



Web Services Mini Project

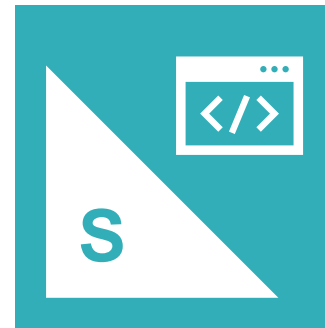
Multi currency e-wallet application
(Spring boot + java)

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Introduction

Multi currency e-wallet

Euro or USD based e-wallet accounts can be created using the system.



Spring boot backend

spring-boot application has been implemented on the provider end.



Basic bank account operation

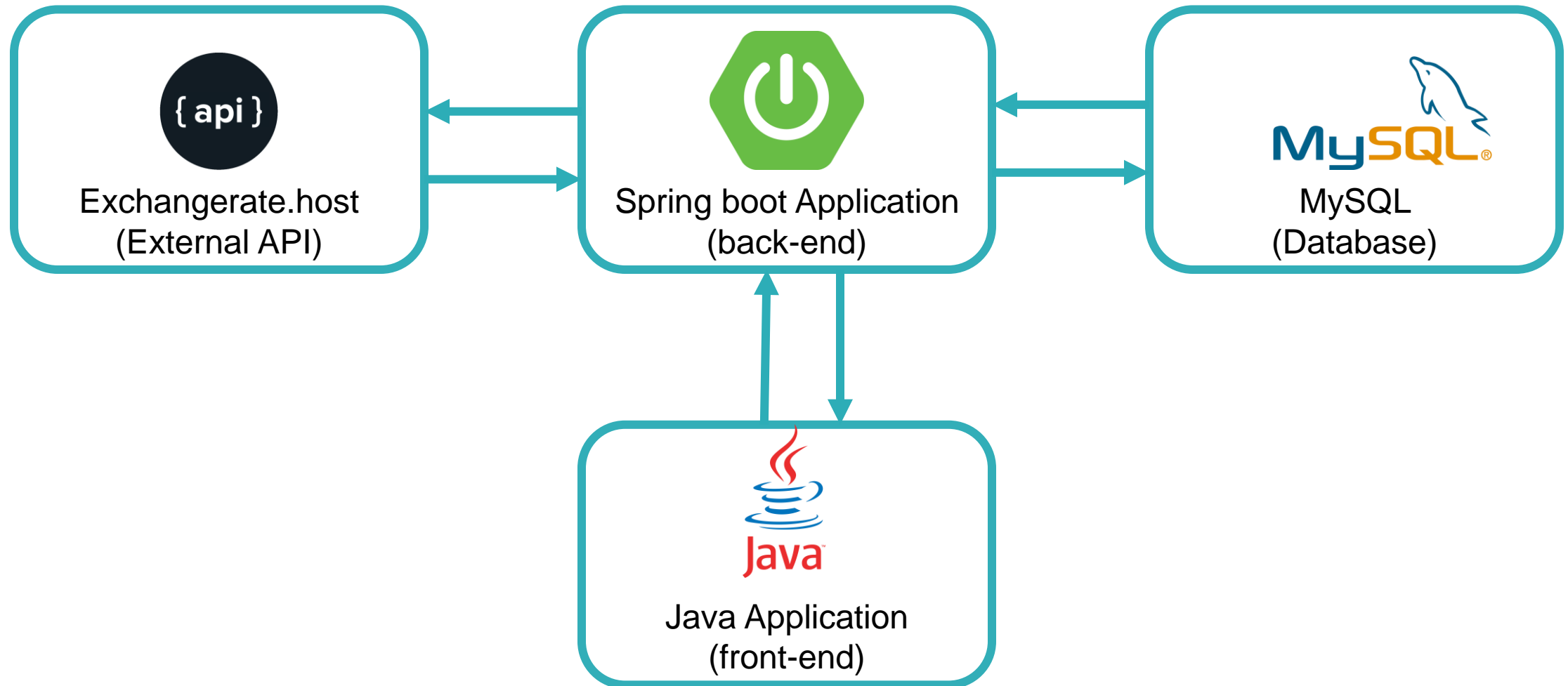
basic bank operations such as deposits, withdrawal, transferring money and bill payment.



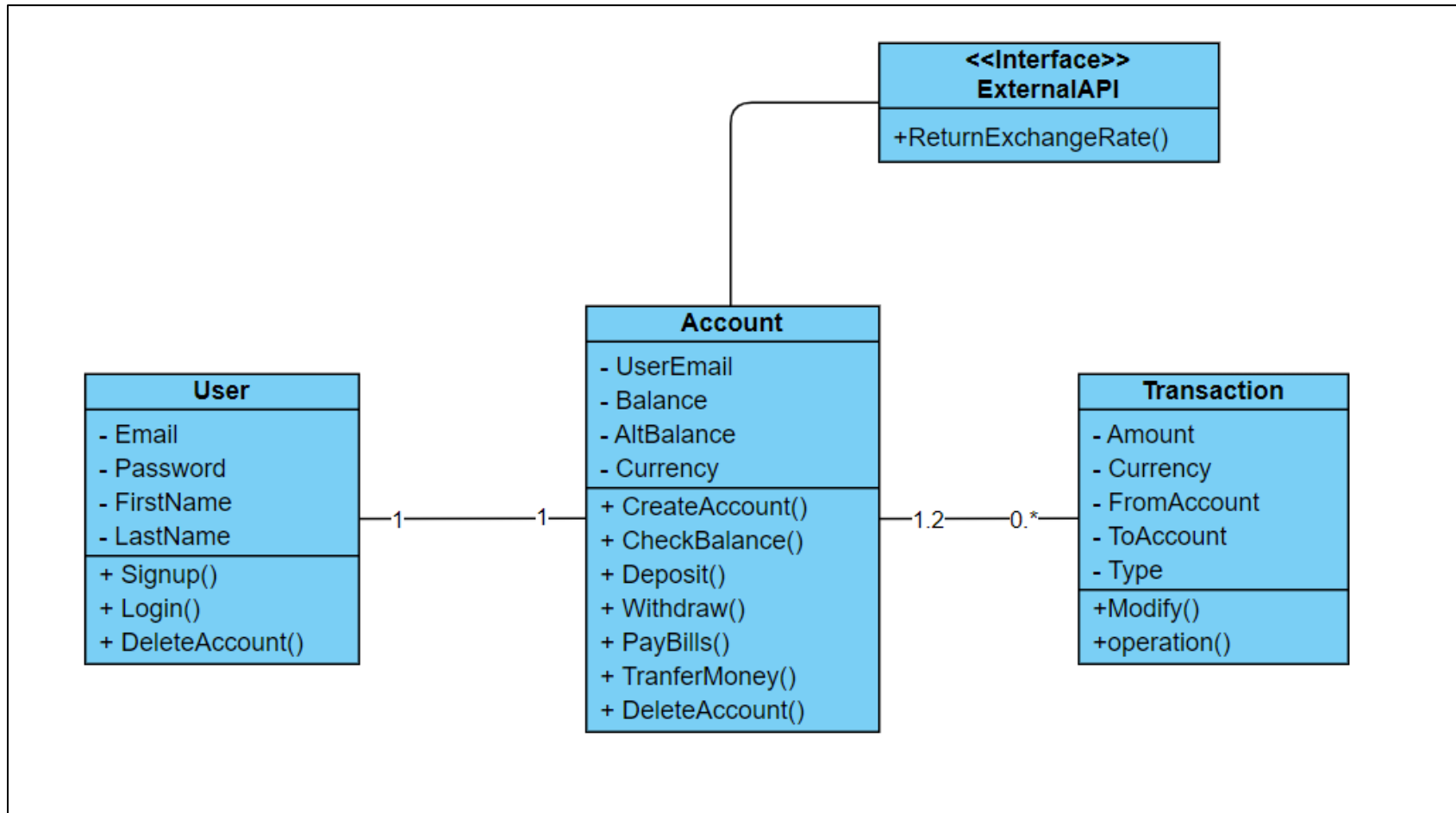
Java application for consumer

a standalone java application has been implemented on the client end.

System Architecture



UML Class Diagram



Application Backend



Spring boot Application

Spring Boot Application Functions

01

Sign up

An external user can sign up for the system.

02

Log in

A user who already has an e-wallet account can sign in

03

Create e-wallet Account

An e-wallet account has been created automatically when a user signs up for the system

04

Deposit money

Users can deposit money into their account through two currencies

05

Withdraw money

Users can withdraw money from their account through two currencies

06

Bill payments

Users can pay essential bills from their account through two currencies

07

Transfer money between two accounts

Users can transfer money from their account to another e-wallet account through two currencies

API Endpoints

POST

localhost:8000/api/v1/signup

POST

localhost:8000/api/v1/deposit

POST

localhost:8000/api/v1/login

POST

localhost:8000/api/v1/withdraw

POST

localhost:8000/api/v1/createaccount

POST

localhost:8000/api/v1/paybill

GET

localhost:8000/api/v1/accountbyid/{email}

POST

localhost:8000/api/v1/transfer

DELETE

localhost:8000/api/v1/deleteaccount/{email}

Open API Specification



Swagger UI has been included in project

<http://localhost:8000/swagger-ui/index.html>

Open API Specification

OpenAPI definition v0 OAS3

[/v3/api-docs](#)

Servers

`http://localhost:8000 - Generated server url` ▾

account-controller ^

POST `/api/v1/withdraw` ▾

POST `/api/v1/transfer` ▾

POST `/api/v1/paybill` ▾

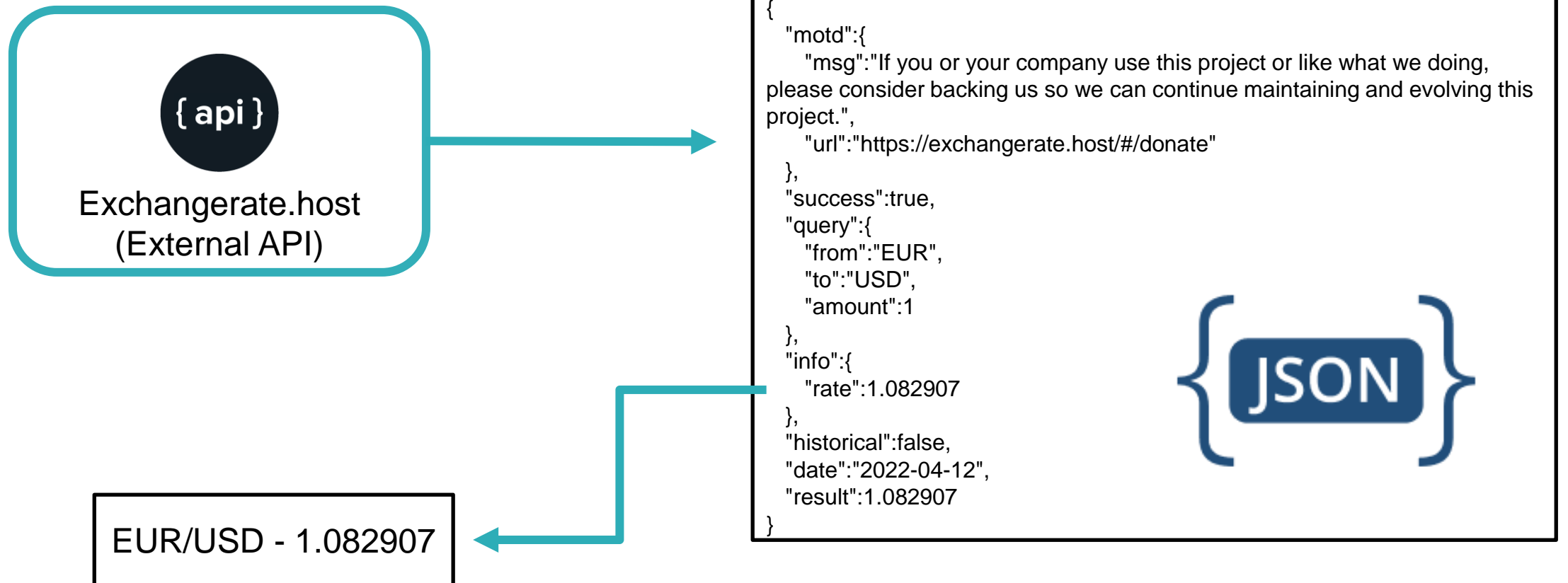
POST `/api/v1/deposit` ▾

POST `/api/v1/createaccount` ▾

GET `/api/v1/accountbyid/{UserEmail}` ▾

DELETE `/api/v1/deleteaccount/{UserEmail}` ▾

External API



Application Font-end



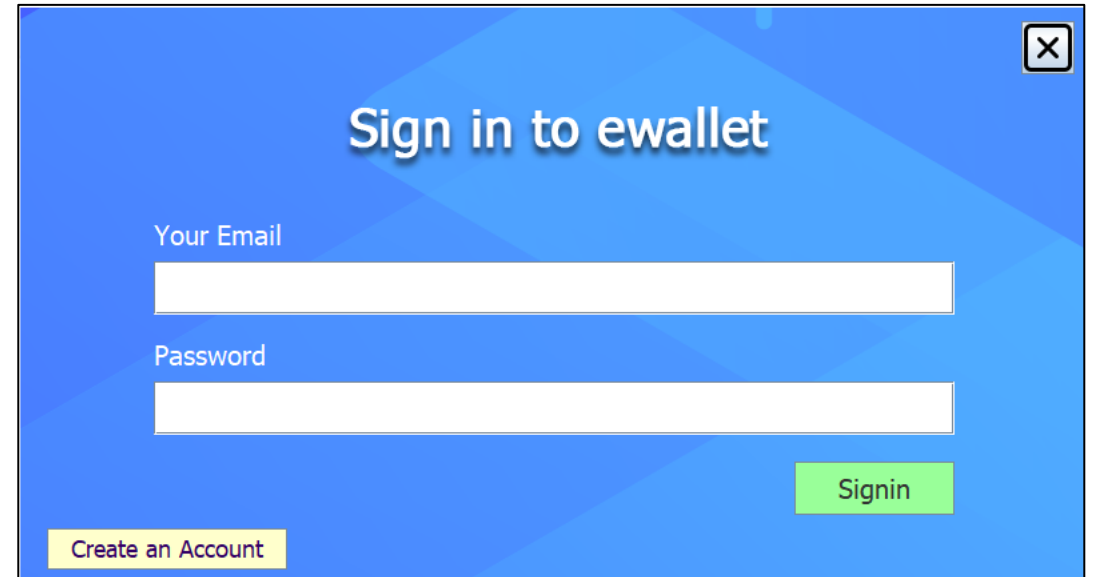
Java Application

Java Application Functions



A screenshot of a 'Create an Account' form. The form has a blue background with a geometric pattern. It includes fields for 'Your Email', 'Password', 'First Name', 'Last Name', 'Birthday' (with a calendar icon), 'Gender' (radio buttons for 'Male' and 'Female'), 'NIC number', 'Marital status' (a dropdown menu showing 'Select'), 'Address', and 'City'. At the bottom, there is a dashed line, an 'Account Currency' dropdown menu showing 'EUR', and a green 'Create My Account' button. A close button (X) is in the top right corner.

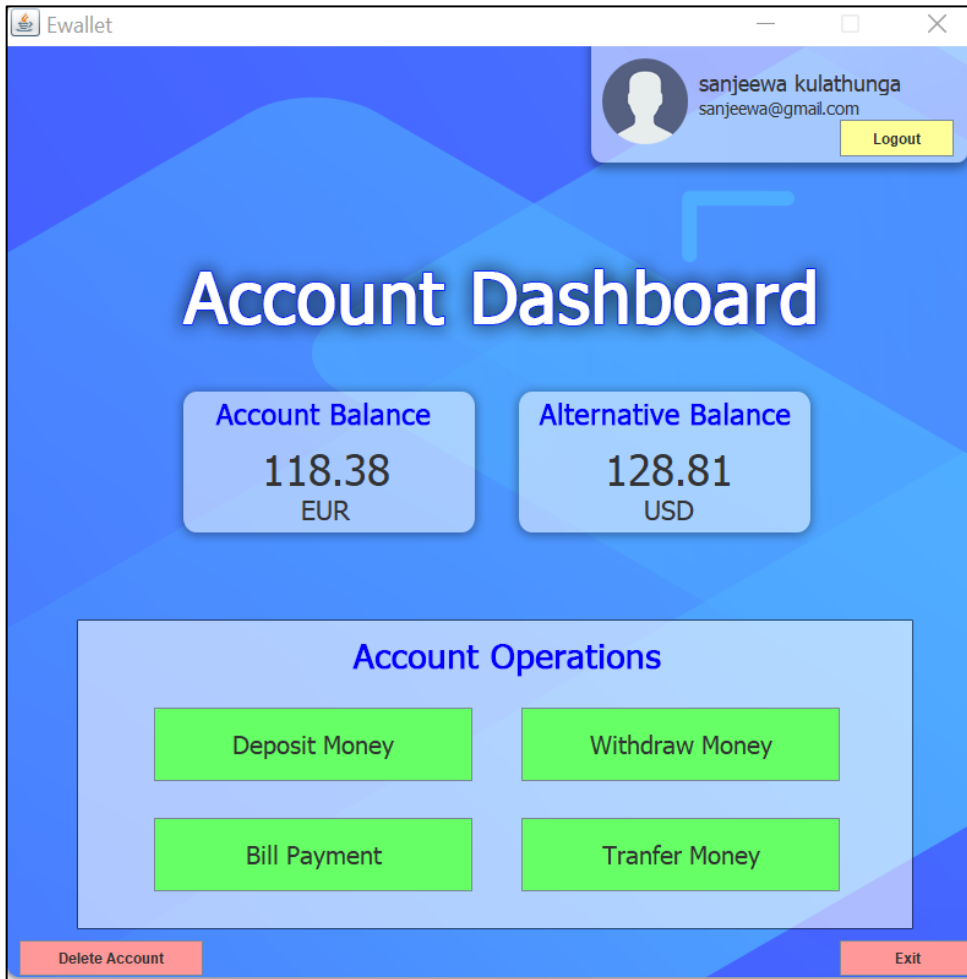
Sign up interface



A screenshot of a 'Sign in to ewallet' form. The form has a blue background with a geometric pattern. It includes fields for 'Your Email' and 'Password'. At the bottom, there is a yellow 'Create an Account' button and a green 'Signin' button. A close button (X) is in the top right corner.

Log in interface

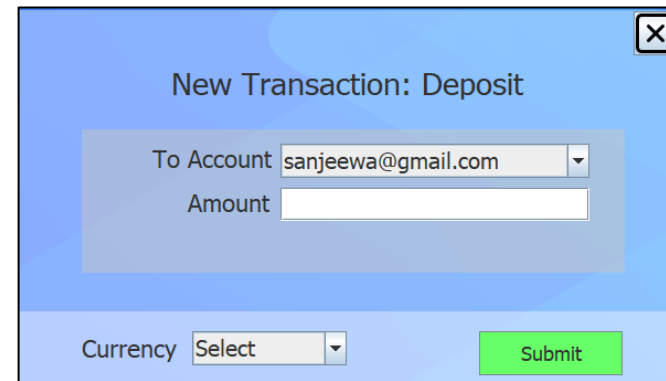
Java Application Functions



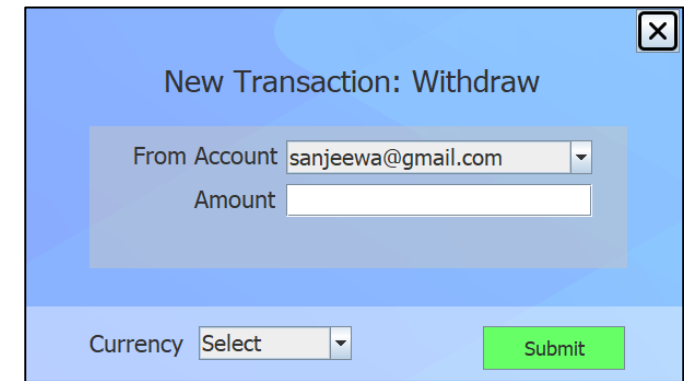
The Account Dashboard interface shows a user profile for 'sanjeewa kulathunga' with email 'sanjeewa@gmail.com' and a 'Logout' button. The main title is 'Account Dashboard'. Below it, there are two balance boxes: 'Account Balance' showing '118.38 EUR' and 'Alternative Balance' showing '128.81 USD'. At the bottom, there is a section titled 'Account Operations' with four buttons: 'Deposit Money', 'Withdraw Money', 'Bill Payment', and 'Transfer Money'. At the very bottom, there are 'Delete Account' and 'Exit' buttons.

Account Dashboard

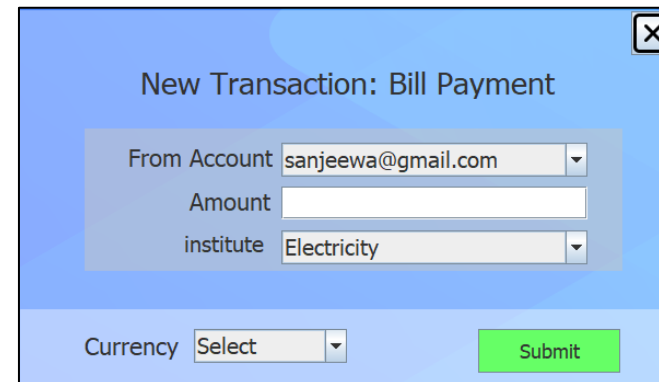
Account Dashboard



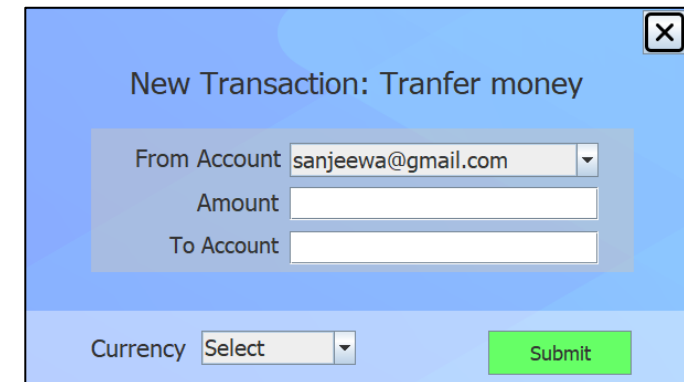
The 'New Transaction: Deposit' interface has a title bar with a close button. It contains a form with 'To Account' (dropdown menu showing 'sanjeewa@gmail.com') and 'Amount' (text input field). At the bottom, there is a 'Currency' dropdown menu (showing 'Select') and a green 'Submit' button.



The 'New Transaction: Withdraw' interface has a title bar with a close button. It contains a form with 'From Account' (dropdown menu showing 'sanjeewa@gmail.com') and 'Amount' (text input field). At the bottom, there is a 'Currency' dropdown menu (showing 'Select') and a green 'Submit' button.



The 'New Transaction: Bill Payment' interface has a title bar with a close button. It contains a form with 'From Account' (dropdown menu showing 'sanjeewa@gmail.com'), 'Amount' (text input field), and 'institute' (dropdown menu showing 'Electricity'). At the bottom, there is a 'Currency' dropdown menu (showing 'Select') and a green 'Submit' button.



The 'New Transaction: Transfer money' interface has a title bar with a close button. It contains a form with 'From Account' (dropdown menu showing 'sanjeewa@gmail.com'), 'Amount' (text input field), and 'To Account' (text input field). At the bottom, there is a 'Currency' dropdown menu (showing 'Select') and a green 'Submit' button.

Transaction interfaces



Thank you