

# **Project Report**

## **on**

# **Bank Management App**

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EIN: YM269

# Introduction

This project is web-based bank management system where the bank can manage their customers and handle all the fund transfer within the bank as well maintain all the information of their customer. This application provides the bank employees to manage the activity within the bank that includes fund transfers, manage records, add new customers and maintain the transactions of the accounts.

There is also administrative access to the web application where the admin can maintain the employees who are working on the bank management, Admins can add or remove employees in the system and their approval is necessary to clear the pending transaction in the system. This app is enabled with all the necessary features required to maintain a bank.

## OOAD of Project

- Use case diagram



Above shows the use case diagram of Bank Management application. It is a graphical depiction of clerk and admin's possible interactions with a system.

Here use case diagram describe the relationship between users and use cases.

A use case is a user activity in the system. It consists of two components,

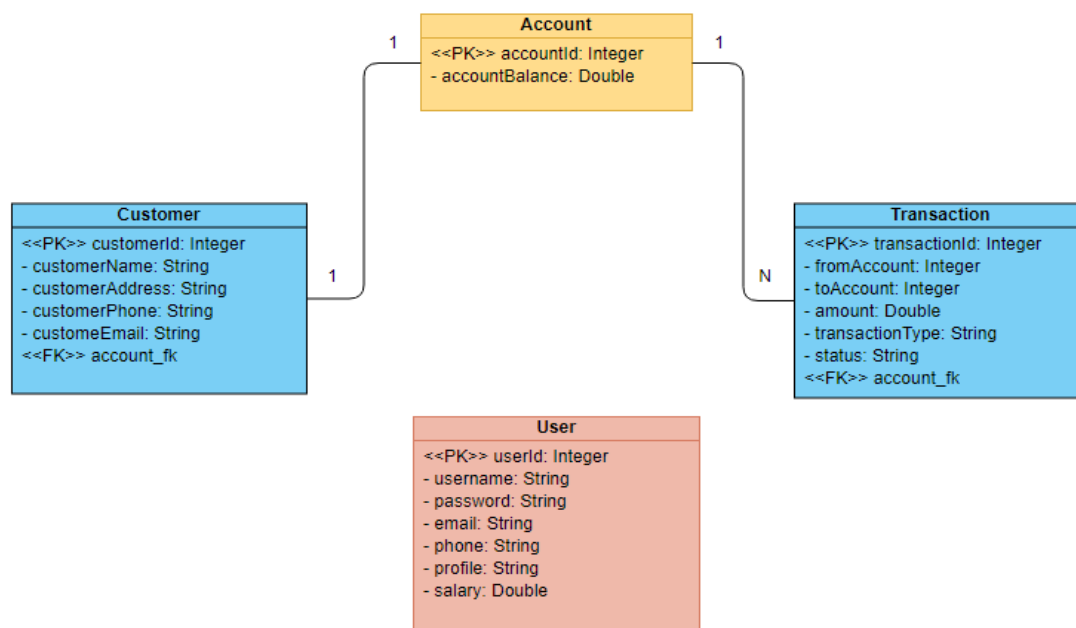
**Actor** : Actors are represented with a label naming actors role. There may be multiple actors in a diagram.

**Use case** : Represented as ellipse with a label inside, naming the use case.

There may be multiple use cases in a diagram.

Actors represent the role that a user might play where each role is represented separately. Actor and Use case names must be unique with in a diagram. A use case describe the activity that is possible. It have several instances of activity throughout it's life time. In this application we need to login first to access the bank management system

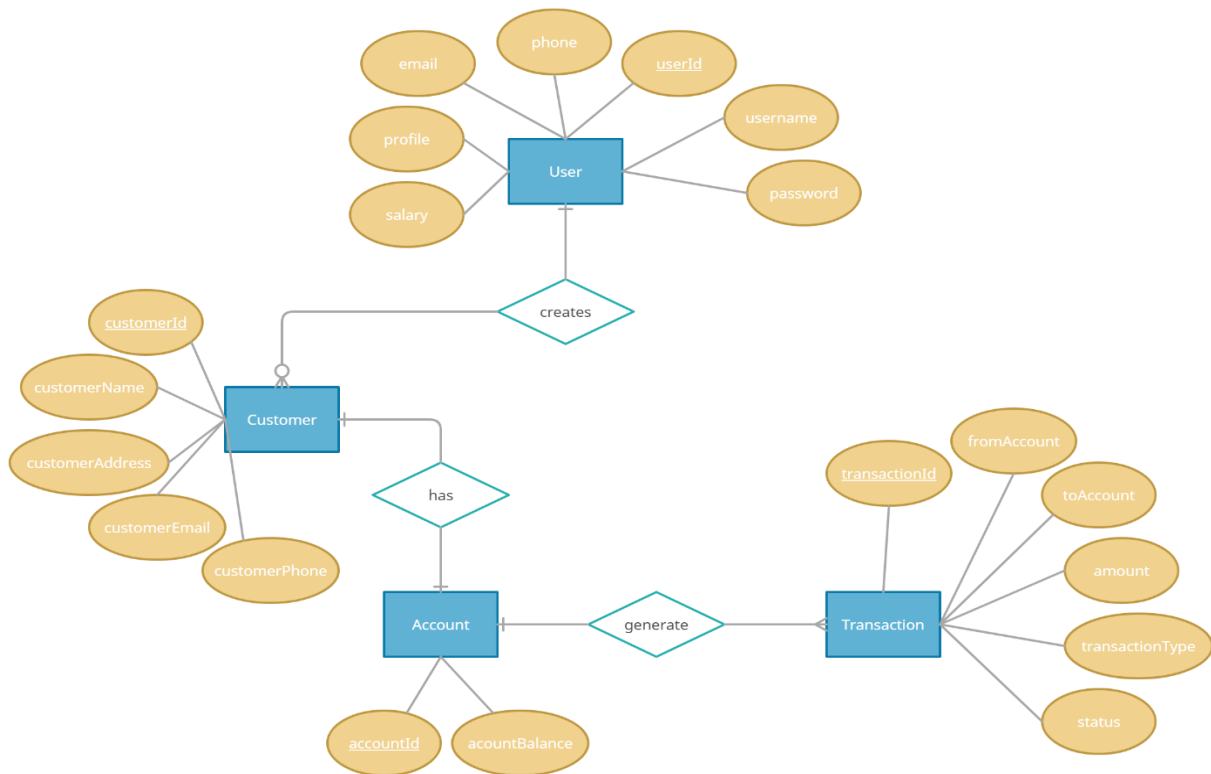
- Class Diagram



## DATABASE DESIGN OF PROJECT

## ER Diagrams

An entity relationship diagram (ERD), also known as an entity relationship model, is a graphical representation that depicts relationships among people, objects, places, concepts or events within an information technology system.



## **TECHNOLOGIES USED IN PROJECT**

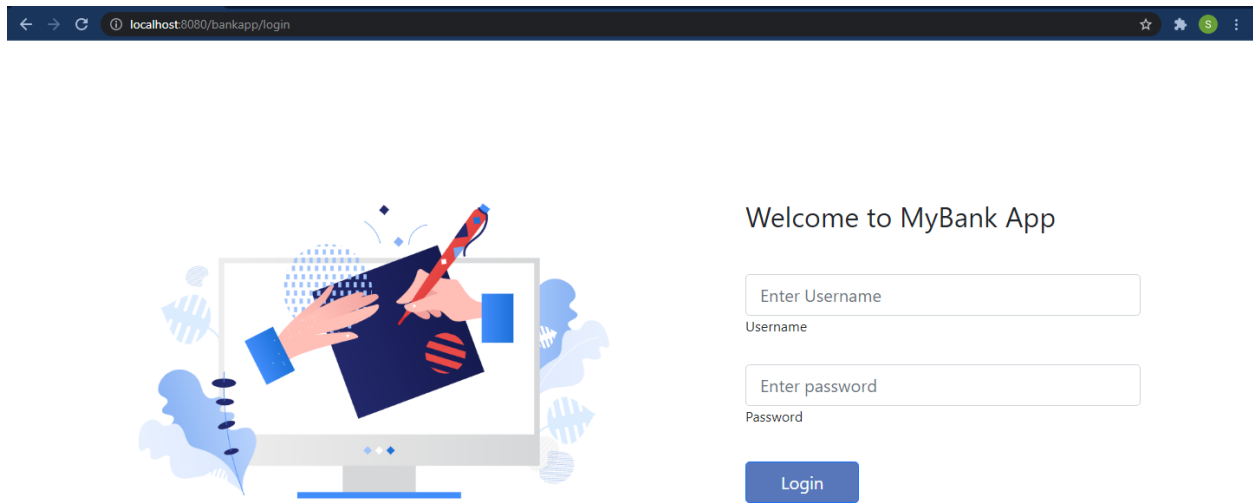
- Java 8
- Spring Boot
- Maven
- Spring Security
- Spring Data JPA
- Hibernate
- Bootstrap
- MySQL-Database

## **Limitations**

- Technical Glitch
- Application Flaws

## Working Screenshots

### Login



localhost:8080/bankapp/login

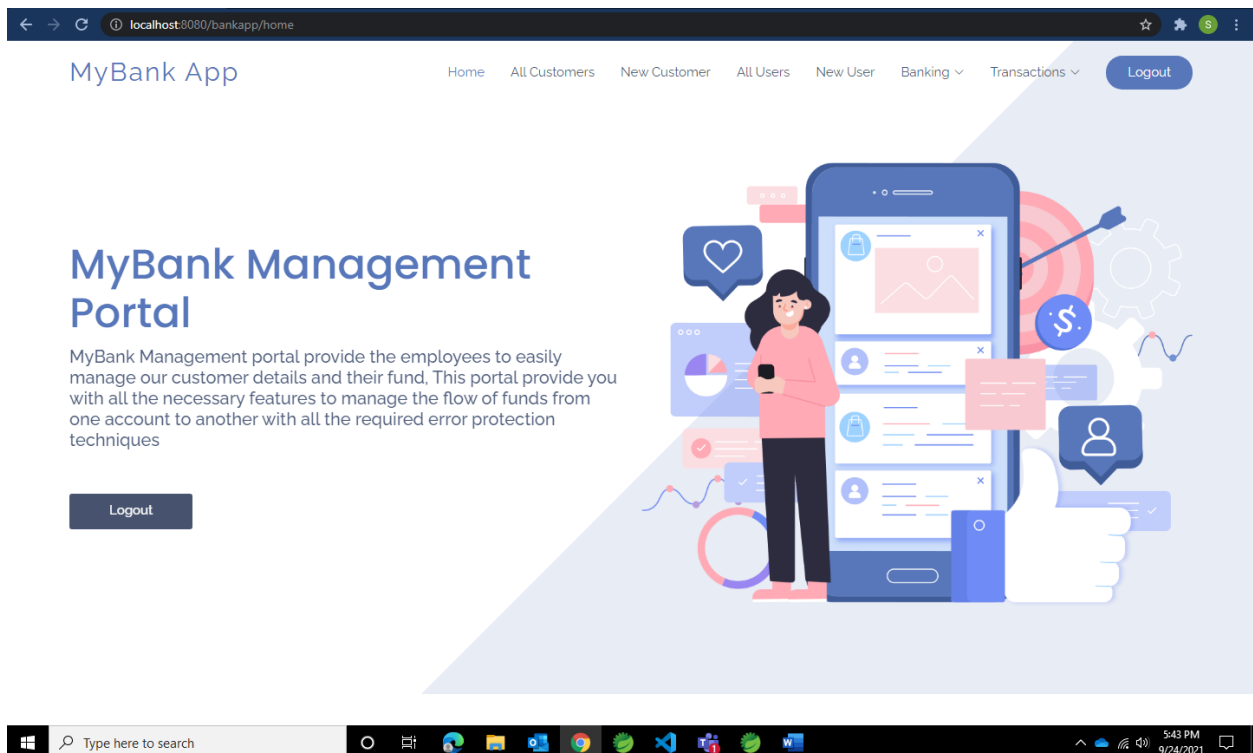
Welcome to MyBank App

Enter Username  
Username

Enter password  
Password

Login

### Home



localhost:8080/bankapp/home

MyBank App

Home All Customers New Customer All Users New User Banking Transactions Logout

## MyBank Management Portal

MyBank Management portal provide the employees to easily manage our customer details and their fund. This portal provide you with all the necessary features to manage the flow of funds from one account to another with all the required error protection techniques

Logout

## All Customers

MyBank App

Home All Customers New Customer All Users Banking Transactions Logout

### Customers

Account No	Name	Email	Address	Phone	Account Balance	Transaction History
1	sahil	sahil@gmail.com	mahavir vihar	4587965823	10398.0	<a href="#">View Transaction</a> <a href="#">delete</a> <a href="#">update</a>
2	Mohit	mohit@gmail.com	Palam	9654824565	197000.0	<a href="#">View Transaction</a> <a href="#">delete</a> <a href="#">update</a>
3	vinod	vinod@gmail.com	dwarka	9856452136	149501.0	<a href="#">View Transaction</a> <a href="#">delete</a> <a href="#">update</a>
4	ankit	ankit@gmail.com	janakpuri	9568426531	300500.0	<a href="#">View Transaction</a> <a href="#">delete</a> <a href="#">update</a>
5	rohit	rohit@gmail.com	tilak nagar	5896542562	800011.0	<a href="#">View Transaction</a> <a href="#">delete</a> <a href="#">update</a>
6	rajesh	rajesh@gmail.com	vasant vihar	9856426325	550000.0	<a href="#">View Transaction</a> <a href="#">delete</a> <a href="#">update</a>
7	anurag	anurag@gmail.com	uttam nagar	7845126589	900000.0	<a href="#">View Transaction</a> <a href="#">delete</a> <a href="#">update</a>

## Customer Transactions

MyBank App

Home All Customers New Customer All Users Banking Transactions Logout

### Transactions

ID	From Account	To Account	Amount	Type	Status
12	4	5	300000.0	TRANSFER	Approved
13	4	6	300000.0	TRANSFER	Approved
7	3	4	300000.0	TRANSFER	Approved
8	5	4	300000.0	TRANSFER	Rejected
9	5	4	300000.0	TRANSFER	Approved
11	5	4	300000.0	TRANSFER	Approved
14	6	4	300000.0	TRANSFER	Rejected
15	6	4	300000.0	TRANSFER	Rejected
20	3	4	500.0	TRANSFER	Approved
24	5	4	350000.0	TRANSFER	Pending



## Add Customer

localhost:8080/bankapp/customer/addCustomer

MyBank App

Home All Customers New Customer All Users Banking Transactions Logout

### Add Customer

Add Details of the customer

Name

Email

Address

Phone

Balance

Continue

## Show All Transactions

localhost:8080/bankapp/transaction/transactionHistory

MyBank App

Home All Customers New Customer All Users Banking Transactions Logout

### Transactions

ID	From Account	To Account	Amount	Type	Status
1	1	Self	2500.0	WITHDRAW	Complete
2	2	Self	5000.0	DEPOSIT	Complete
3	2	1	2000.0	TRANSFER	Approved
4	2	1	11000.0	TRANSFER	Approved
5	3	1	200000.0	TRANSFER	Approved
6	1	3	200001.0	TRANSFER	Approved
7	3	4	300000.0	TRANSFER	Approved
8	5	4	300000.0	TRANSFER	Rejected
9	5	4	300000.0	TRANSFER	Approved
10	1	Self	1.0	WITHDRAW	Complete
11	5	4	300000.0	TRANSFER	Approved
12	4	5	300000.0	TRANSFER	Approved
13	4	6	300000.0	TRANSFER	Approved
14	6	4	300000.0	TRANSFER	Rejected

## Pending Transactions

The screenshot shows the 'Pending Transactions' page of the 'MyBank App'. The browser address bar indicates the URL is `localhost:8080/bankapp/transaction/pending transactions`. The app's navigation bar includes links for 'Home', 'All Customers', 'New Customer', 'All Users', 'Banking', and 'Transactions', along with a 'Logout' button. The main content area features a table with two pending transactions. Each transaction row includes an 'ID', 'From Account', 'To Account', 'Amount', 'Type', and 'Status', followed by 'Approve' and 'Reject' buttons.

ID	From Account	To Account	Amount	Type	Status		
23	7	1	400000.0	TRANSFER	Pending	<button>Approve</button>	<button>Reject</button>
24	5	4	350000.0	TRANSFER	Pending	<button>Approve</button>	<button>Reject</button>

## Funds Transfer

The screenshot shows the 'Funds Transfer' page of the 'MyBank App'. The browser address bar indicates the URL is `localhost:8080/bankapp/transaction/transfer`. The app's navigation bar is identical to the previous page. The main content area is titled 'Transfer' and features a 'Transfer Funds' form. The form includes input fields for 'From Account', 'To Account', and 'Amount', and a 'Continue' button. The background of the page has a light blue and white geometric design.

## Deposit

localhost:8080/bankapp/transaction/deposit

MyBank App

Home All Customers New Customer All Users Banking Transactions Logout

### Deposit

Deposit Funds in the account

Account Number

Account number cannot be null

Amount

Amount cannot be null

Continue

Type here to search

5:58 PM 9/24/2021

## Withdraw

localhost:8080/bankapp/transaction/withdraw

MyBank App

Home All Customers New Customer All Users Banking Transactions Logout

### Withdraw

Withdraw Funds from the account

Account Number

Account number cannot be null

Amount

Amount cannot be null

Continue

Withdraw

Deposit

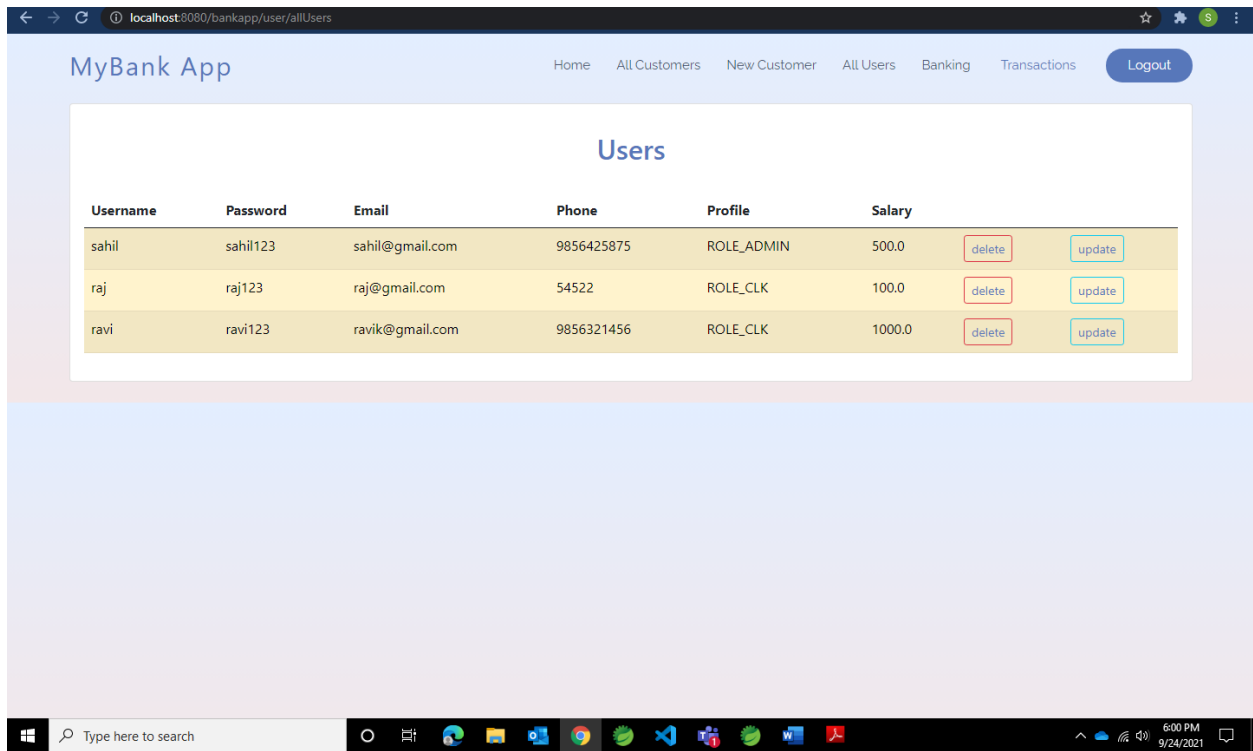
Fund Transfer

localhost:8080/bankapp/transaction/withdraw

Type here to search

5:59 PM 9/24/2021

## All Users



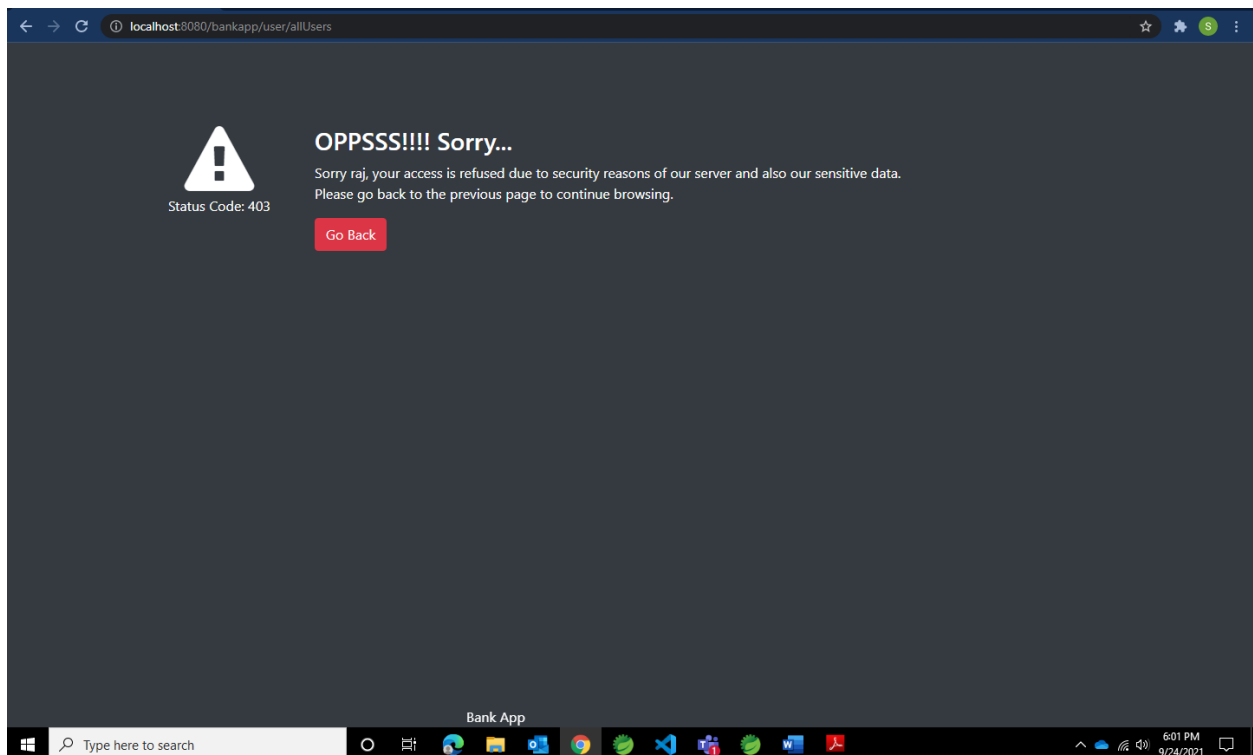
MyBank App

Home All Customers New Customer All Users Banking Transactions Logout


### Users

Username	Password	Email	Phone	Profile	Salary		
sahil	sahil123	sahil@gmail.com	9856425875	ROLE_ADMIN	500.0	delete	update
raj	raj123	raj@gmail.com	54522	ROLE_CLK	100.0	delete	update
ravi	ravi123	ravik@gmail.com	9856321456	ROLE_CLK	1000.0	delete	update

## 403 Page



localhost:8080/bankapp/user/allUsers



Status Code: 403

### OPPSSS!!!! Sorry...


Sorry raj, your access is refused due to security reasons of our server and also our sensitive data. Please go back to the previous page to continue browsing.

Go Back

Bank App

## Logout

localhost:8080/bankapp/login?logout=1



### Welcome to MyBank App

Logged Out Successfully

Enter Username

Username

Enter password

Password

Login

Type here to search

6:02 PM 9/24/2021

## Project Structure

springboot - BankApp2/src/main/java/com/bankapp/model/service/TransactionServiceImpl.java - Spring Tool Suite 4

File Edit Source Refactor Navigate Search Project Run Window Help

BankApp2 > src/main/java > com.bankapp.model.service > TransactionServiceImpl.java

```
43 }
44
45 @Override
46 @Transactional(rollbackFor = { AccountNotFoundException.class })
47 public void deposit(Integer accountId, Double amount) {
48     Account account = accountService.getAccountById(accountId);
49     account.setAccountBalance(account.getAccountBalance() + amount);
50     Transaction transaction = new Transaction(account.getId(), null, amount, "DEPOSIT", "Complete")
51     transaction.setAccount(account);
52     account.getTransactionHistory().add(transaction);
53     transactionDao.save(transaction);
54     accountService.addAccount(account);
55 }
56
57 @Override
58 @Transactional(rollbackFor = { MinimumBalanceException.class, AccountNotFoundException.class })
59 public void transfer(Integer fromAccountId, Integer toAccountId, Double amount) {
60     Account from_account = accountService.getAccountById(fromAccountId);
61     Account to_account = accountService.getAccountById(toAccountId);
62     if (from_account.getAccountBalance() >= amount) {
63         if (amount <= 200000) {
64             from_account.setAccountBalance(from_account.getAccountBalance() - amount);
65             to_account.setAccountBalance(to_account.getAccountBalance() + amount);
66             Transaction transaction = new Transaction(fromAccountId, toAccountId, amount, "TRANSFER", "App
67             from_account.getTransactionHistory().add(transaction);
68             transaction.setAccount(from_account);
69             transactionDao.save(transaction);
70 }
```

BankApp2 - BankAppApplication [Spring Boot App] C:\Program Files\Java\jdk1.8.0\_261\bin\javaw.exe (Sep 24, 2021, 5:40:08 PM)

Hibernate: select user0\_.user\_id as user\_id1\_3\_, user0\_.email as email2\_3\_, user0\_.password as password3\_3\_, user0\_.

Writable Smart Insert 79:14:3479

## References:

- <https://spring.io/>
- <https://www.w3schools.com/>
- <https://stackoverflow.com/>

