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.

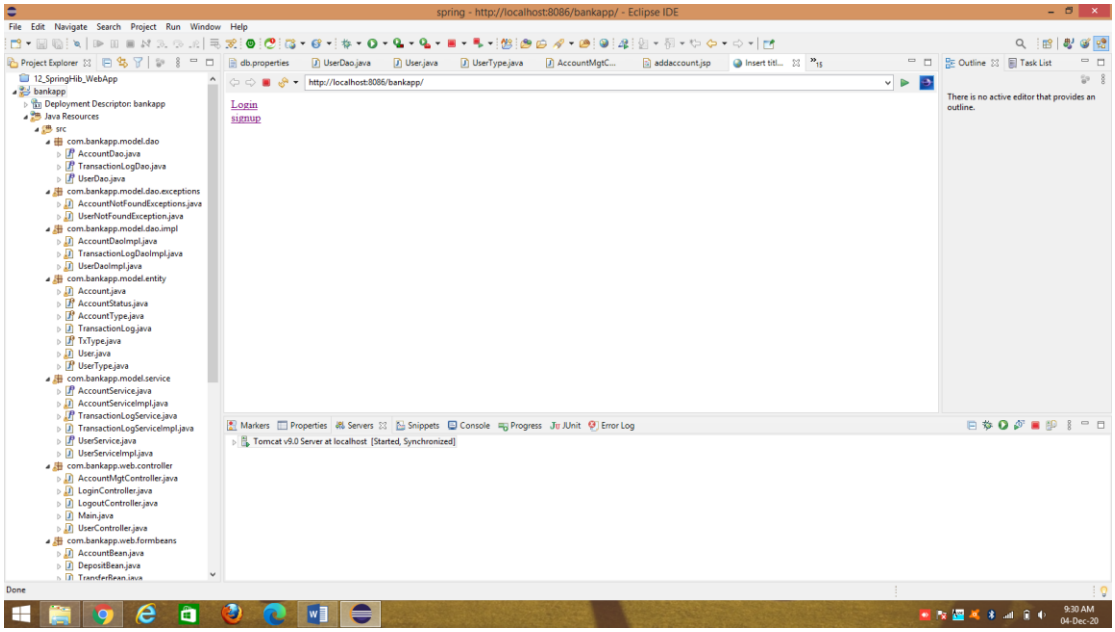
- ❖ Validations also include not null(which indicates that the details should be filled), should enter number(should enter number only), should enter string(should enter string only) etc.

Updating User/Account:

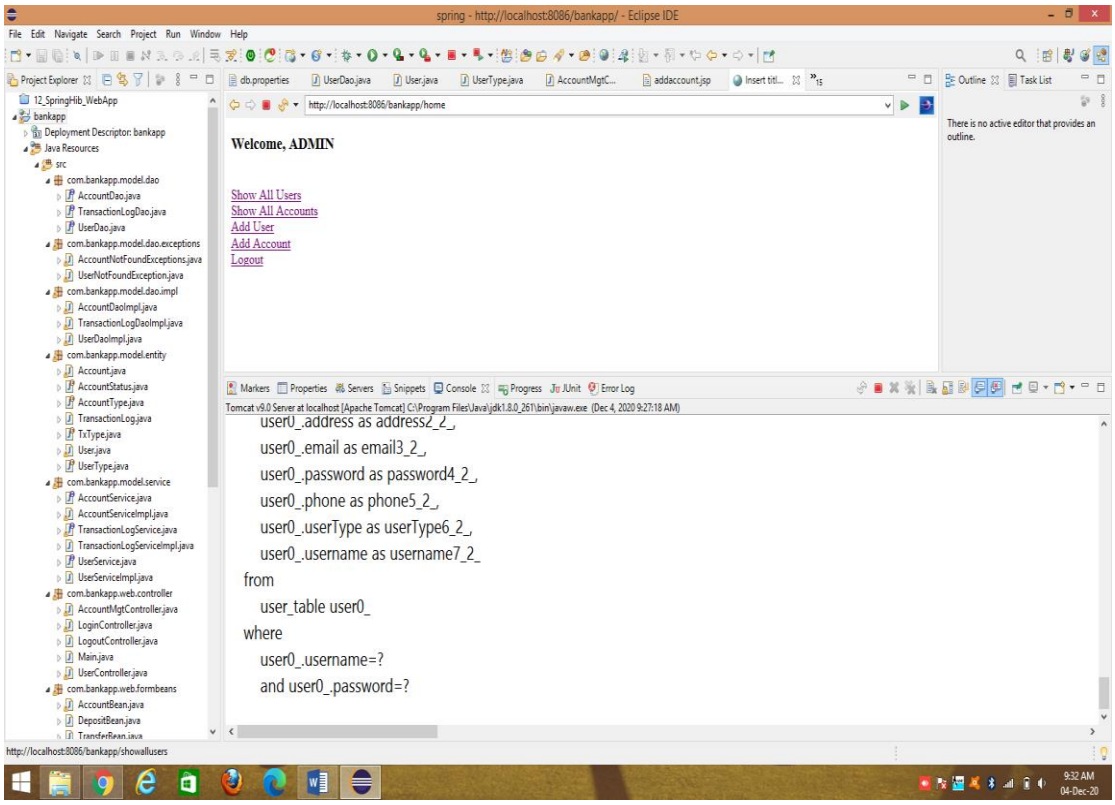
While updating user/account only specific data can be updated. The data are Address, Phone and Email.

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

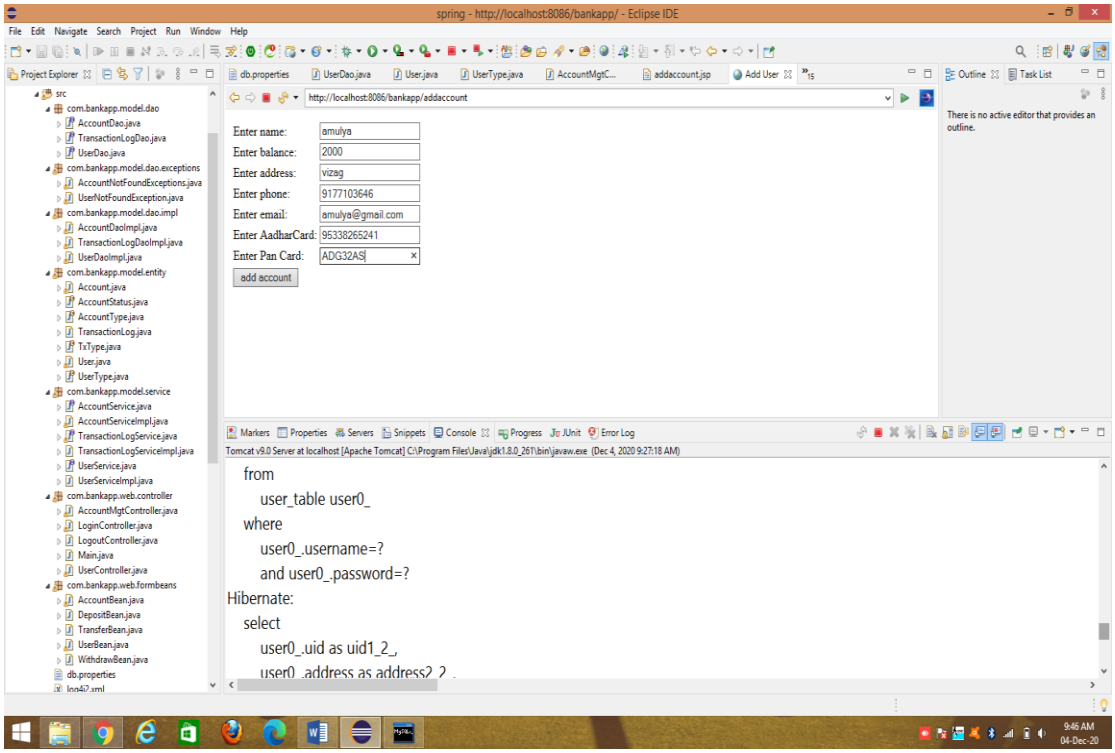
Login page:



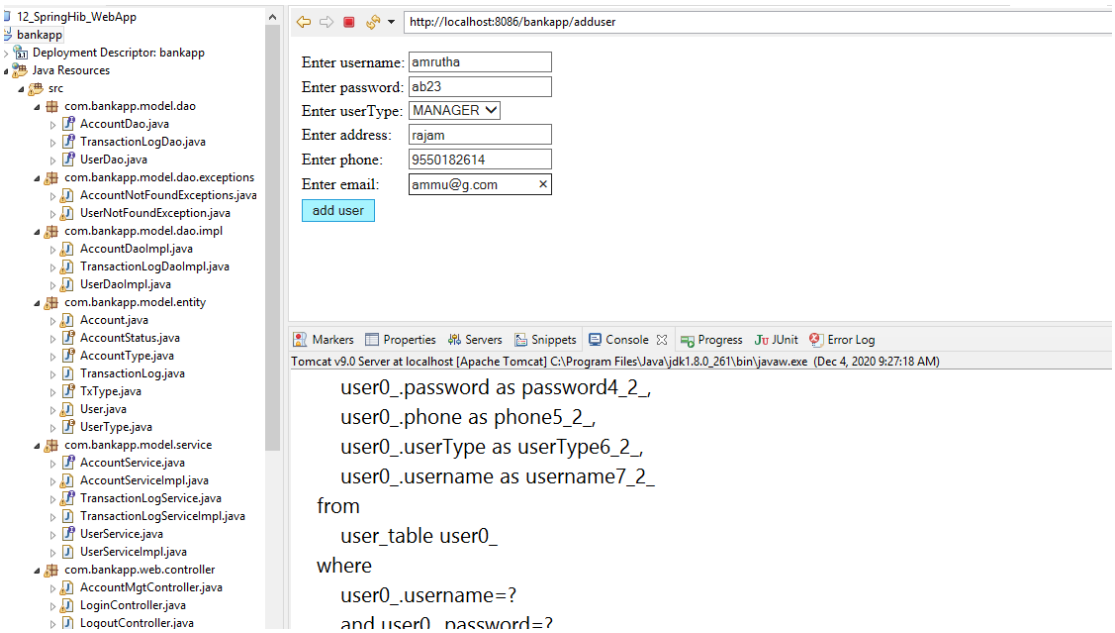
Admin Welcome Page:



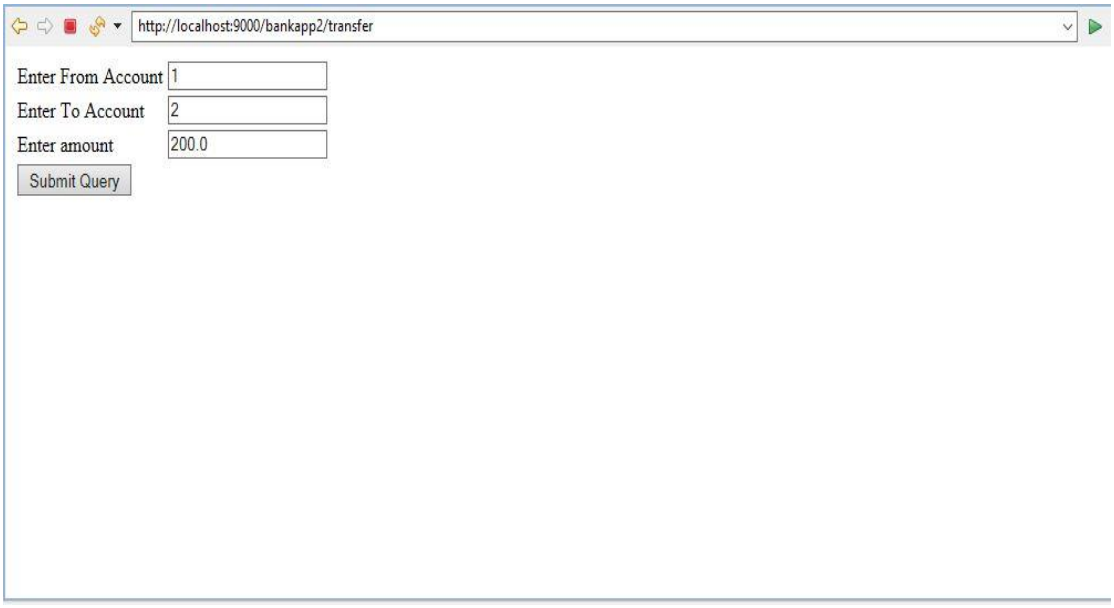
Add Account:

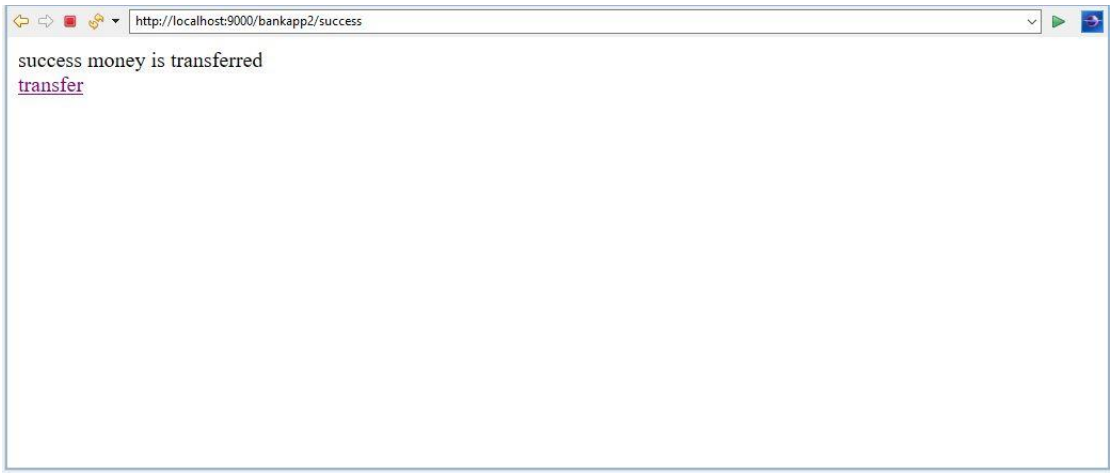


Add User:

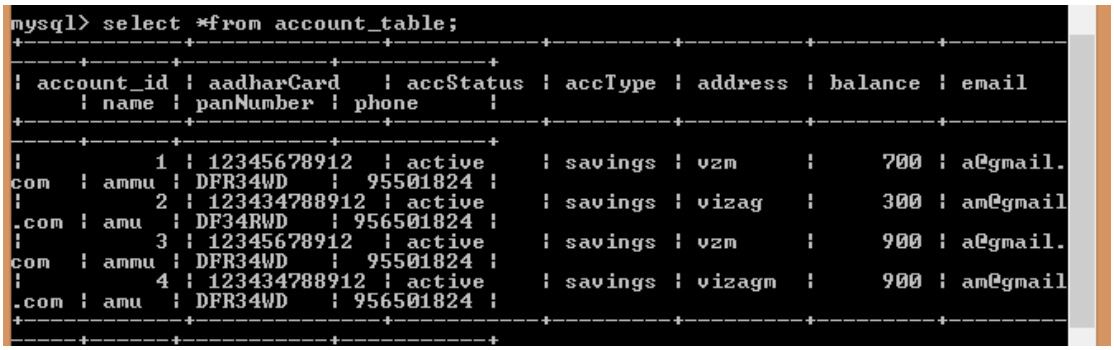


Output of Money Transfer:





Database Output:



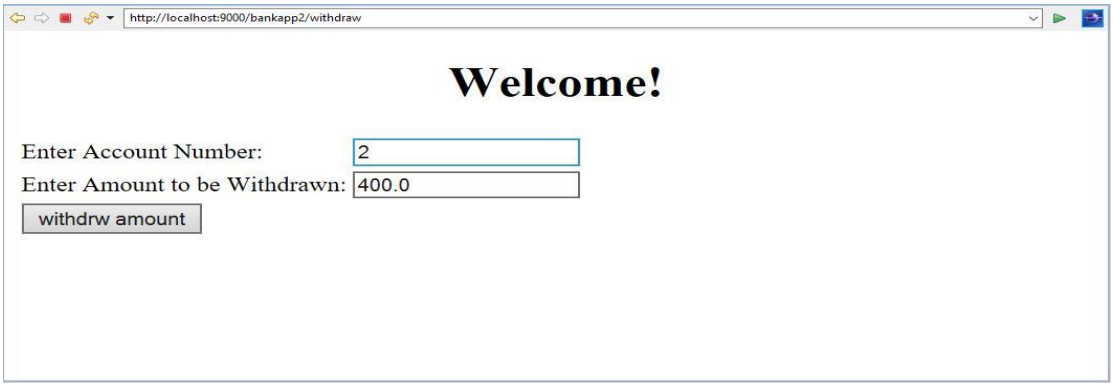
```
mysql> select *from account_table;
+------------+--------------+-----------+---------+---------+---------+---------
-----+------+-----------+-----------+
| account_id | aadharCard   | accStatus | accType | address | balance | email
     | name | panNumber | phone     |
+------------+--------------+-----------+---------+---------+---------+---------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

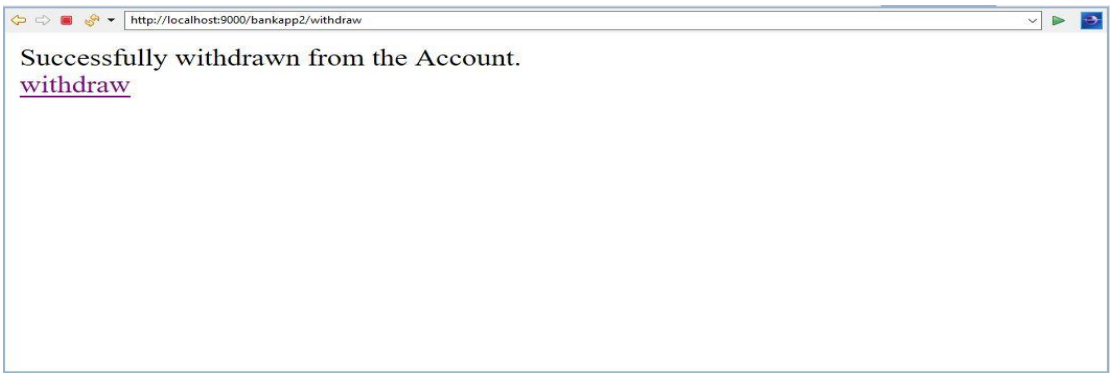
Output of Deposit:

Database Output:

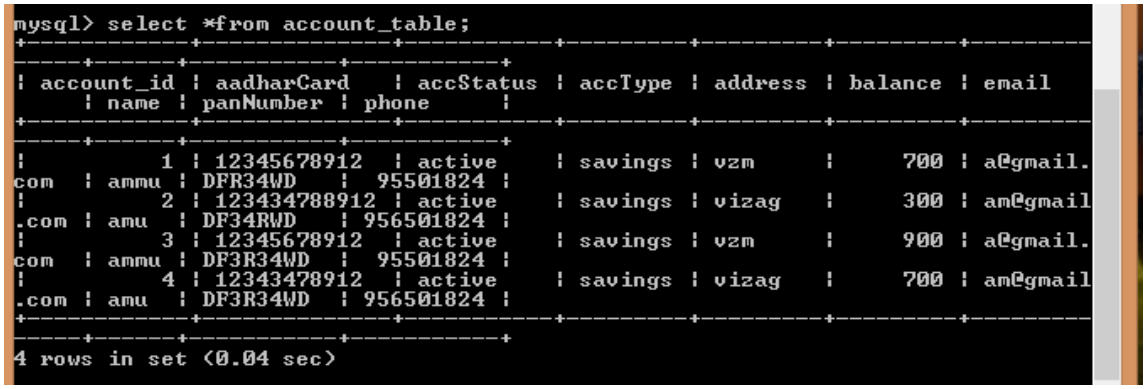
```
mysql> select *from account_table;
+------------+--------------+-----------+---------+---------+---------+---------
-----+------+-----------+-----------+
| account_id | aadharCard   | accStatus | accType | address | balance | email
     | name | panNumber | phone     |
+------------+--------------+-----------+---------+---------+---------+---------
-----+------+-----------+-----------+
|          1 | 12345678912  | active    | savings | vzm     |     700 | a@gmail.
com  | ammu | DFR34WD   |  95501824 |
|          2 | 123434788912 | active    | savings | vizag   |     300 | am@gmail
.com | amu  | DF34RWD   | 956501824 |
|          3 | 12345678912  | active    | savings | vzm     |     900 | a@gmail.
com  | ammu | DFR34WD   |  95501824 |
|          4 | 123434788912 | active    | savings | vizag   |    1100 | am@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  | ammu  | DFR34WD   |  95501824 |
|          2 | 123434788912 | active    | savings | vizag   |     300 | am@gmail
.com | amu   | DF34RWD   | 956501824 |
|          3 | 12345678912 | active    | savings | vzm     |     900 | a@gmail.
com  | ammu  | DF3R34WD  |  95501824 |
|          4 | 12343478912 | active    | savings | vizag   |     700 | am@gmail
.com | amu   | DF3R34WD  | 956501824 |
+------------+-------------+-----------+---------+---------+---------+---------
-----+-------+-----------+-----------+
4 rows in set (0.04 sec)
```

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