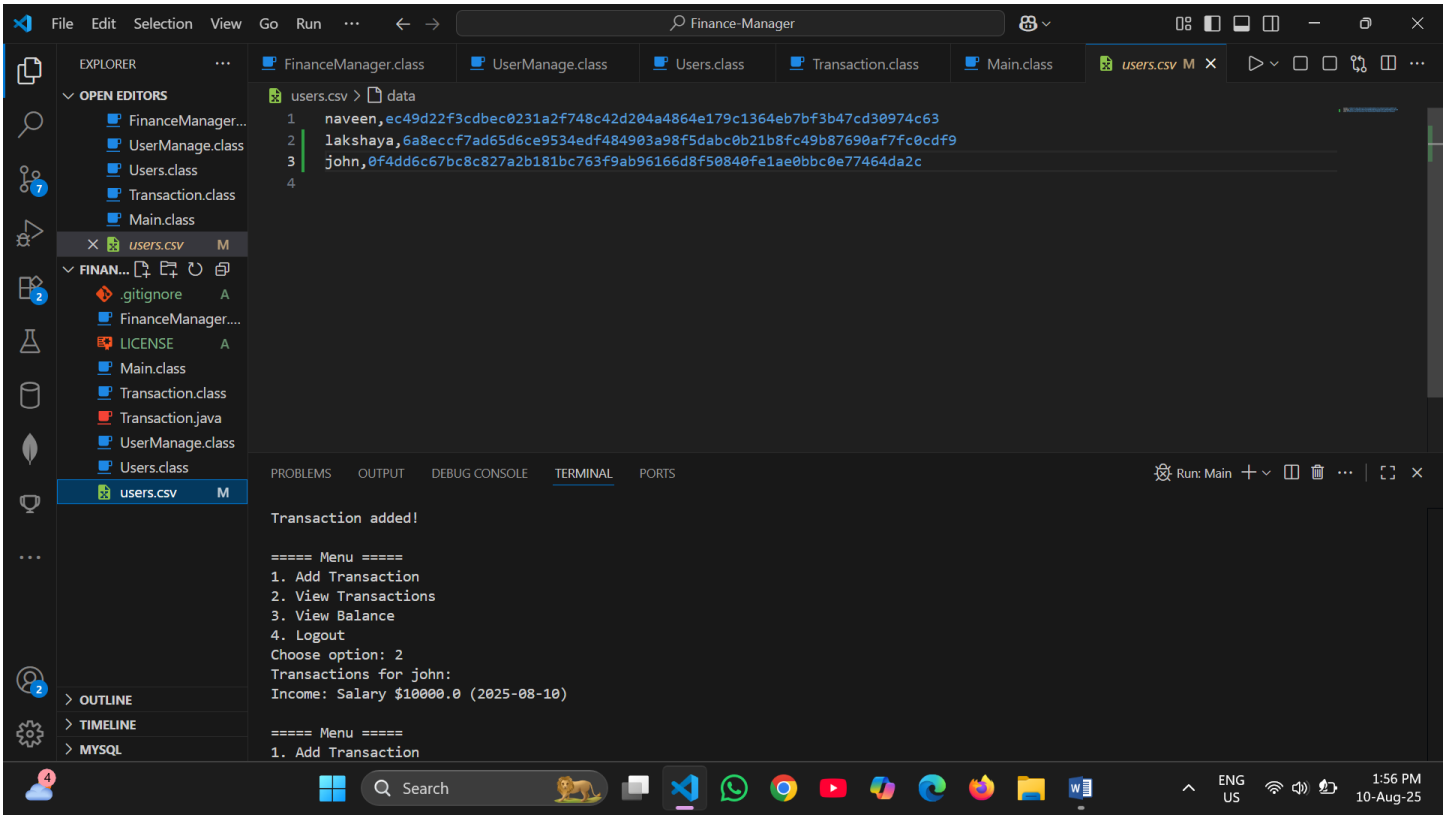
FINANCE TRACKER (LOGIN, REGISTER)



FINANCE TRACKER MENU (TRANSACTIONS- ADD, VIEW, BALANCE)



TO HASH THE PASSWORD USING SH-256 AND STORE IT IN CSV FILE



GITHUB LINK

https://github.com/NaveenDevX/finance-tracker-java

CONCLUSION

The **Finance Tracker** project demonstrates strong fundamentals in Java programming, database integration with MySQL, and software design for real-world use.

Its console-based interface ensures simplicity while still delivering valuable functionality for managing personal finances.