# purpose

this product was designed to ease the process of transferring money between accounts from different bank and cash wallets

# scope

the function of the product is to transfer money between the people

# product functions

Only users who have an account bank can register in the system.

In order to register, they should enter their name,birthday,gender,email, then choose an unregistered username and password.

In order to login,users should enter their username and password.

In case of forgetting the password,users should select the “forget my password” option then will be asked to enter the email linked with the account.the system will send their email an url to reset their password.

After logging in,users should choose a linked bank account to continue with or link a new account.

To link a new account user should select their bank from the list of the banks then enter the bank card number and password,then users will be asked to enter a 6-digit number to continue,the bank will send them an sms containing the required number.

Every linked bank account should have an unique id to be different from other user's accounts.

After the user selects a linked bank account,two choices will be available: send money or ask for sending money.

Users can send money to a bank account,cash wallet or another product user.and can ask another user to send them a money.

In order to send money to a bank account ,the user should enter the bank card number and the amount of money.

In order to send money to a cash wallet ,the user should enter the phone number that is related to this cash wallet and the amount of money.

In order to send money to another product user,the user should enter the id of the linked bank account and the amount of money.

In order to ask for sending money ,the user should enter the id of the sender linked account ,send a request,then the other user has the choice to accept or refuse the request.

# functional requirements

## signing up

* + description

the process where the user sign up to the system

* + input

1. name
2. birthday
3. gender
4. email
5. username
6. password
   * processing

the system send a message containing a 6-digit number to the entered email,the user entered the number and finish the signup

* + output

a new account in the system was created

## logging in

* + description

the process where the users log in to their accounts

* + input

1. username
2. email
   * processing

the system check if the username are registered and the entered password is correct ,if they are then the user login to it’s account

* + output

now,user are logging in to his/her account

## reset password

* + description

the user forgets his/her account password and wants to reset it

* + input

user’s email

* + processing

the user enter their email,receive an message containing a 6-digit number ,then the user enter the number,enter the new password

* + output

new password

## link a bank account

* + description

the user link his/her bank account to the system to be able to send/receive money

* + input
  1. bank card number (bcn)
  2. bank card password (bcp)
  + processing

1. the user select an bank
2. the user enter the bcn and the bpc
3. the system send a request to the bank to verify the entered data
4. the bank send an response to the system and send the user an sms containing 6-digit number
5. the system ask the user to enter the an 6-digit number
6. the user enter the number and finish the process
   * output

new bank account are linked with the system

## send money to a bank account

* + input

1. bank account number
2. amount of money
   * processing
3. the user enter the bank account number and amount of money
4. the system check if the user have enough money
5. the system check if the bank account are valid
6. the system updates the balance of the sender and the receiver
   * output

user with new balance

## send money to wallet cash

* + input

1. phone number of the wallet cash (PN)
2. amount of money (AM)
   * processing
3. the user enter the PN and the AM
4. the system check if the user have enough money
5. the system check if the wallet cash are valid
6. the system updates the balance of the sender and the receiver
   * output

user with new balance

## send money to another system user

* + input

1. linked bank id (ID)
2. amount of money (AM)
   * processing
3. the user enter the IDand the AM
4. the system check if the user have enough money
5. the system check if the ID is exist in the system
6. the system updates the balance of the sender and the receiver
   * output

user with new balance

## ask another user to send me a money

* + input

1. the username of the other user(US)
2. amount of money (AM)
   * processing
3. the user enter the US
4. the other user receive a request
5. the other user accept the request
6. function-7 is used
   * output

user with new balance

## Non-Functional Requirement:

## Performance:

## 1.Response Time: The system must respond to user actions (e.g., login, money transfer) within 3 seconds under normal operating conditions.

## 2.Concurrent Users: The system should support at least 1000 concurrent users performing various transactions without significant degradation in performance.

## 3.Scalability: The system architecture should be scalable to accommodate a potential 20% increase in user transactions over the next two years.

## Security:

## 1. Data Encryption: All sensitive user data, including passwords and financial transactions, must be encrypted during transmission using industry-standard encryption protocols.

## 2.User Authentication: The system must implement secure authentication mechanisms to ensure only authorized users can access their accounts.

## 3.Password Policies: Passwords must adhere to a strong policy, requiring a combination of uppercase, lowercase, numbers, and special characters. Passwords should be stored securely using hash algorithms.

## 4.Audit Trails: The system should maintain audit logs for all user transactions, including login attempts, money transfers, and account updates.

## Reliability:

## 1. System Uptime: The system should aim for 99.9% uptime, allowing for scheduled maintenance windows and minimizing unplanned downtime.

## 2.Data Integrity: The system must ensure the integrity of user data, and in case of any failures, provide mechanisms to recover data to a consistent state.

## Usability:

## 1. User Interface Consistency: The user interface should maintain consistency in design and layout across different functionalities to enhance user experience.

## 2.Error Handling: The system should provide clear and user-friendly error messages in case of incorrect inputs, ensuring users understand the issue and how to rectify it.

## Compatibility:

## 1. Cross-Browser Compatibility: The system's web interface should be compatible with major web browsers (e.g., Chrome, Firefox, Safari, Edge) to ensure a consistent experience for users.

## 2.Mobile Responsiveness: The system should be responsive, adapting its layout for optimal viewing and interaction across various devices, including smartphones and tablets.

## Regulatory Compliance:

## 1. Data Protection Compliance: The system must comply with relevant data protection regulations and standards, ensuring the secure handling and storage of user information.

## Documentation:

## 1. User Documentation: Comprehensive documentation should be provided, including user guides and FAQs, to assist users in understanding and utilizing the system's functionalities.