

BANK APPLICATION

Types: There are three types of users for this application.

- 1) Admin
- 2) Manager
- 3) Clerk

Users and their roles:

- 1) **Admin:** Among all the users, Admin can perform all actions on an account. The actions include creating new account, create new user for the application, Suspend a account and delete a account.
- 2) **Manager:** Manager is also an user who has limited actions. The actions include update account, Transfer fund that require approval.
- 3) **Clerk:** Clerk is the low tier user who can only perform action fund transfer and get transaction history.

Actions:

- 1) **Login:** This is used to login for particular person. It takes parameters like username and password. If login fails he/she will be redirected to home page.
- 2) **AddUser:** This action allows us to add user. The inputs are username, password, user type, address, phone number, email, aadhar card and pan card.
- 3) **Deposit:** This action allows us to deposit money in user account. It takes parameters like account number and amount to be deposited.
- 4) **Withdraw:** This action allows the user to withdraw money from his account. It takes two parameters like account number and amount to withdraw.
- 5) **Fund Transfer:** This action allows an user to transfer fund from one account to another. It takes 3 parameters from account number, to account number and amount to transfer.
- 6) **AddAccount:** It is similar to add user but it takes an extra input called user type which indicates whether the user is an admin, manager or clerk.
- 7) **ShowAllAccounts:** Show all accounts is used to display all the accounts in the accounts table.
- 8) **ShowAllUsers:** Show all users is used to display all the users in the users table which include admin, manager or clerk.
- 9) **UpdateAccount/UpdateUser:** Used to update details for an user or an account.

Validations:

Account number: Account number is validated by checking whether it is already existing in database or not.

Withdraw: The amount for withdraw will also be validated since it should always be less than the current balance.

Fund Transfer: Fund transfer also requires validation for both account numbers and money to be transferred.

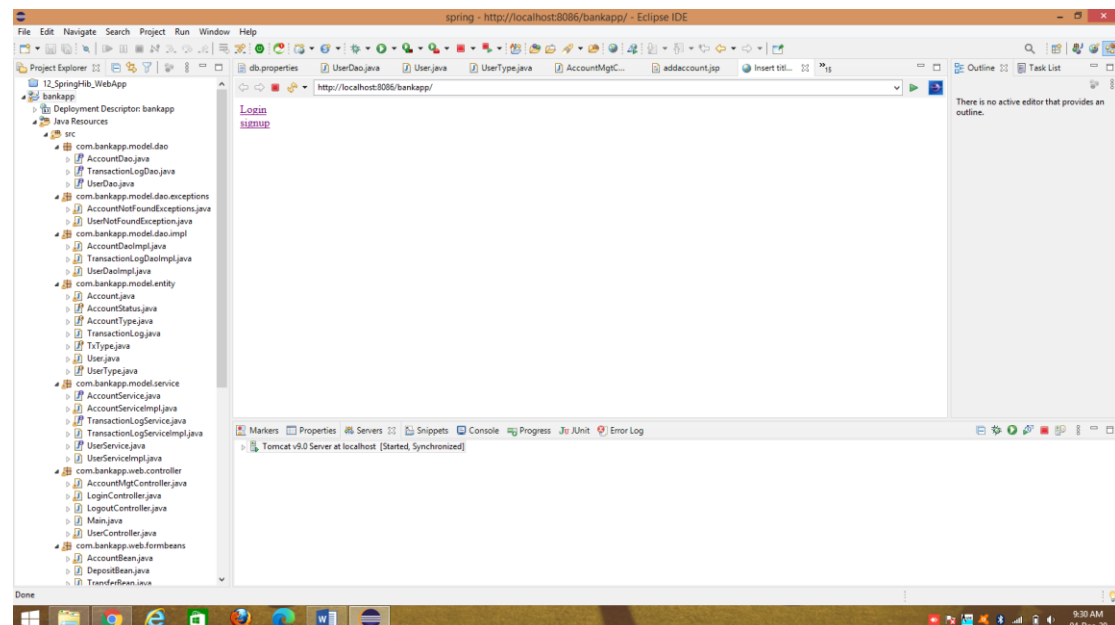
❖ Validations also include not null(which indicates that the details should be filled), should enter number(should enter number only), should enter string(should enter string only) etc.

Updating User/Account:

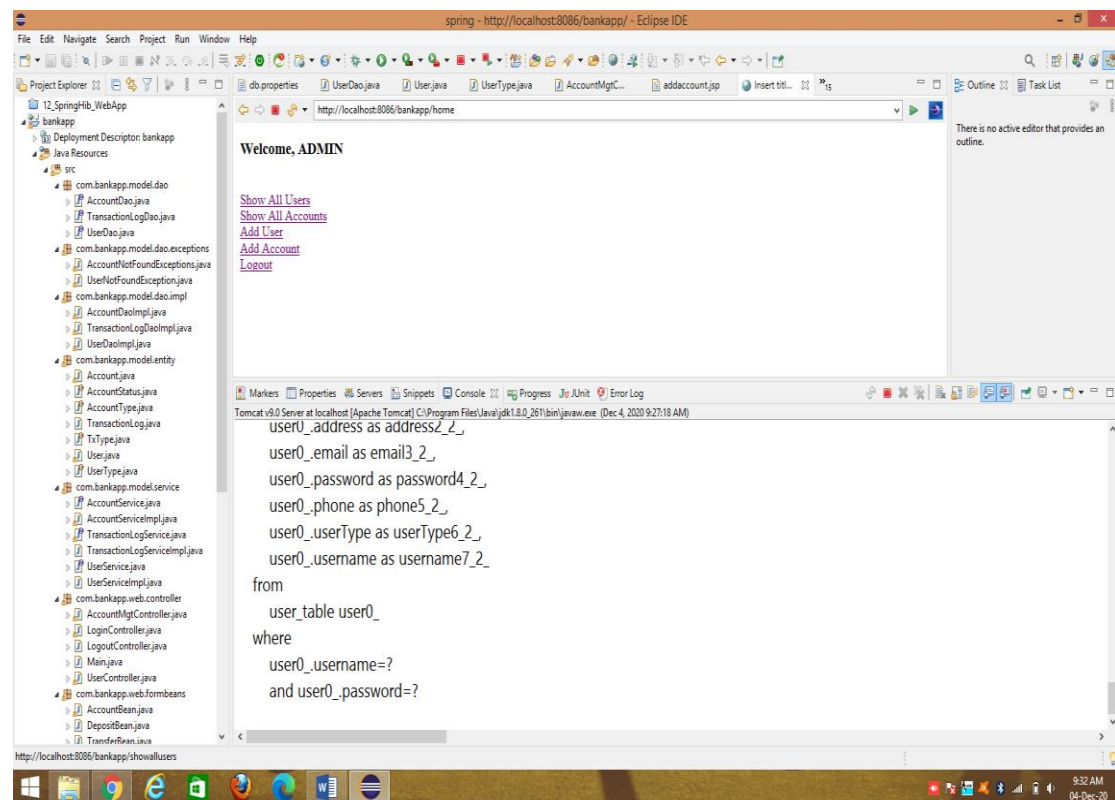
While updating user/account only specific data can be updated. The data are Address, Phone and Email.

- ❖ Aadhar card and Pan card cannot be updated for an user/account.
- ❖ The type of user can also be changed by the admin.

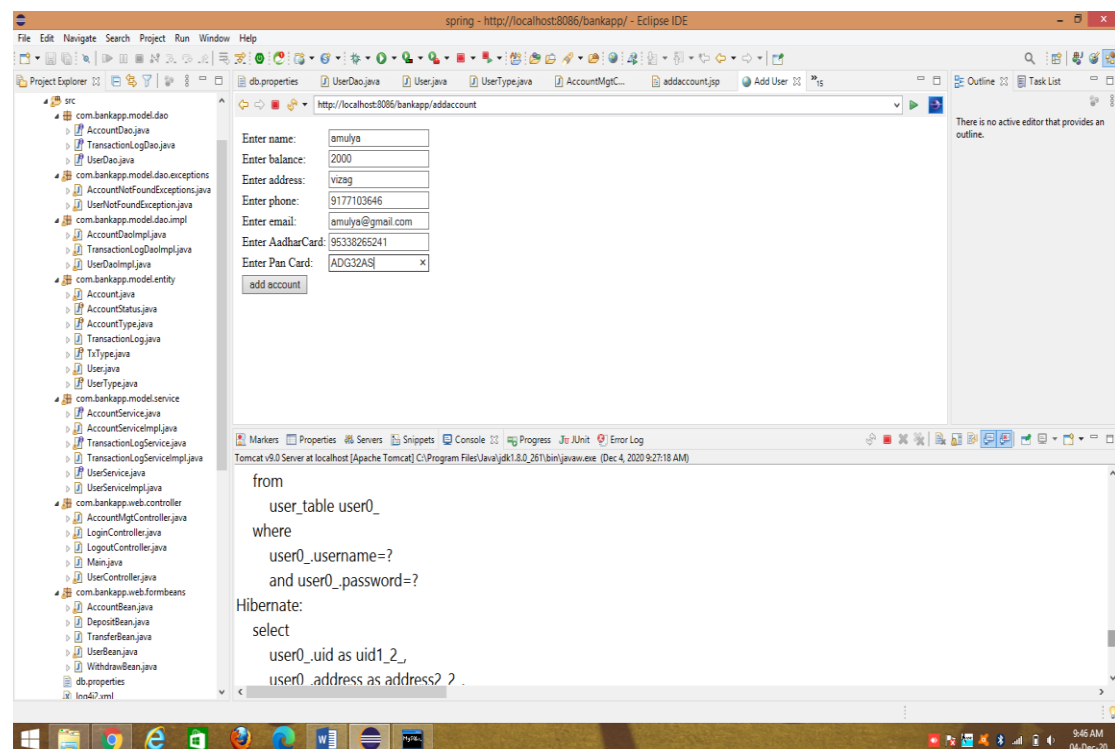
Login page:



Admin Welcome Page:



Add Account:



Add User:

12_SpringHib_WebApp

- bankapp
 - Deployment Descriptor: bankapp
 - Java Resources
 - src
 - com.bankapp.model.dao
 - AccountDao.java
 - TransactionLogDao.java
 - UserDao.java
 - com.bankapp.model.dao.exceptions
 - AccountNotFoundException.java
 - UserNotFoundException.java
 - com.bankapp.model.dao.impl
 - AccountDaoImpl.java
 - TransactionLogDaoImpl.java
 - UserDaoImpl.java
 - com.bankapp.model.entity
 - Account.java
 - AccountStatus.java
 - AccountType.java
 - TransactionLog.java
 - TxType.java
 - User.java
 - UserType.java
 - com.bankapp.model.service
 - AccountService.java
 - AccountServiceImpl.java
 - TransactionLogService.java
 - TransactionLogServiceImpl.java
 - UserService.java
 - UserServiceImpl.java
 - com.bankapp.web.controller
 - AccountMgtController.java
 - LoginController.java
 - LogoutController.java

http://localhost:8086/bankapp/adduser

Enter username: amrutha

Enter password: ab23

Enter userType: MANAGER

Enter address: rajam

Enter phone: 9550182614

Enter email: ammu@g.com

add user

Markers Properties Servers Snippets Console Progress JUnit Error Log

Tomcat v9.0 Server at localhost [Apache Tomcat] C:\Program Files\Java\jdk1.8.0_261\bin\javaw.exe (Dec 4, 2020 9:27:18 AM)

```
user0_.password as password4_2_,
user0_.phone as phone5_2_,
user0_.userType as userType6_2_,
user0_.username as username7_2_
from
  user_table user0_
where
  user0_.username=?
and user0_.password=?
```

Output of Money Transfer:

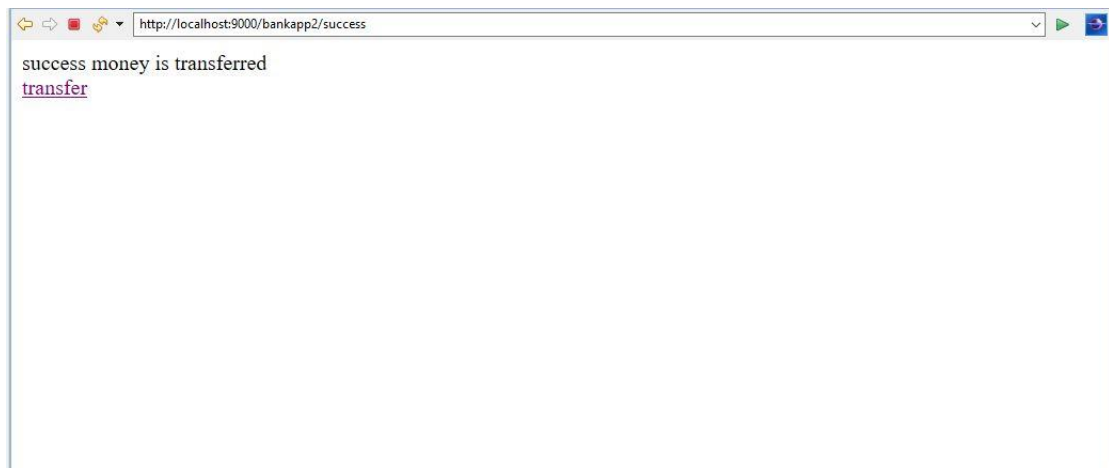
http://localhost:9000/bankapp2/transfer

Enter From Account 1

Enter To Account 2

Enter amount 200.0

Submit Query



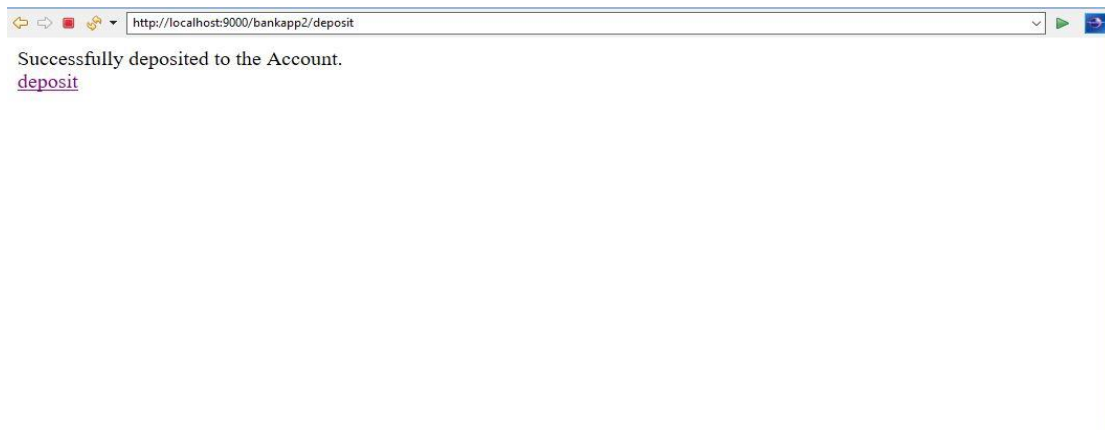
Database Output:

```
mysql> use bankapp2;
Database changed
mysql> show tables;
+-----+
| Tables_in_bankapp2 |
+-----+
| account_table      |
| txlog_table        |
| user_table         |
+-----+
3 rows in set (0.00 sec)

mysql> select *from account_table;
+-----+-----+-----+-----+-----+-----+
| account_id | aadharCard | accountStatus | accountType | address | balance |
| email      | name       | panNumber    | phone      |         |         |
+-----+-----+-----+-----+-----+-----+
| 1          | 123456789123 | 1            | savings    | rajam   | 1000    |
| a@gmail.com | Amrutha    | DGe45WQ     | 9550182614 |         |         |
| 2          | 123345677543 | 2            | savings    | vizag   | 2000    |
| amu@gmail.com | Amulya    | D12e5WQ     | 9177103646 |         |         |
+-----+-----+-----+-----+-----+-----+
2 rows in set (0.00 sec)
```

Output of Deposit:

A screenshot of a web browser window. The address bar shows the URL `http://localhost:9000/bankapp2/deposit`. The main content area displays a "Welcome!" message. Below the message, there are two input fields: "Enter Account Number:" with the value "4" and "Enter Amount to be Transferred:" with the value "200.0". A button labeled "transfer amount" is positioned below the second input field.



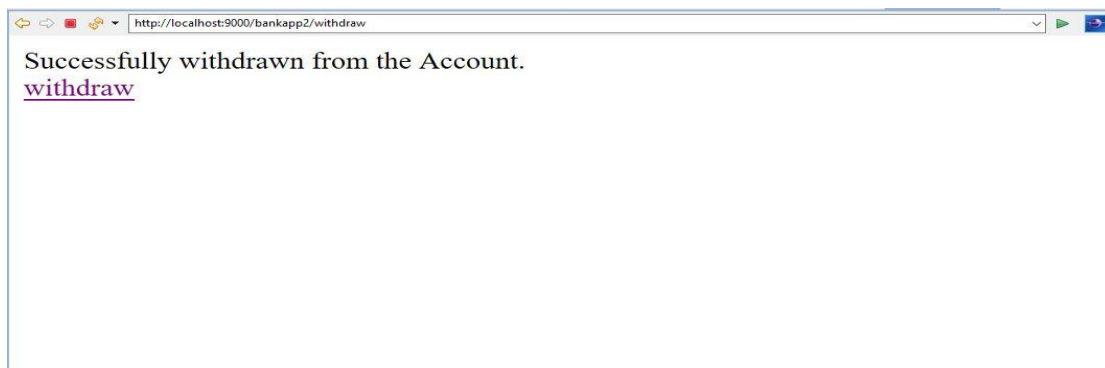
Database Output:

```
mysql> select *from account_table;
```

| account_id | aadharCard | accountStatus | accountType | address | balance |
|---------------|--------------|---------------|-------------|---------|---------|
| email | name | panNumber | phone | | |
| 1 | 123456789123 | 1 | savings | rajam | 1000 |
| a@gmail.com | Amrutha | DGe45WQ | 9550182614 | | |
| 2 | 123345677543 | 2 | savings | vizag | 2000 |
| anu@gmail.com | Amulya | D12e5WQ | 9177103646 | | |
| 3 | 123456743567 | 3 | savings | vzm | 3000 |
| g@gmail.com | jyothi | FGF45FGF | 9876543217 | | |
| 4 | 1234567347 | 4 | savings | vzm | 900 |
| p@gmail.com | priya | FW34RF | 94566543217 | | |

Output of Withdraw:

A screenshot of a web browser window with the address bar showing `http://localhost:9000/bankapp2/withdraw`. The page displays a "Welcome!" message. Below it, there are two input fields: "Enter Account Number:" with the value "2" and "Enter Amount to be Withdrawn:" with the value "400.0". A button labeled "withdrw amount" is positioned below the second input field.



Database Output:

```
mysql> select *from account_table;
```

| account_id | aadharCard | accountStatus | accountType | address | balance |
|---------------|--------------|---------------|-------------|---------|---------|
| email | name | panNumber | phone | | |
| 1 | 123456789123 | 1 | savings | rajam | 1000 |
| a@gmail.com | Amrutha | DGe45WQ | 9550182614 | | |
| 2 | 123345677543 | 2 | savings | vizag | 2000 |
| amu@gmail.com | Amulya | D12e5WQ | 9177103646 | | |
| 3 | 123456743567 | 3 | savings | vzm | 3000 |
| g@gmail.com | jyothi | FGP45FGF | 9876543217 | | |
| 4 | 1234567347 | 4 | savings | vzm | 900 |
| p@gmail.com | priya | FW34RF | 94566543217 | | |

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