

## **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.

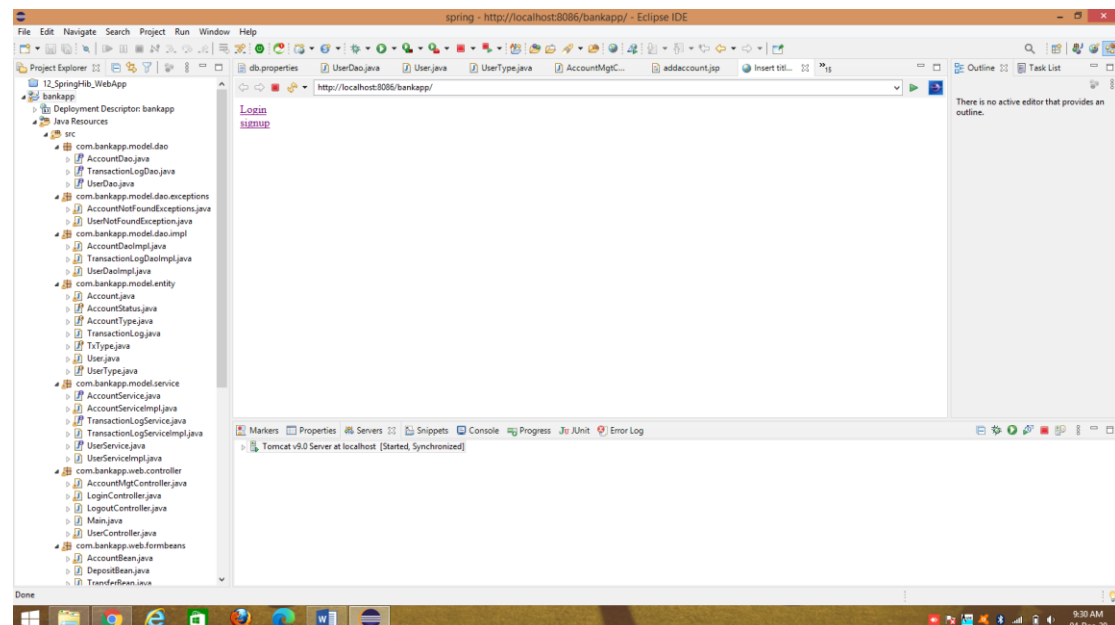
❖ Validations also include not null(which indicates that the details should be filled), should enter number(should enter number only), should enter string(should enter string only) etc.

## Updating User/Account:

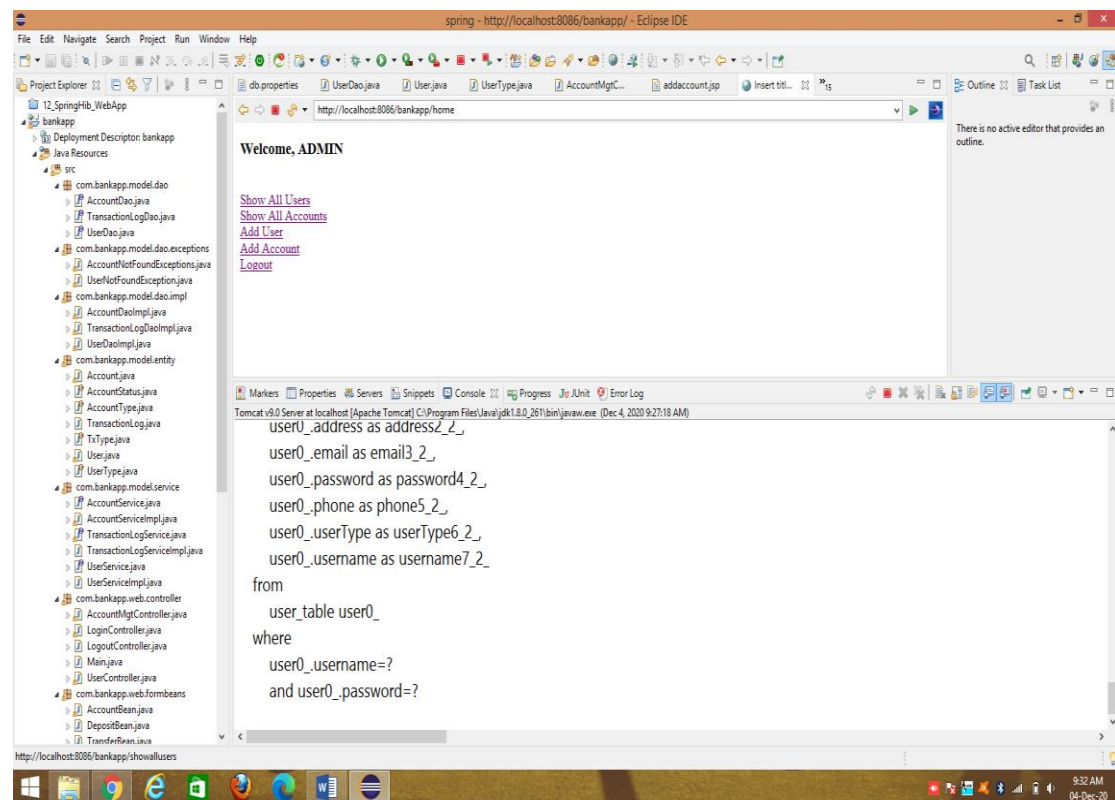
While updating user/account only specific data can be updated. The data are Address, Phone and Email.

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

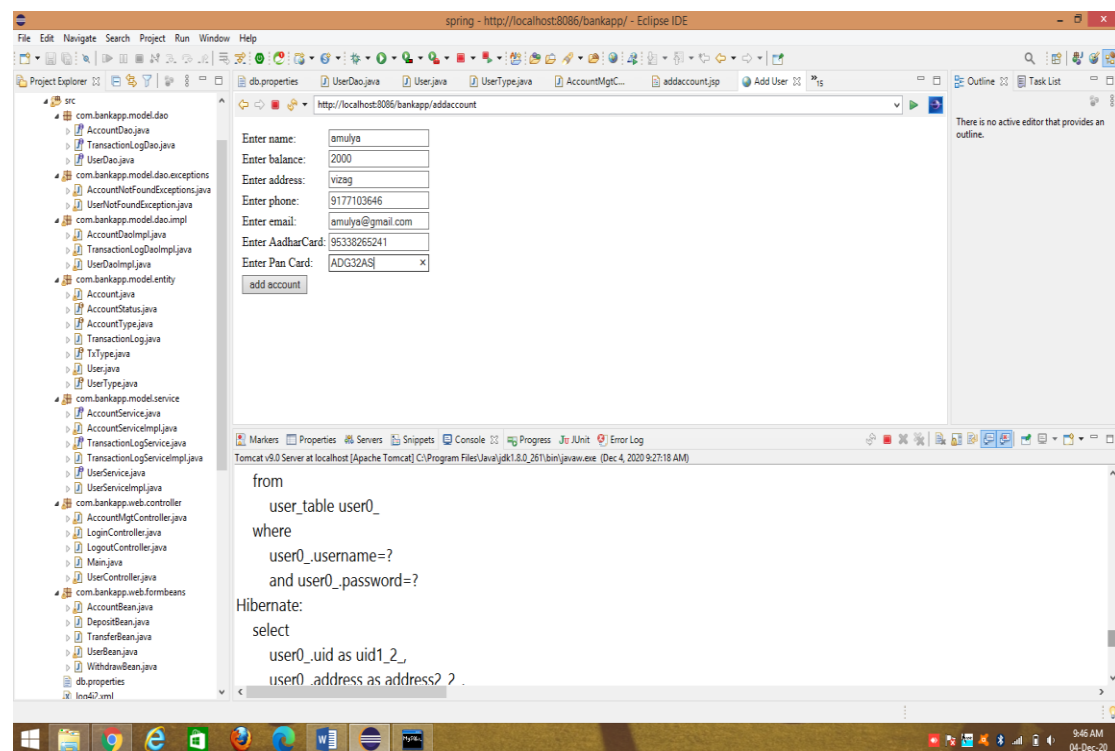
## Login page:



## 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:

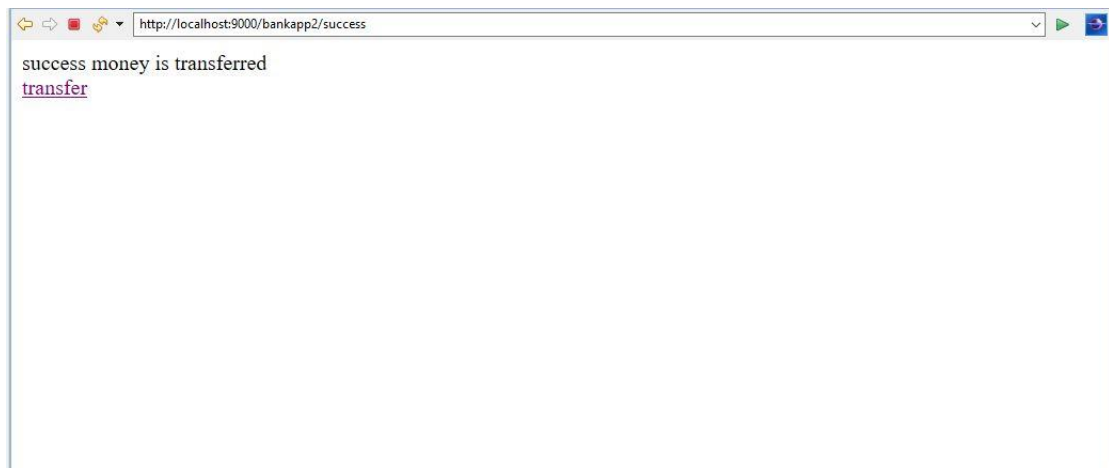
http://localhost:9000/bankapp2/transfer

Enter From Account 1

Enter To Account 2

Enter amount 200.0

Submit Query



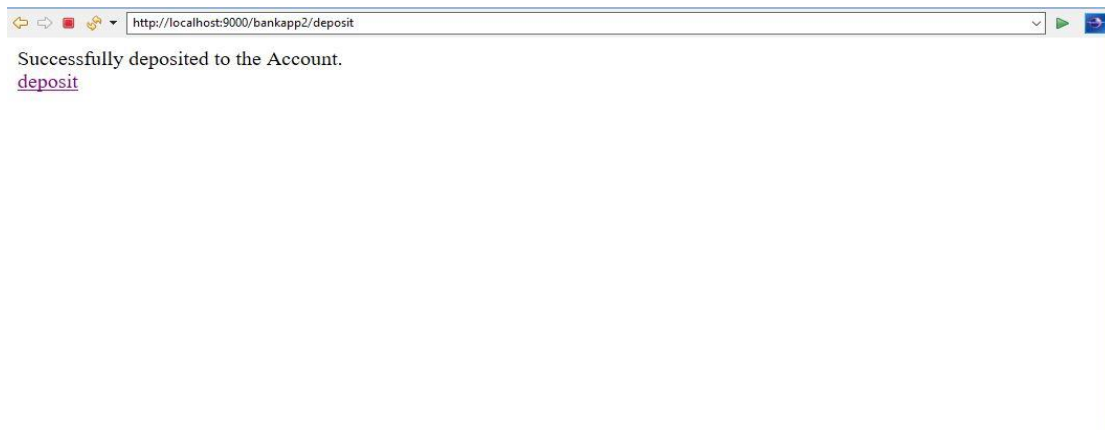
### Database Output:

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

account_id	aadharCard	accStatus	accType	address	balance	email
name	panNumber	phone				
1	12345678912	active	savings	vzm	700	a@gmail.
com	ammu	DFR34WD				
2	123434788912	active	savings	vizag	300	am@gmail
.com	amu	DF34RWD				
3	12345678912	active	savings	vzm	900	a@gmail.
com	ammu	DFR34WD				
4	123434788912	active	savings	vizagm	900	am@gmail
.com	amu	DFR34WD				

### Output of Deposit:

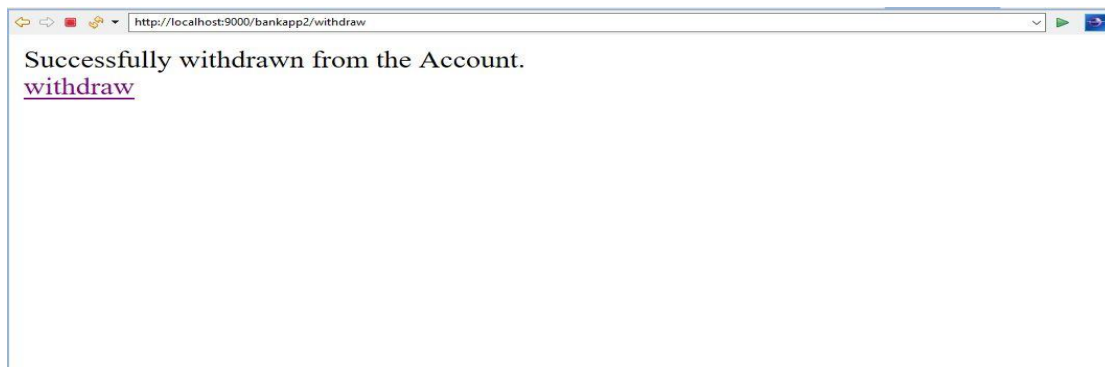
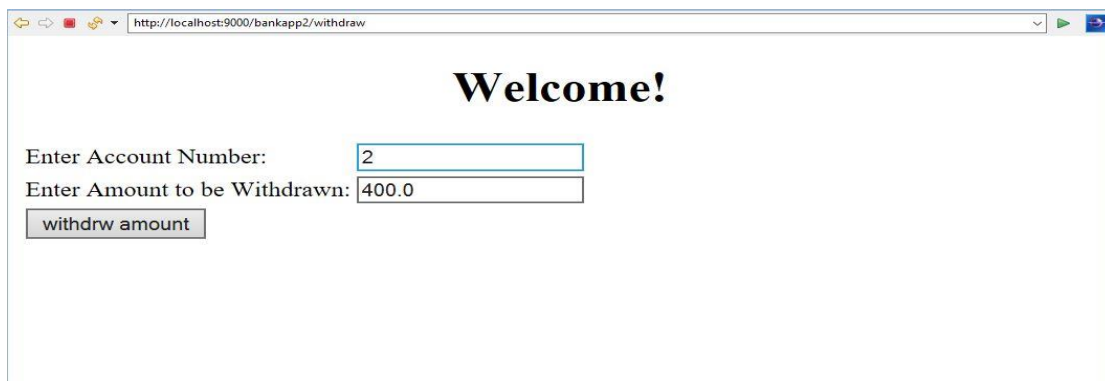
A screenshot of a web browser window with the address bar showing `http://localhost:9000/bankapp2/deposit`. The page features a "Welcome!" heading. Below it, there are two input fields: "Enter Account Number:" with the value "4" and "Enter Amount to be Transferred:" with the value "200.0". A button labeled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



### Database Output:

```
mysql> select *from account_table;
+-----+-----+-----+-----+-----+-----+-----+
| account_id | aadharCard | accStatus | accType | address | balance | email |
| name | panNumber | phone | | | | |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | 12345678912 | active | savings | vzm | 700 | a@gmail. |
com | ammu | DFR34WD | 95501824 | | | |
| 2 | 123434788912 | active | savings | vizag | 300 | an@gmail |
.com | amu | DF34RWD | 956501824 | | | |
| 3 | 12345678912 | active | savings | vzm | 900 | a@gmail. |
com | ammu | DFR34WD | 95501824 | | | |
| 4 | 123434788912 | active | savings | vizag | 1100 | an@gmail |
.com | ammu | DF34RWD | 956501824 | | | |
+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.00 sec)
```

### Output of Withdraw:



### Database Output:

```
mysql> select *from account_table;
+-----+-----+-----+-----+-----+-----+-----+
| account_id | aadharCard | accStatus | accType | address | balance | email |
| name | panNumber | phone |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | 12345678912 | active | savings | vzm | 700 | a@gmail.com |
| 2 | 123434788912 | active | savings | vizag | 300 | an@gmail.com |
| 3 | 12345678912 | active | savings | vzm | 900 | a@gmail.com |
| 4 | 12343478912 | active | savings | vizag | 700 | an@gmail.com |
| 5 | 12345678912 | active | savings | vzm | 900 | a@gmail.com |
+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.04 sec)
```

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