Requirements Document - current EZWallet

Date:

Version: V1 - description of EZWallet in CURRENT form

Contents

Informal description

EZWallet (read EaSy Wallet) is a software application designed to help individuals and families keep track of their expenses. Users can enter and categorize their expenses, allowing them to quickly see where their money is going. EZWallet is a powerful tool for those looking to take control of their finances and make informed decisions about their spending.

Defect table

Defect	Description

Defect	Description
get_users, privacy defect	the function get_users returns all users of the application, without checking if the requester is logged in. Even if logged in, any user would be able to access information about any other user
get_labels	The behavior of function get_labels is unclear. Probably it is meant to return the color associated to the category of a transaction, but it does not do so
user is not associated to her transactions	Nowhere in the application a user is linked to the transactions she has created. So each user will see all transactions of all users.
users	Overall, the application seems to be made for one user, although there are functions for user management

Stakeholders

Stakeholder name	Description
User	User of the application
Developer	Person who develops and maintains the application

Context Diagram and interfaces

Context Diagram

Interfaces

Actor	Logical Interface	Physical Interface
User	GUI	PC

Stories and personas

Persona 1:
John, 25 years old, is a computer professional. He decides he wants to know how he is spending his money using a software application.
Story:
John makes an expense. As soon as possible he opens the applications and logs the expense, attaching to it a category.
Story:
At the end of each month John analyzes the expenses of the month, overall and per category.

Functional and non functional requirements

Functional Requirements

ID	Name
FR1	Manage account
FR11	Register
FR12	login
FR13	logout
FR2	Handle transactions
FR21	create transaction
FR22	show transactions
FR23	delete transaction
FR3	Handle categories
FR31	create category
FR32	show categories
FR4	Handle users
FR41	create user
FR42	show users

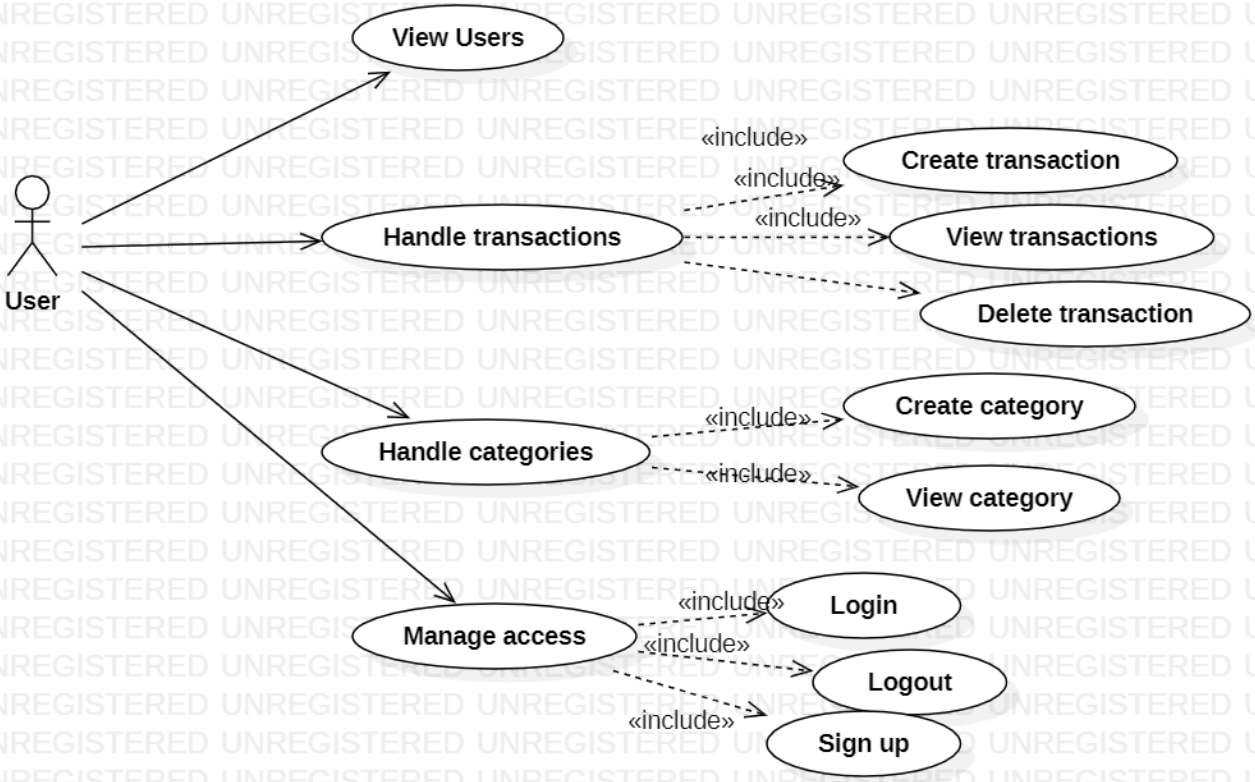
Non Functional Requirements

ID	Type (efficiency, reliability, ..)	Description	Refers to
NFR1	Efficiency	All functions of the application should have a response time lower than 0.5 sec.	All FR

ID	Type (efficiency, reliability, ..)	Description	Refers to
NFR2	Usability	At least 95% of average users (no computer professionals with more than 1 year of experience of using PC) can use the application within 1 hour, with no training	All FR

Use case diagram and use cases

Use case diagram



Use case 1, Login (UC1)

Actors Involved	User
Precondition	User not logged in, user registered
Post condition	User logged in
Nominal Scenario	Scenario 1.1
Variants	None
Exceptions	Scenario 1.2, 1.3, 1.4

Scenario 1.1

Scenario 1.1	**Login**
Precondition	User not logged in, user registered
Post condition	User logged in
Step#	Description
1	System: Ask email, password
2	User: Provide email, password.
3	System: Read email, password. Check cookie, user is not logged in.
4	System: Retrieve password, compare with the one provided. Passwords match, user is auhorized

Scenario 1.2

Scenario 1.2	**Wrong password**
Precondition	User not logged in, user registered
Post condition	User not logged in
Step#	Description
1	System: Ask email password.
2	User: Provide email, password.
3	System: Read email, password. Check cookie, the user is not logged in.
4	System: Given email, find the user.
5	System: Retrieve password, compare with the one provided. Passwords do not match, user is not auhorized

Scenario 1.3

Scenario 1.3	**User not registered**
Precondition	User not logged in, user not registered
Post condition	User not logged in
Step#	Description
1	System: Ask email password.
2	User: Provide email, password.
3	System: Read email, password. Check cookie, the user is not logged in.

Scenario 1.3	User not registered
4	System: Given email, find the user. User is not found. User not authorized

Scenario 1.4

Scenario 1.4	User already logged in
Precondition	User logged in, user registered
Post condition	User logged in
Step#	Description
1	System: Ask email password.
2	User: Provide email, password.
3	System: Read email, password. Check cookie, the user is already logged in.
4	System: Return an error message

Use case 2, Logout (UC2)

Actors Involved	User
Precondition	User logged in
Post condition	User not logged in
Nominal Scenario	Scenario 2.1
Variants	
Exceptions	Scenario 2.2

Scenario 2.1

Scenario 2.1	Logout through button
Precondition	User logged in
Post condition	User not logged in
Step#	Description
1	User: Asks to logout
2	System: Find user, check cookie, the user is logged in.
3	System: remove authorization to the user device
4	System: Show a logout confirmation message.

Scenario 2.2

Scenario 2.2	**User already logged out**
Precondition	User not logged in
Post condition	User not logged in
Step#	Description
1	User: Go to /logout address.
2	System: Check that the user isn't already logged out.
3	System: User hasn't performed login yet. Show an error message.

Use case 3, Registration (UC3)

Actors Involved	**User**
Precondition	The user doesn't have an account
Post condition	User registered
Nominal Scenario	Scenario 3.1
Variants	None
Exceptions	Scenario 3.2

Scenario 3.1

Scenario 3.1	**Registration**
Precondition	The user doesn't have an account
Post condition	User registered
Step#	Description
1	User: Ask to register
2	System: ask username, email, password
2	User: Provide username, email, password
3	System: Read username, email, password.
4	System: Check that the provided email isn't associated with any account yet. The email hasn't been used yet.
5	System: Create a new user and store his information

Scenario 3.2

Scenario 3.2	**User already registered**
Precondition	The user has an account
Post condition	Registration failed
Step#	Description
1	User: Ask to register
2	System: ask username, email, password
2	User: Provide username, email, password
3	System: Read username, email, password.
4	System: Check that the provided email isn't associated with any account yet. The email has been used already. Provide error message

Use case 4, Handle transactions (UC4)

Actors Involved	**User**
Precondition	The user is logged in
Post condition	Transaction inserted/deleted/shown
Nominal Scenario	Scenario 4.1, 4.2, 4.3
Variants	
Exceptions	

Scenario 4.1

Scenario 4.1	**Insert transaction**
Precondition	The user is logged in
Post condition	Transaction inserted
Step#	Description
1	USer: ask to insert a transaction
2	System: ask name, amount and type of the transaction
3	User: Insert name, amount and type of the transaction.
4	System: Create a new transaction and store it

Scenario 4.2

Scenario 4.2	Get the existing transactions
Precondition	The user is logged in and has associated transactions
Post condition	Transactions shown
Step#	Description
1	User: Ask all transactions
2	System: Retrieve all the transactions and show them.

Scenario 4.3

Scenario 4.3	Delete a transaction
Precondition	The user is logged in
Post condition	Transaction deleted
Step#	Description
1	User: ask to delete a transaction.
2	System: ask for transaction to delete
3	User: select transaction
4	System: Retrieve the transaction and delete it.

Use case 5, Handle categories (UC5)

Actors Involved	User
Precondition	The user is logged in
Post condition	Category inserted/shown
Nominal Scenario	Scenario 5.1, 5.2
Variants	
Exceptions	

Scenario 5.1

Scenario 5.1	Insert category
Precondition	The user is logged in
Post condition	Category inserted
Step#	Description
1	User: Ask to insert category

Scenario 5.1	Insert category
2	System: ask category type and color
3	User: Insert type and color.
4	System: Create a new category and store it

Scenario 5.2

Scenario 5.2	Get categories
Precondition	The user is logged in
Post condition	Categories shown
Step#	Description
1	User: Ask to show all categories.
2	System: Retrieve all the categories and show them.

Use case 6, Handle users (UC7)

Actors Involved	User
Precondition	None (for 7.1), user logged in (for 7.2)
Post condition	User(s) shown
Nominal Scenario	Scenario 7.1, 7.2
Variants	None
Exceptions	

Scenario 7.1

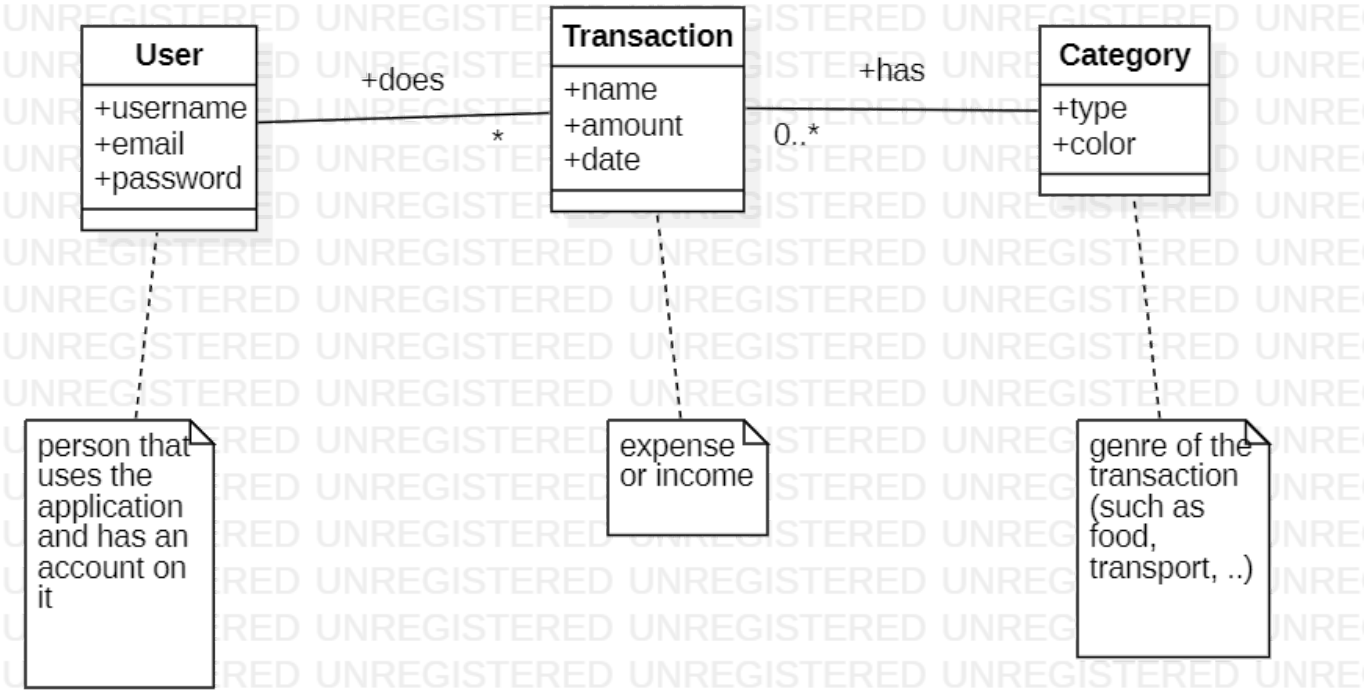
Scenario 7.1	Get all users
Precondition	None
Post condition	Users shown
Step#	Description
1	User: Ask all users
2	System: Retrieve all the users, with their information, and show them.

Scenario 7.2

Scenario 7.2	Get user information
Precondition	The user is logged in

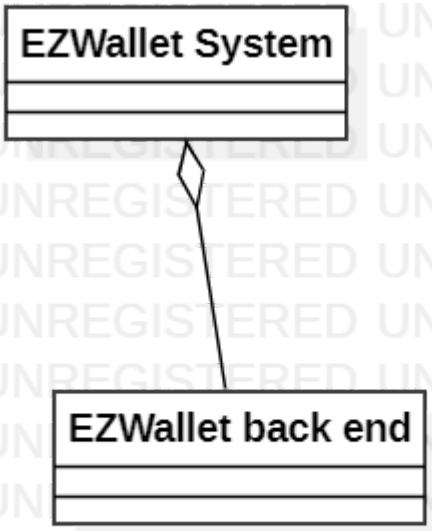
Scenario 7.2	**Get user information**
Post condition	User information shown
Step#	Description
1	User: ask user info for a certain user.
2	System: Retrieve the details about the user that's performing the request.
3	System: Check if the username provided matches with the user's one. They match.
4	System: Show user information.

Glossary



System Design

There is only one component in the system. A client would be needed, but it is not available in V1.



Deployment Diagram