WorldWideWallet
Project Report

Group Members:

Chloé Wolff De grivel perrigny:
- GitHub username: Chloedgp

Kate Ehrnstrom:
- GitHub username: kaeh1902

Daniel Folino:
- GitHub username: dafo2334

Carter Sammis:
- GitHub username: CarterSammis

Yuliia Piguliak:
- GitHub username: yuliiapiguliakCU

Ethan Schrauf:
- GitHub username: ethan-schrauf

Project Description:

WorldWideWallet is an essential tool for accurate currency conversions. This application provides an interface that offers real-time exchange of currency to help users make financial decisions. Users have access to live exchange rates from around the globe, updated to provide the most current information. This application prioritizes user experience with personalized logins so users can easily view their recent conversions and not worry about losing their history when leaving the site.

Our application delivers a comprehensive financial tool that meets the needs of our users by focusing on accurate conversions and user-friendly design. After registering or logging in with a previous account, users are able to interact with several different features offered by the application. Firstly, users are able to view their recent currency conversions and can see what they converted, when they converted, and an option to convert again. Secondly, users can view recent news related to currency in the world today and navigate to their respective websites. Users can also customize their profile settings and, most importantly, convert from one currency to another seamlessly. Our hope is to provide people with an elevated way to manage and view currencies around the world.

Project Tracker - GitHub project board:
https://github.com/orgs/CU-CSCI3308-Spring2024/projects/2/views/1

Recitation-014-Team-02

🔲 WorldWideWallet ▾   + New view

⫶ Filter by keyword or by field   Discard | Save

Ice-box 0 ⋯
This item hasn't been started

Todo 0 ⋯
This item hasn't been started

In Progress 4 ⋯
This is actively being worked on

⊙ Recitation-014-Team-02 #70
Week 5 Plan

⊙ Recitation-014-Team-02 #3
Currency chart
Second sprint 8

⊙ Recitation-014-Team-02 #74
Fixing editing profile to make it appear properly on profile page
Final sprint

⊙ Recitation-014-Team-02 #21
DB diagram
Application structure 3

Done 22 ⋯
This has been completed

⊘ Recitation-014-Team-02 #53
Week 4 Plan

⊘ Recitation-014-Team-02 #10
Header
Application structure 2

⊘ Recitation-014-Team-02 #20
Profile page
Application structure 5

⊘ Recitation-014-Team-02 #25
Home Page
Application Structure 8

⊘ Recitation-014-Team-02 #7
Currency converter week 1
Application Structure 8

+ Add item (Ice-box)   + Add item (Todo)   + Add item (In Progress)   + Add item (Done)

Recitation-014-Team-02

🔲 WorldWideWallet ▾   + New view

⫶ Filter by keyword or by field   Discard | Save

Ice-box 0 ⋯

Todo 0 ⋯
This item hasn't been started

In Progress 0 ⋯
This is actively being worked on

Done 27 ⋯
This has been completed

⊘ Recitation-014-Team-02 #53
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Header
Application structure 2

+ Add item (Ice-box)   + Add item (Todo)   + Add item (In Progress)   + Add item (Done)

Video: ▪ video1132301657.mov

VCS: https://github.com/CU-CSCI3308-Spring2024/Recitation-014-Team-02

Contributions:

Chloé Wolff de Grivel Perrigny: I worked on the profile page and profile settings page. Using SQL and Handlebars I implemented both pages, allowing the user to navigate between them and edit their information on the profile as they would like. One special feature that I worked on the profile/setting pages was the possibility of choosing the profile image. To do so I had to install the library Multer, change the yaml file as well as include the image path on the database so SQL request could be done in order to achieve the goal of selecting the desired profile image. Additionally I created our positive and negative test cases and made sure they would pass correctly. Aside from the technical aspects I also contributed by doing the slides and the Architecture diagram.

Kate Ehrnstrom: I worked on the News page and its UI. The news page was designed using an API from newsapi.org. When the user clicks on the news page in the navigation bar, the GET route that is called includes the API call to the news api, using axios. This will return a list of the most relevant news articles that are related to the specified parameter/keyword "currency conversion." Additionally, worked briefly on backend connection and helped fix bugs throughout both sprints, along with writing most of the readMe.

Daniel Folino:I worked on several key components of our web application, including the Login, Register, Logout, and Password Reset features, as well as contributing to the Profile page. For the Login functionality, I integrated the username and password fields with our database, enabling users to securely access the site. Users who don't have an account can register themselves through the Register page, which prevents duplicate user registrations. If users forget their password, they can reset it through a secure process where a link is sent to their registered email for password resetting.

Additionally, the Login page enhances security by ensuring that users cannot access the website without proper authentication. The Password Reset feature also includes a validation check to ensure the email used is registered in our system before allowing a password reset. To further secure user data, all passwords are hashed using bcrypt before being stored in the database.

Carter Sammis: I worked on the Navbar and other website technologies including things like the header, footer, etc. In addition to this, I worked to help around the rest of the application with smaller jobs and fixing certain things as I was not tasked with a major implementation such as

the currency chart or converter. I worked with bootstrap to implement these essential website features that allowed users to easily navigate with the page in an inviting and appealing manner.

Yuliia Piguliak: I focused on integrating real-time and historical currency data charts using Chart.js library, currency API and PostgreSQL database creating the queries. Implemented the home page with Handlebars template and Bootstrap that includes implementing "Convert Again" functionality to improve user experience, allowing currency conversions without page reloads. My main goal was to populate the charts and enhance the front-end functionalities to show the trends. Was responsible for the team's weekly demos and releases.

Ethan Schrauf: In charge of designing the currency converter and its UI. The currency converter was designed using an API called currencyapi. The application's UI was created using Bootstrap, HTML, and CSS, also in charge of designing JavaScript to make the currency converter work. This was made possible by creating a list of all currencies, a filter function to search for currencies, a function to select a currency, and a function to convert the currency.

Wireframes:
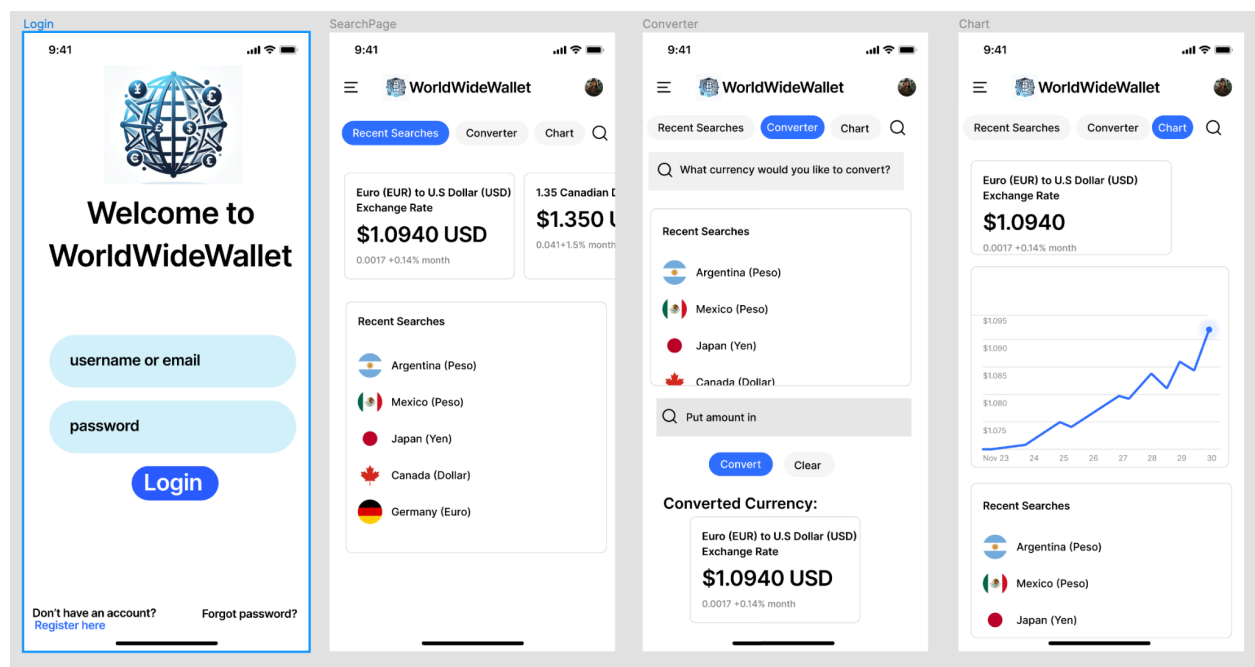
Use Case Diagram:
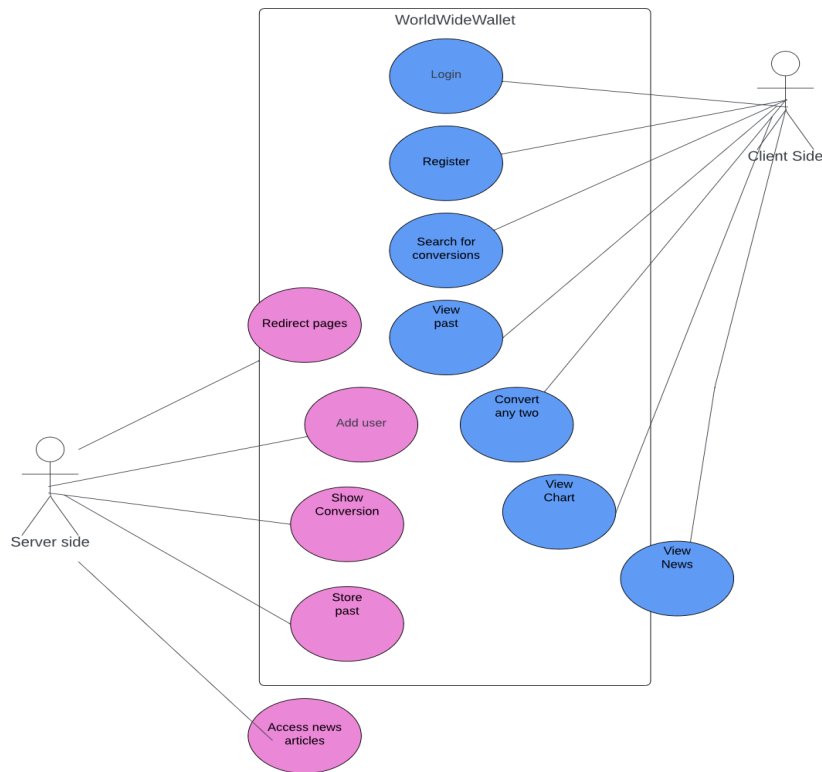
Test Cases:
1. Register New User (Positive Case)
   - Description: Tests the successful registration of a new user.
   - Input: Valid username and password.
   - Expected Output: 200 OK, successful registration message.
2. Register New User (Negative Case)
   - Description: Tests registration with missing username.
   - Input: Missing username, valid password.
   - Expected Output: 400 Bad Request, error message about invalid input.
3. Login (Positive Case)
   - Description: Tests logging in with correct credentials.
   - Input: Correct username and password.
   - Expected Output: 200 OK, successful login message, redirect to profile page.
4. Login (Negative Case)
   - Description: Tests login with incorrect password.

- Input: Correct username, incorrect password.
- Expected Output: 401 Unauthorized, error message.
5. Access Protected Page (Unauthorized Access)
    - Description: Tests access to a protected route without authentication.
    - Expected Output: 302 Redirect, redirect to login page.
6. Password Reset (Positive Case)
    - Description: Tests the initiation of a password reset with a registered email.
    - Input: Valid registered email.
    - Expected Output: 200 OK, password reset initiation successful message.

All positive and negative unit tests were passed covering all test case observations.

Observations
- What are the users doing?

During testing, users attempted to register, log in, and perform currency conversions. Some users went to profile settings immediately after logging in. After attempting a currency conversion, users used the news page to see articles.
- What is the user's reasoning for their actions?

Users explained that they were looking for a way to register as a new user, log in and first fill out their profile page, set default currencies, and try out different conversions. Some users tried to change the language because English was not their native language, but the option was not available.
- Is their behavior consistent with the use case?

Yes, their behavior was consistent: they tested registration and login functions, entering required information and pressing buttons. They were then successfully redirected to the home page. Other features such as currency conversion were not covered in test cases.
- If there is a deviation from the expected actions, what is the reason for that?

The application met the user's expectations as it allowed registration, password reset and login as a new or previous user with valid credentials.
- Did you use that to make changes to your application? If so, what changes did you make?

Based on this feedback, several changes were made:
- Available settings: the design of the profile page has been changed, the ability to insert a profile photo has become available.
- Default Settings Feature: Added a feature to allow users to convert previous currencies again.

Deployment:
http://recitation-014-team-02.eastus.cloudapp.azure.com:3000/login
(Note: If the link doesn't work that means that the IP address switched)