

NEPTCASH

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INTRODUCTION

This project consists of developing a monolithic software for a digital wallet application with multiple backends which are connected through web services.

The objective of the development of this project is to implement the digital wallet using object-oriented programming, design patterns and SOLID principles.

STAKEHOLDERS

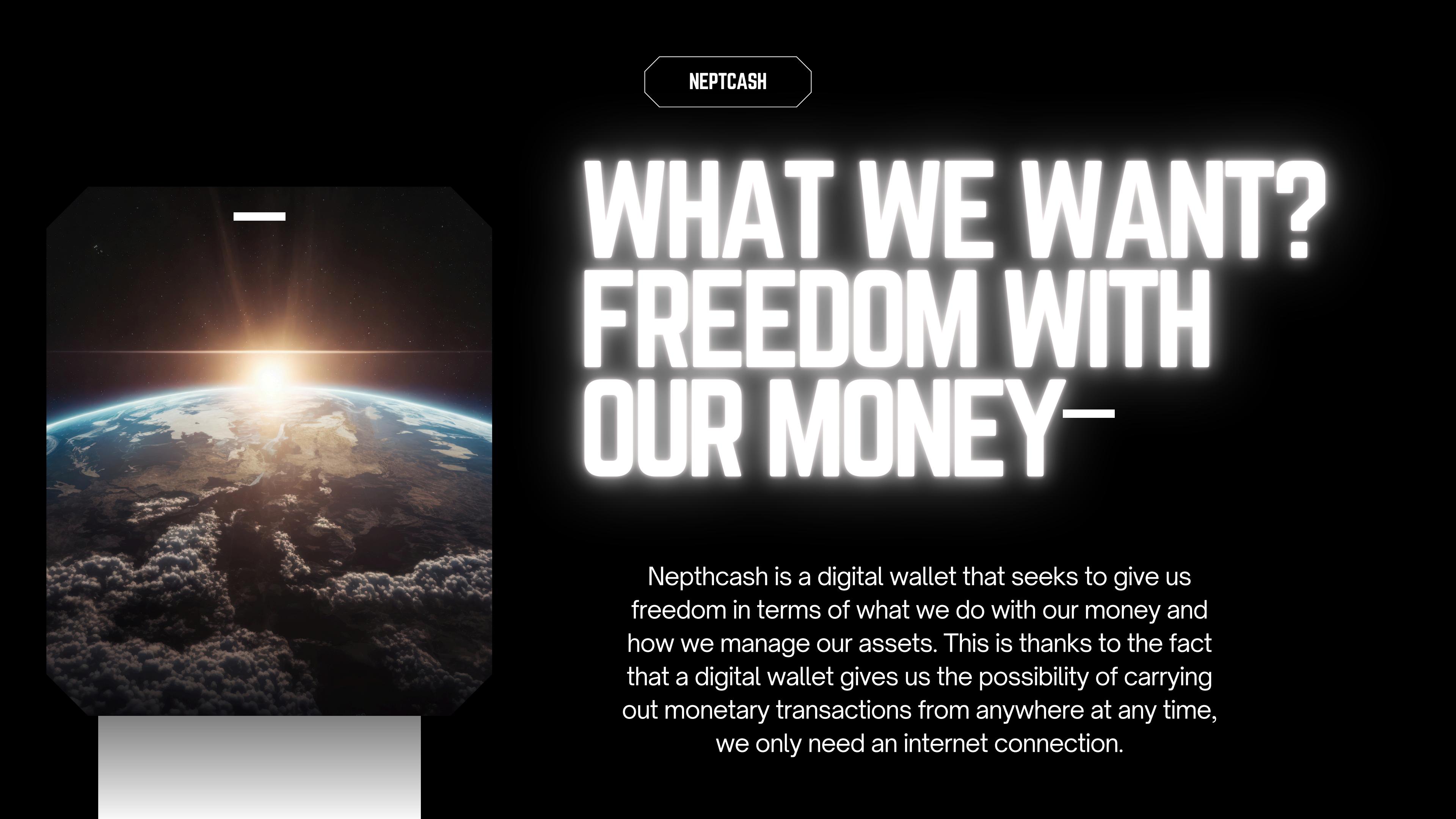
About stakeholders, we consider that our software can be functional for those banking companies that want to expand their capabilities and reach with the public. Likewise, those users who require a simple and efficient way to manage their money may be interested in the virtual wallet.

TECHNICAL DECISIONS

As for the technical decisions, it was decided to structure the project under the idea of a layered architecture, in order to develop a scalable, maintainable and flexible system.

In this way, the application is made up of a backend that has all the logic for the operation of the software, as well as the data layer. The backend is made in two programming languages, Python and Java. For the data layer we use json files.

Likewise, FastApi and Spring Boot were used to easily unify the backends made with Java and Python, as well as having a complete tool for managing the application's web services. Finally, the postman software was used to test the services.



NEPTCASH

WHAT WE WANT? FREEDOM WITH OUR MONEY—

Neptcash is a digital wallet that seeks to give us freedom in terms of what we do with our money and how we manage our assets. This is thanks to the fact that a digital wallet gives us the possibility of carrying out monetary transactions from anywhere at any time, we only need an internet connection.

GOALS

1

A scalable,
maintainable,
flexible and
modular system

2

Good
programming
practices

3

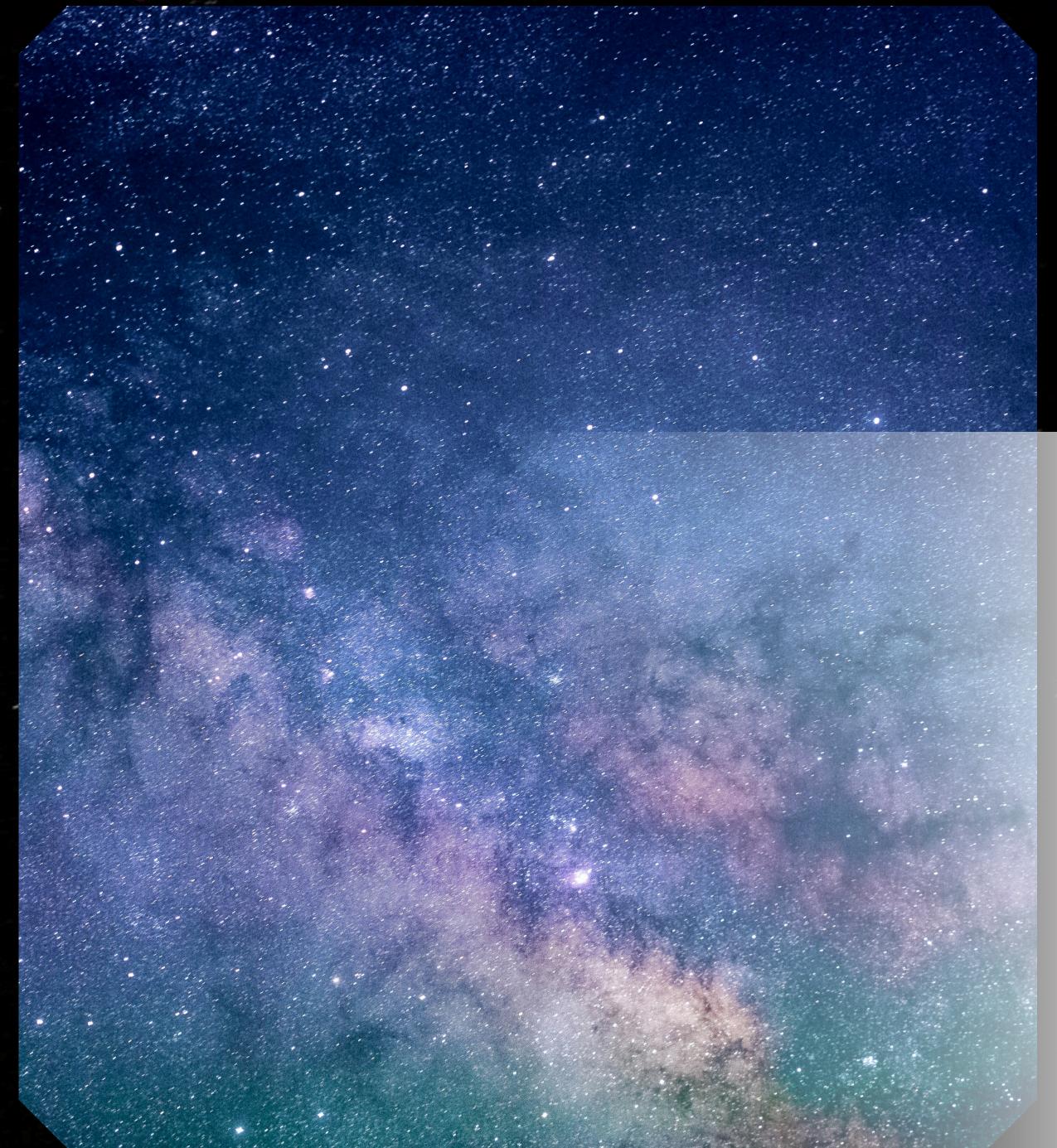
Keep it simple

IMPLEMENTATION OF PATTERNS

Factory

Facade

Singleton





DESIGN PROCESS

- USER HISTORIES
- ACTIVITY DIAGRAMS
- SEQUENCE DIAGRAMS
- DEPLOYMENT DIAGRAMS
- COMPONENTS DIAGRAM
- CLASS DIAGRAM

USER HISTORIES



UH_1: As CTO, I want to keep a record of the users who enter the application. I want to know their first and last name, cell phone number, email address, and ID, to know who is using our service.



UH_2: As CTO I want to offer a simple way for users to access their digital wallet, so that everyone can access the service easily and immediately.

UH_3: As CTO I want to be able to send money between different wallets so that users can make fast and secure transfers within the ecosystem.

USER HISTORIES



UH_4: As CTO I want users to be able to link a debit card to their wallet so they can make payments easily.



UH_5: As a user, I want to be able to withdraw money from my wallet at a physical location so that I can access my cash quickly and conveniently when I need it.

UH_6: As a user, I want to be able to load money into my account in different ways so that I can have flexibility and ease when adding funds.

USER HISTORIES



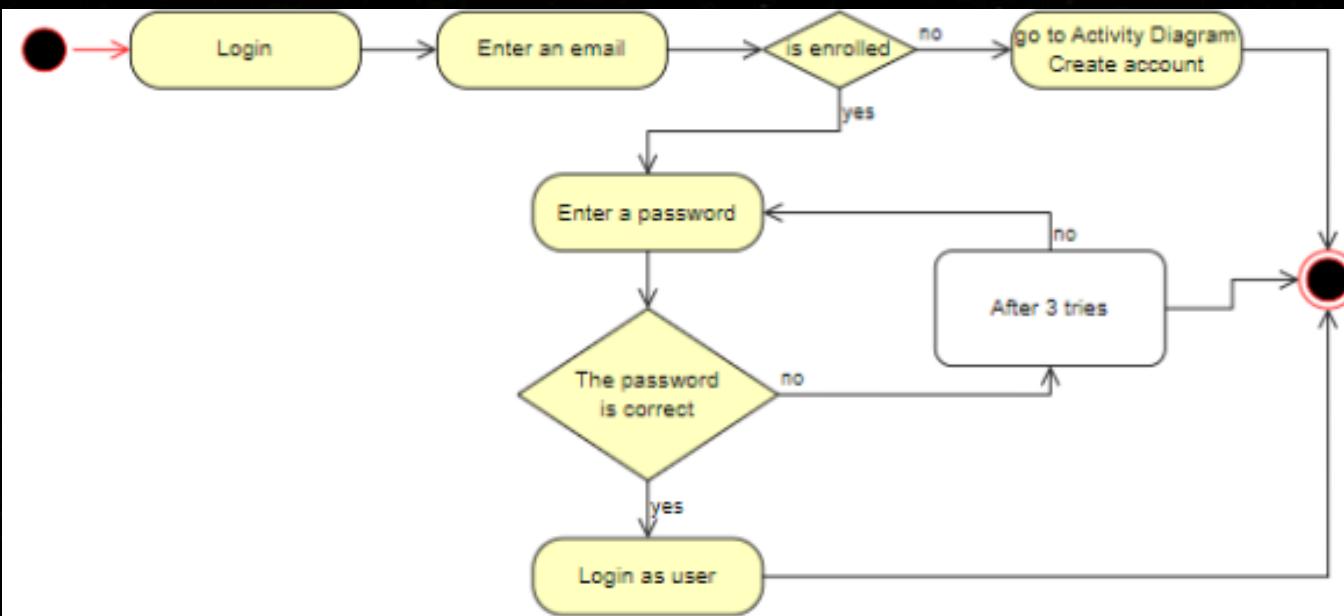
UH_7: As a user, I want to be able to request money from a friend who also has the app so that I can receive the money quickly and easily without complications.



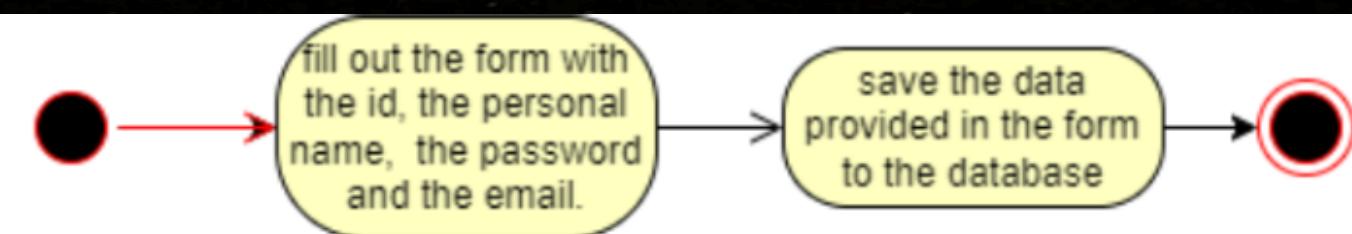
UH_8: As a user, I want to be able to see how much money I currently have and a history of all the transactions made so that I can keep track and monitor my finances.

UH_9: As CTO, I want to know the user's place of residence and their ID to ensure that all legal requirements are met.

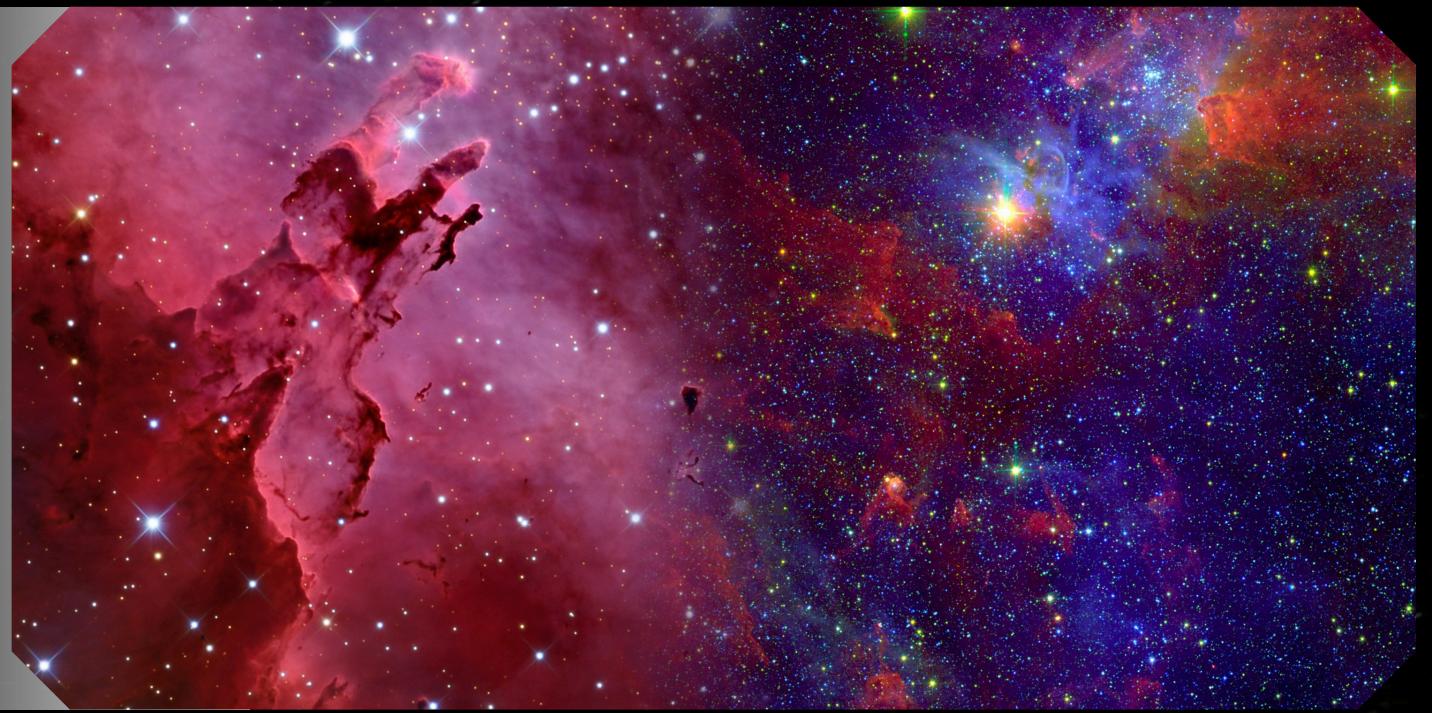
Login



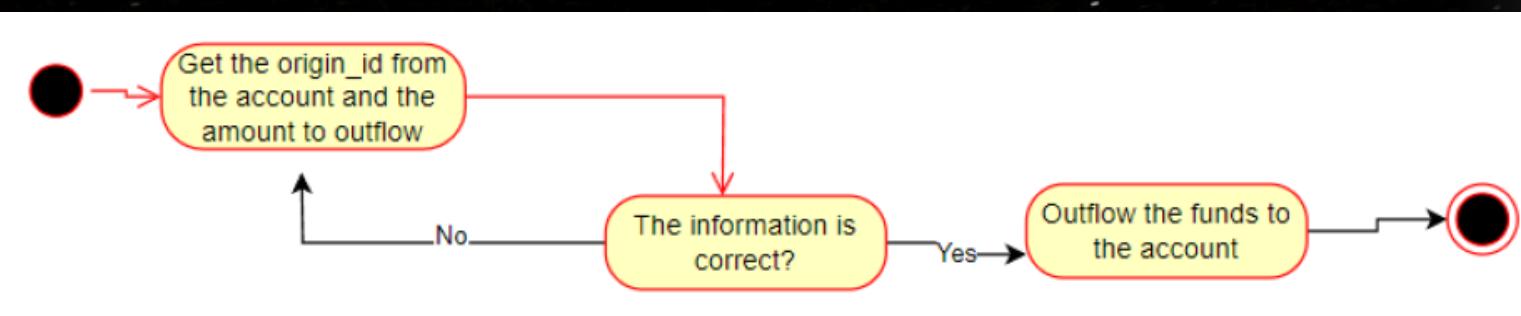
Create account



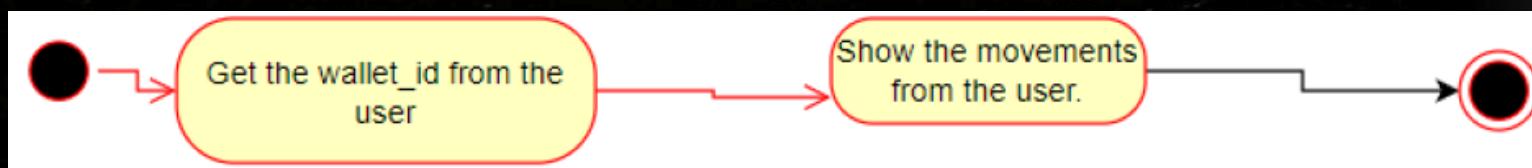
ACTIVITY DIAGRAMS



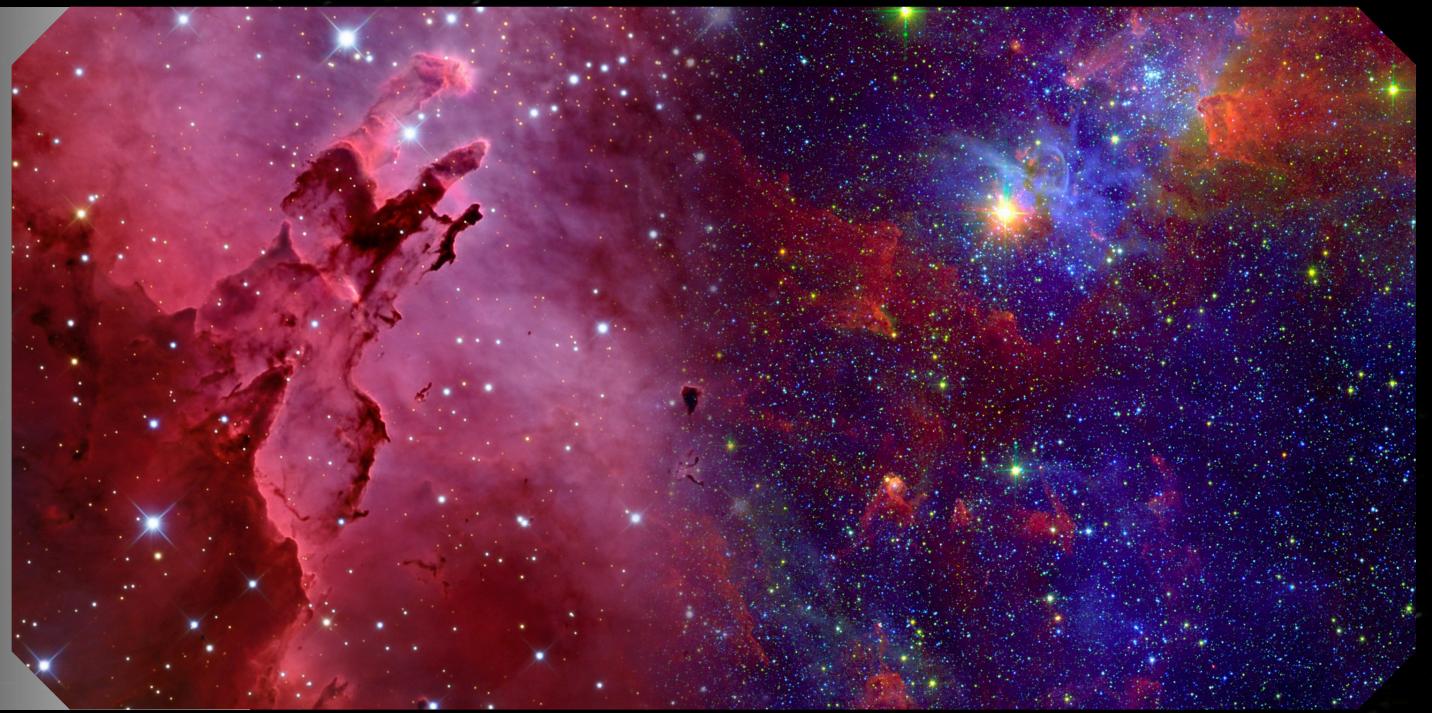
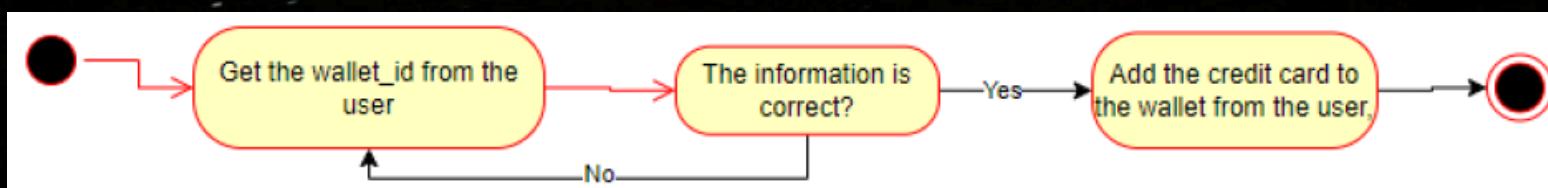
Outflow funds



Show Movements



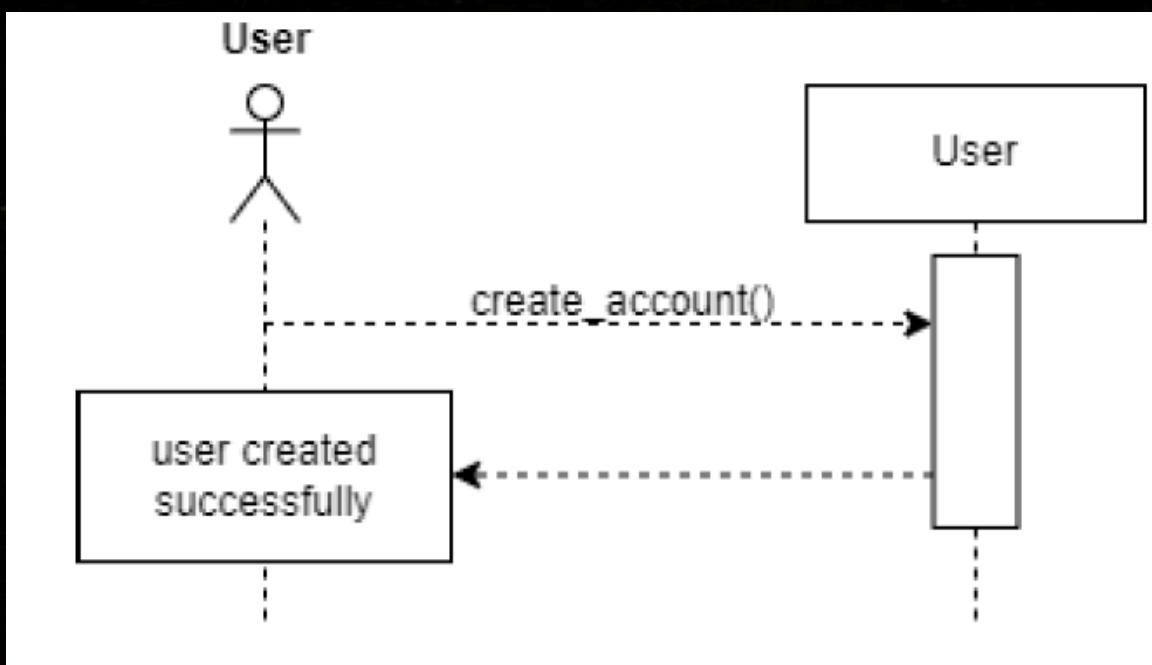
Outflow funds



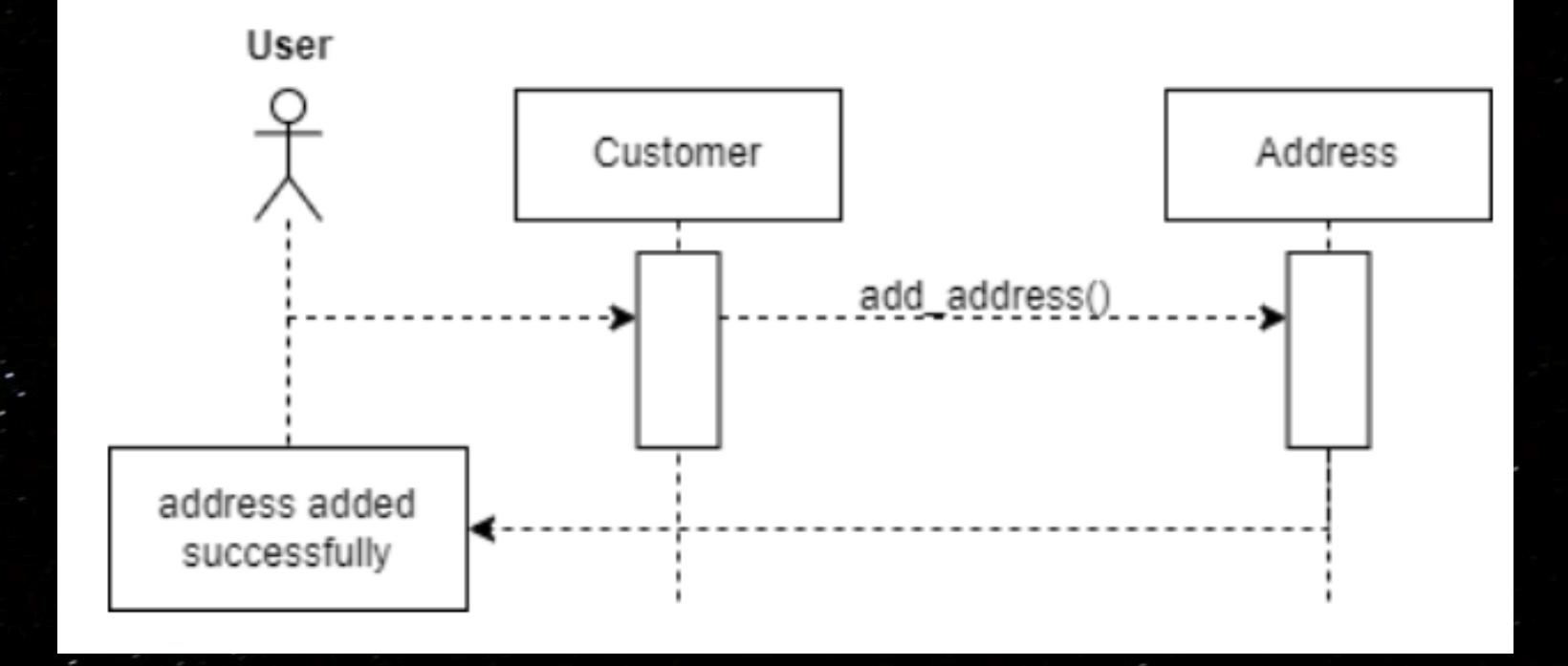
ACTIVITY DIAGRAMS

SEQUENCE DIAGRAMS

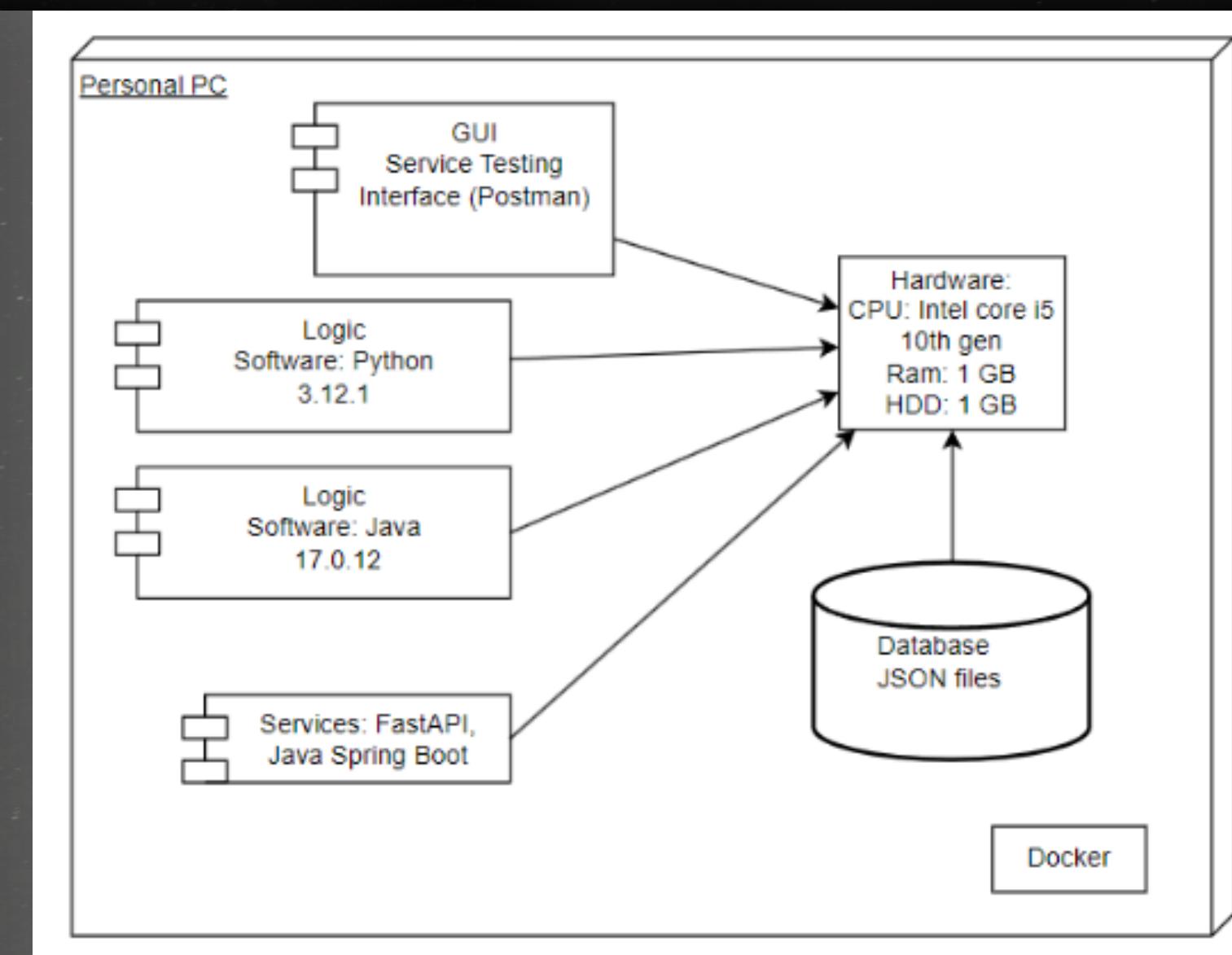
Create Account

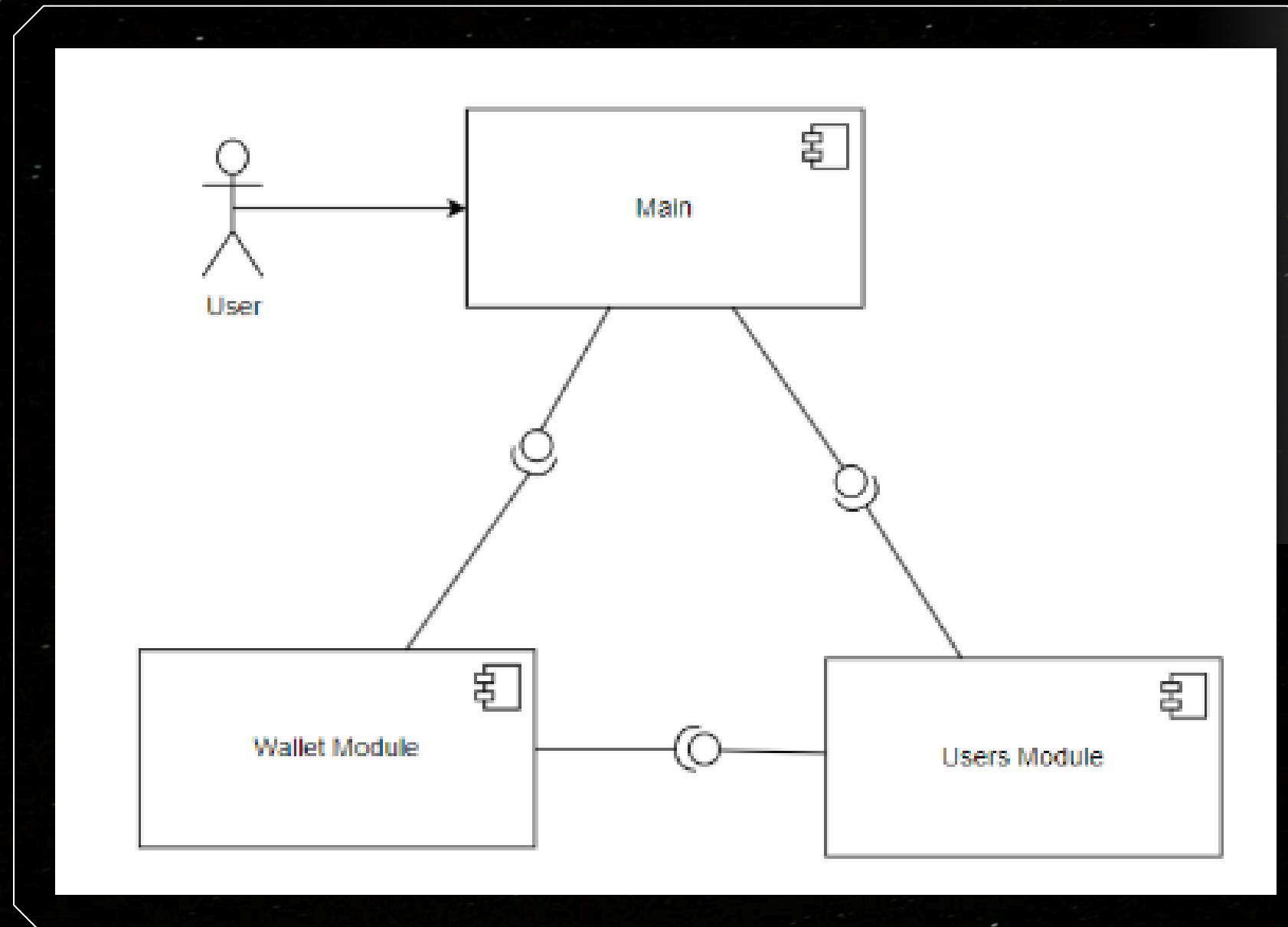


Add Address



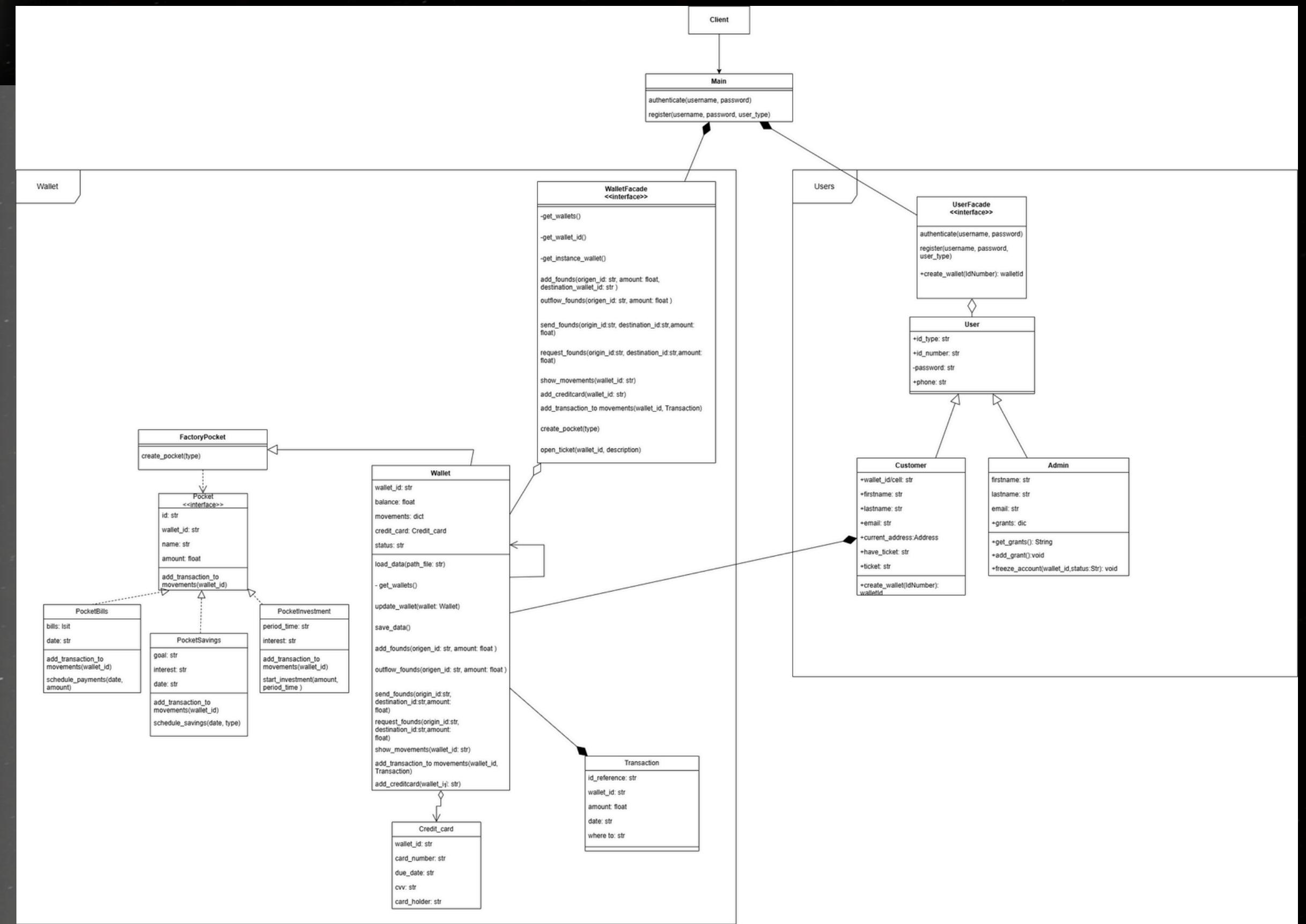
DEPLOYMENT DIAGRAM





COMPONENTS DIAGRAM

CLASS DESIGN





LET'S GO TO THE APPLICATION

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