

HCL Bank Web Application

Users:

1.Admin

- Can add a new account and new administration user
- .Can view all accounts and users.
- Can update an account or delete an account.

2.Manager

- Can transfer,deposit and withdraw money.
- Can view all accounts.

3.Clerk

- Can view only transaction log information.

Actions:

1.**Login** :This is used to login for a particular person. It takes parameters like username and password. If login fails he/she will be redirected to the home page.

2.**Add Account**: This is used to create a new bank account by the admin. The inputs are name, address, phone number, email,account type,balance, aadhar card and pan card.

3.**Add User**: This is used to create a new administrative user account by the admin. The inputs are username, password, address, phone number, email, user type.

4.**ShowAllAccounts**: This displays all the accounts in the database.

5.**Update Account**: This is used to update details of the account like phone, email, address.

6.**Delete Account**: This is used to suspend or delete the account from the database.

7.**Transfer**: This is used to transfer money from one account to another account. The inputs are from account id, to account id and the amount to be transferred.

8.**Deposit**: This is used to deposit money into an account. The inputs are to account id and the amount to be deposited.

9. **Withdraw:** This is used to withdraw money from an account. The inputs are from account id and the amount to be transferred.

10. **Transaction Log:** This is used to display the transaction details of the accounts.

Configuration: Java Configuration is used instead of xml.

- **Configuration Files:** Model Config, Web Config, Web Initializer.

DAO Layer:

- **Entities:** Account, TransactionLog, User, Account Type, Account Status, User Type, Transaction Type.
- **Interfaces:** AccountDao, TransactionLogDao, UserDao.
- **Exceptions:** Account not found, user not found.

Service Layer:

- **Interfaces:** AccountService, TransactionLog Service, User Service.
- **Aspects:** Loggable(custom annotation), Logging Aspect.

Web Layer:

- **Controller:** Account Controller, Transaction Controller, User Controller, Login Controller.
- **Form Beans:** Account Bean, User Bean, Login Bean, Transfer Bean, Withdraw Bean, Deposit Bean

Resources: Database properties, log4j, Validation Properties.

Views: Add account, add user, all accounts, update account, home, login, logout, deposit, transfer, success, txlog, 404, db error.

CSS Resources: Form, table.

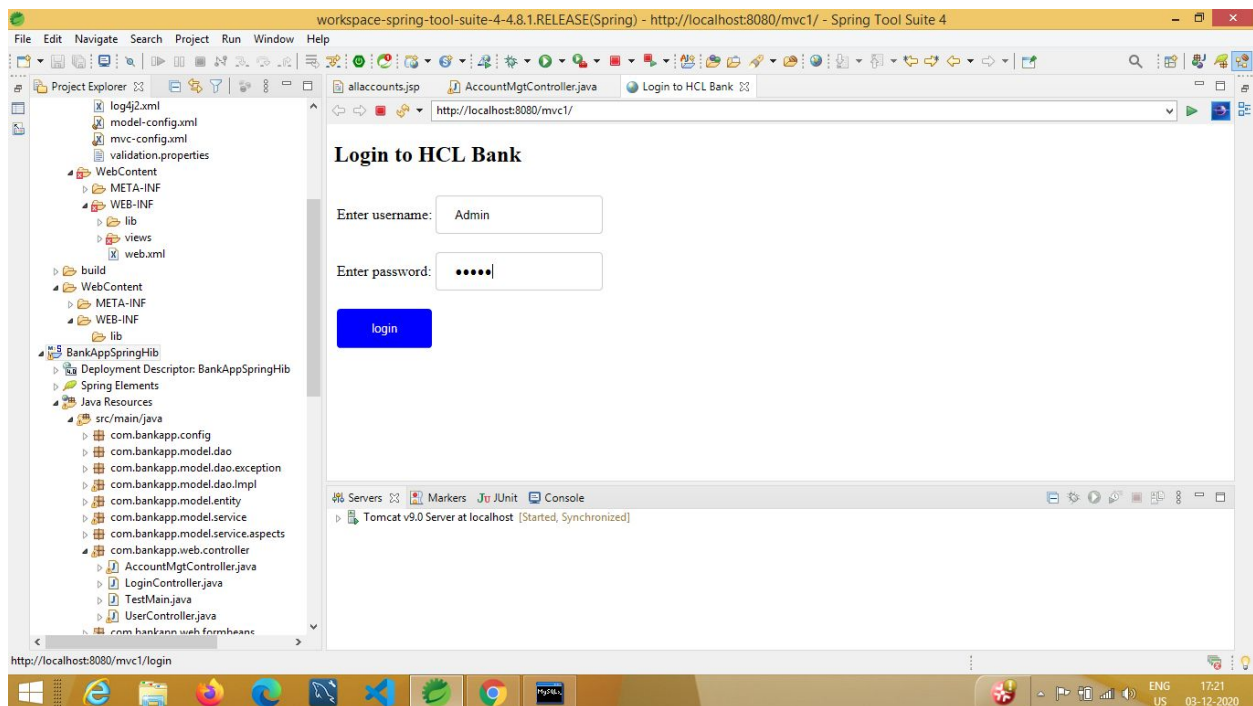
Validations:

Account Number: Account number cannot be empty.

Amount: Amount cannot exceed the limit while transfer and deposit actions and cannot be less than minimum balance while withdrawal action.

Type Mismatch: The entry should match with the type of field i.e numeric or string.

Login Page:



Admin Page:

workspace-spring-tool-suite-4-4.8.1.RELEASE(Spring) - http://localhost:8080/mvc1/ - Spring Tool Suite 4

Project Explorer: log4j2.xml, model-config.xml, mvc-config.xml, validation.properties, WebContent, META-INF, WEB-INF, lib, views, web.xml, build, WebContent, META-INF, WEB-INF, lib, BankAppSpringHib, Deployment Descriptor: BankAppSpringHib, Spring Elements, Java Resources, src/main/java, com.bankapp.config, com.bankapp.model.dao, com.bankapp.model.dao.exception, com.bankapp.model.dao.impl, com.bankapp.model.entity, com.bankapp.model.service, com.bankapp.model.service.aspects, com.bankapp.web.controller, AccountMgtController.java, LoginController.java, TestMain.java, UserController.java, com.bankapp.web.frontend

Browser: http://localhost:8080/mvc1/home

Hi, Admin

[Create New Bank Account](#)
[Show All Accounts](#)
[Create New Administrative User](#)
[Logout](#)

Console: Tomcat v9.0 Server at localhost [Apache Tomcat] C:\Program Files\Java\jdk1.8.0_271\bin\javaw.exe (03-Dec-2020, 5:19:54 pm)

```
roles0_User_uid as User_uid1_1_0_,
roles0_role as role2_1_0_
from
roles roles0_
where
roles0_User_uid=?
```

All Accounts:

workspace-spring-tool-suite-4-4.8.1.RELEASE(Spring) - http://localhost:8080/mvc1/ - Spring Tool Suite 4

Project Explorer: log4j2.xml, model-config.xml, mvc-config.xml, validation.properties, WebContent, META-INF, WEB-INF, lib, views, web.xml, build, WebContent, META-INF, WEB-INF, lib, BankAppSpringHib, Deployment Descriptor: BankAppSpringHib, Spring Elements, Java Resources, src/main/java, com.bankapp.config, com.bankapp.model.dao, com.bankapp.model.dao.exception, com.bankapp.model.dao.impl, com.bankapp.model.entity, com.bankapp.model.service, com.bankapp.model.service.aspects, com.bankapp.web.controller, AccountMgtController.java, LoginController.java, TestMain.java, UserController.java, com.bankapp.web.frontend

Browser: http://localhost:8080/mvc1/allaccounts

All the accounts

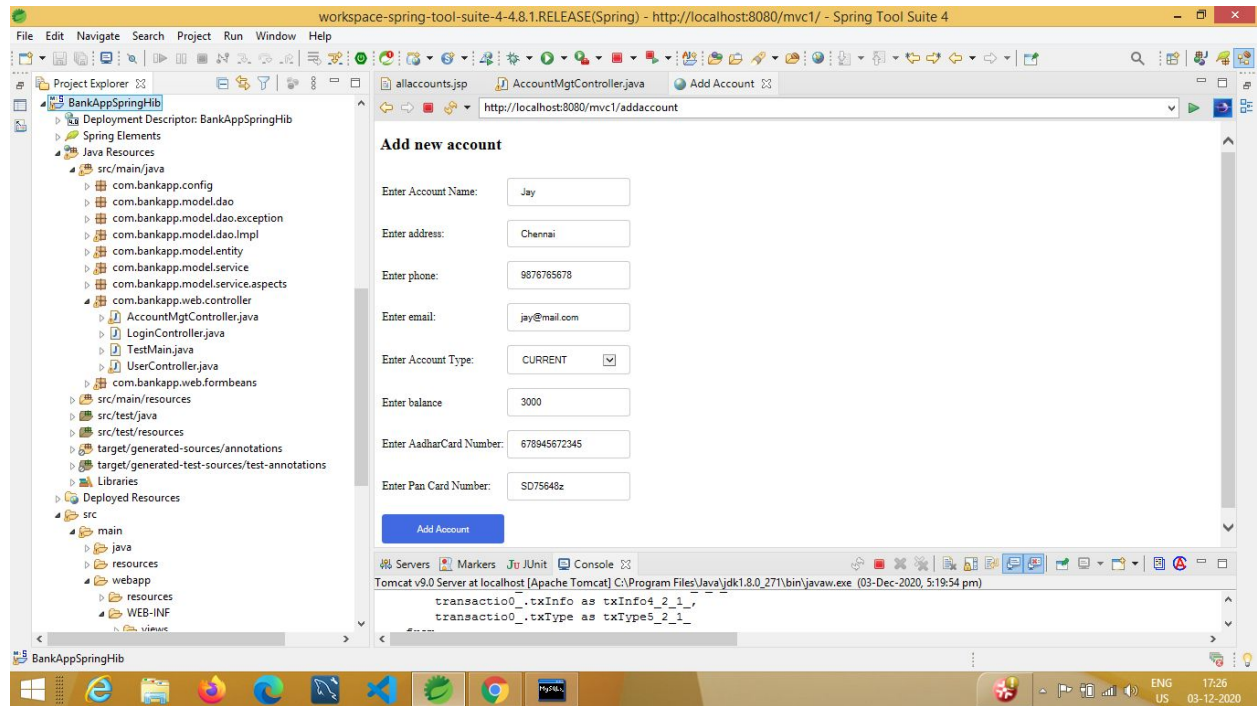
accountId	name	address	phone	email	accountType	balance	updateaccount	deleteaccount
1	sri	SKLM	9653559246	bhavani@gmail.com	CURRENT	1850.8899999999999	Update Account	Delete Account
2	Sravanthi	BLR	9576596562	sri@gmail.com	SAVING	6350.9	Update Account	Delete Account
11	Harry	Mumbai	7876543212	harry@mail.com	CURRENT	10000.0	Update Account	Delete Account
12	Geetha	Vizag	876545674	geet@mail.com	SAVING	40000.0	Update Account	Delete Account

[Add Account](#)

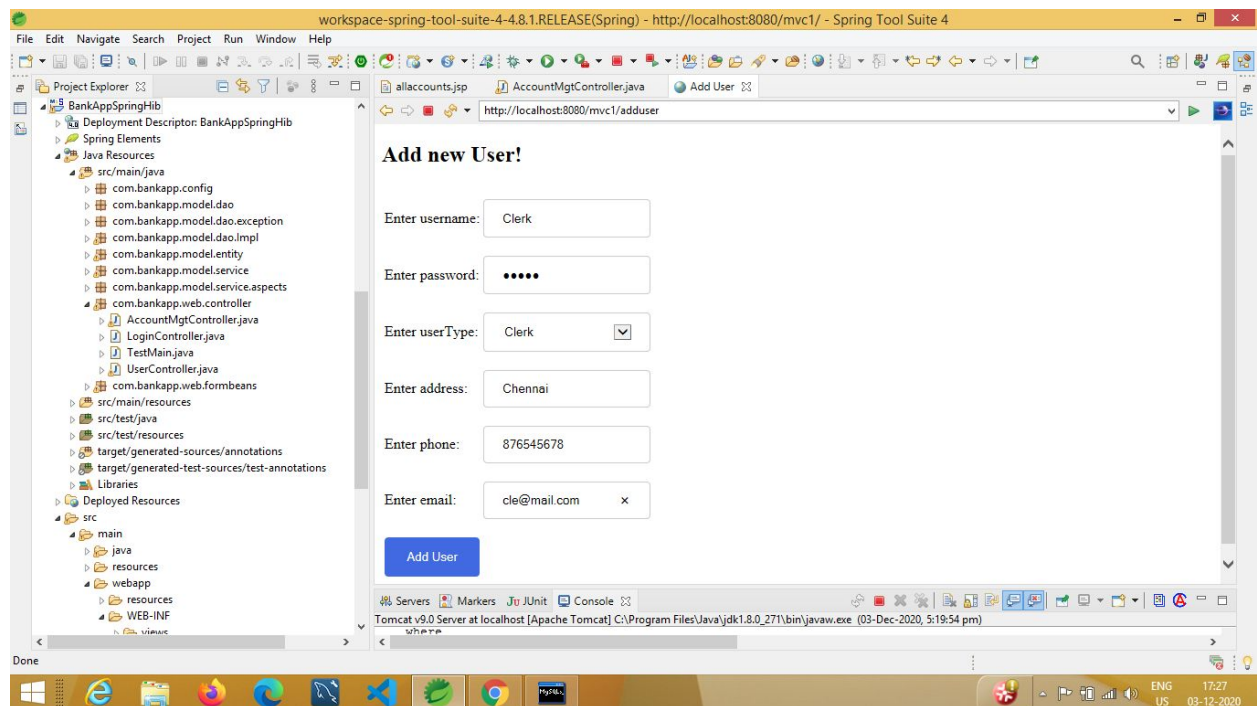
Console: Tomcat v9.0 Server at localhost [Apache Tomcat] C:\Program Files\Java\jdk1.8.0_271\bin\javaw.exe (03-Dec-2020, 5:19:54 pm)

```
transaction0_txInfo as txInfo4_2_1_1_
transaction0_txType as txType5_2_1_1_
from
txLog_table transaction0_
where
transaction0_accountId_FK=?
```

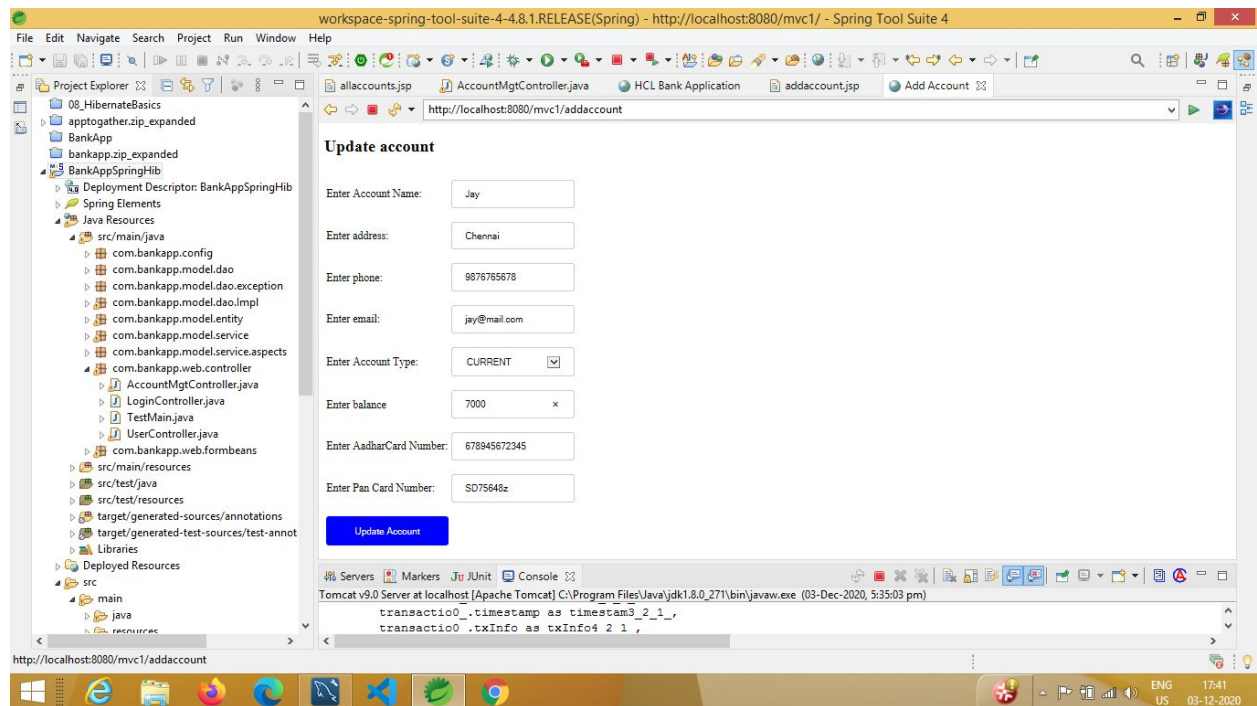
Add new account:



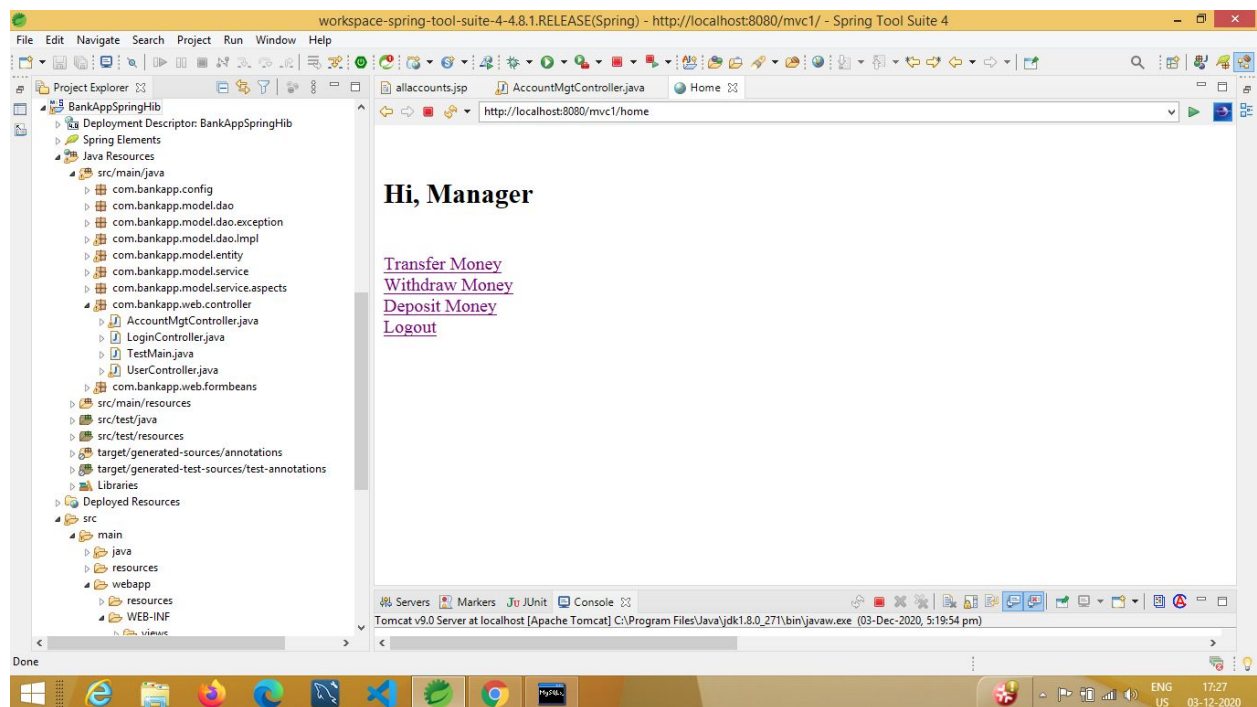
Add new user:



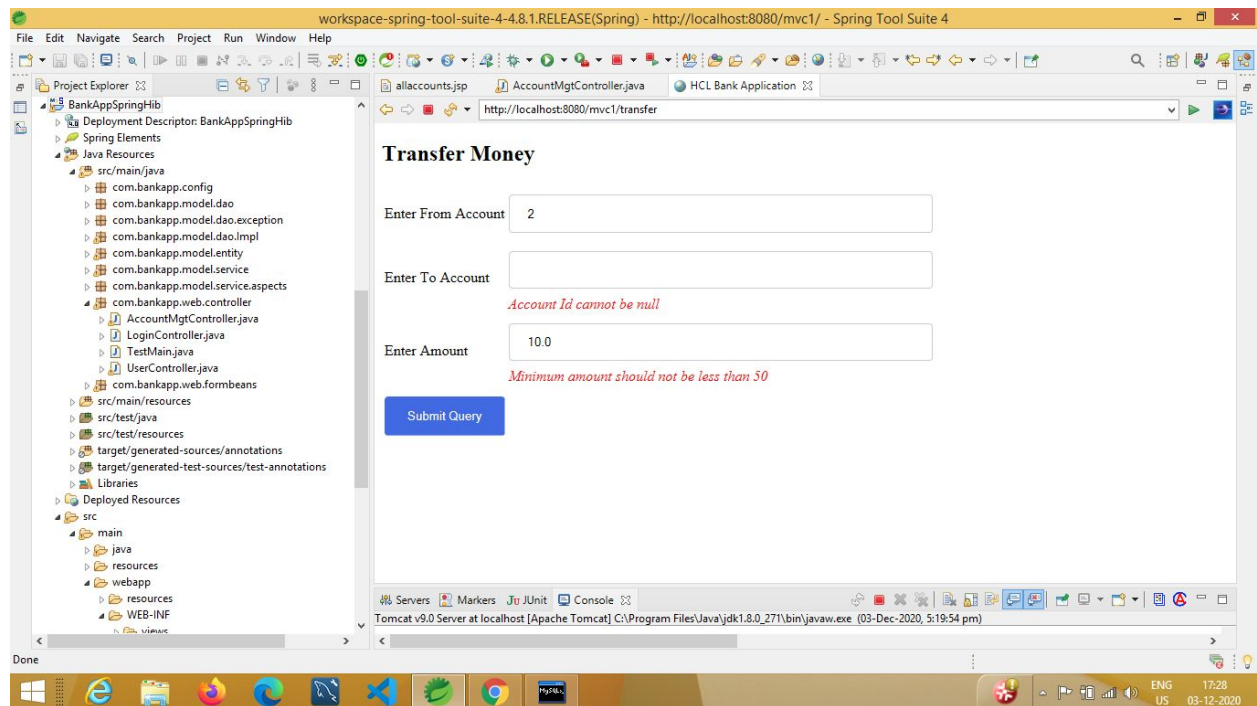
Update Account:



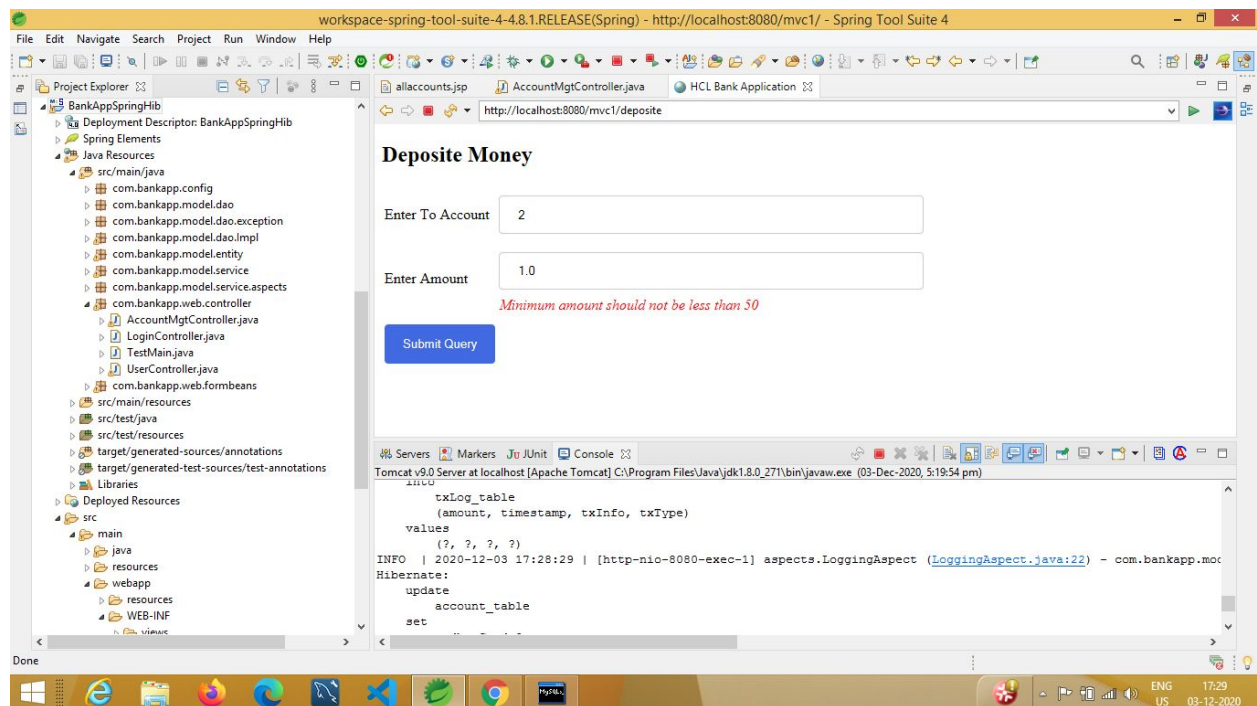
Manager Page:



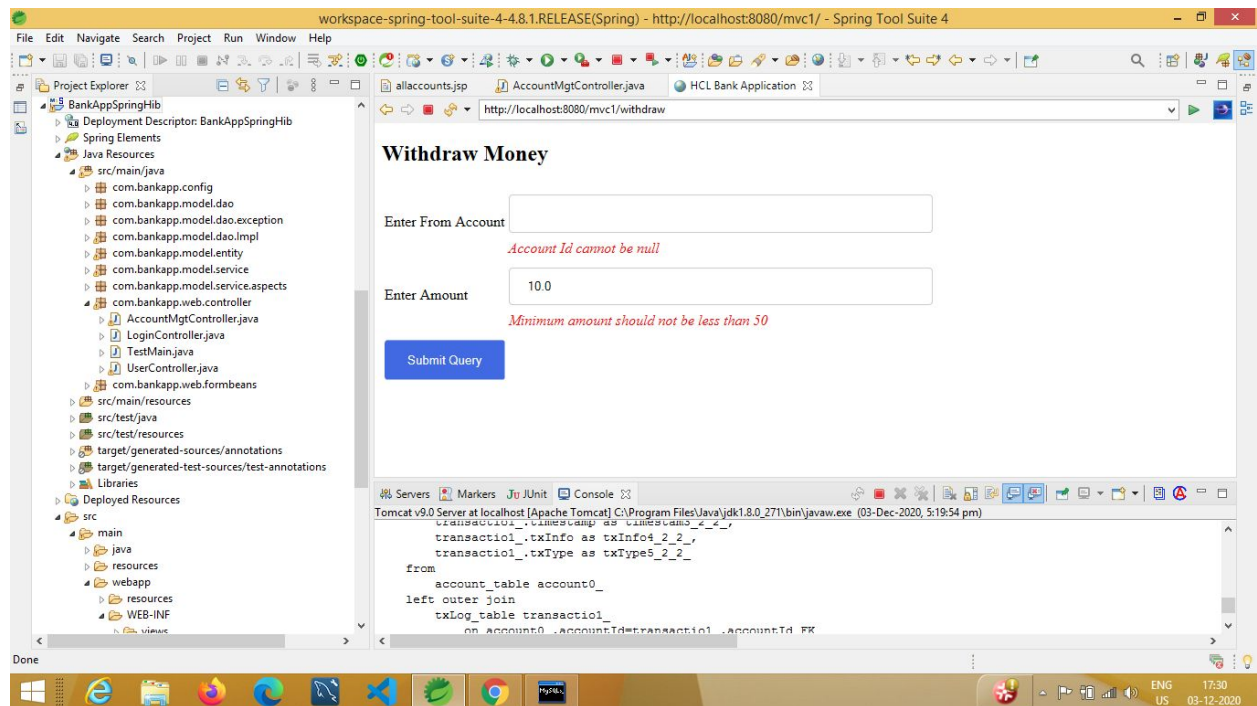
Transfer Money:



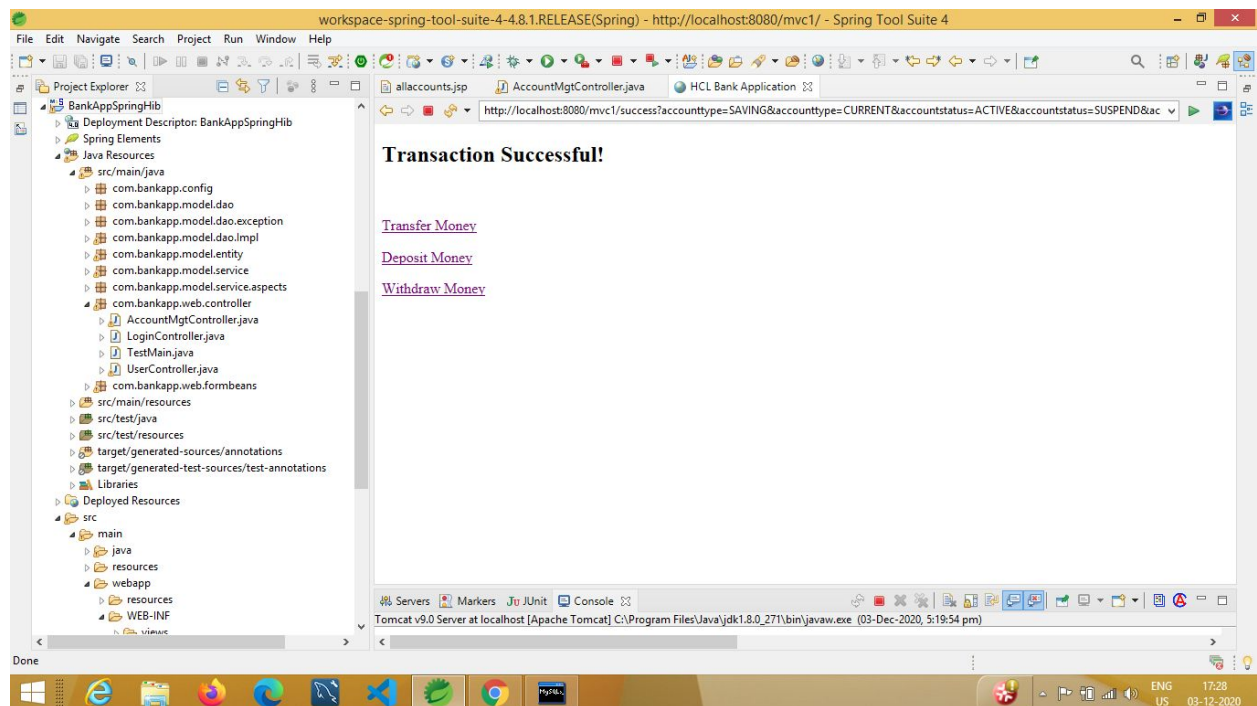
Deposit Page:



Withdraw Page:



Success Page:



Clerk Page:

The screenshot shows the Spring Tool Suite 4 interface. The browser window displays the Clerk page with the text "Hi, Clerk" and two links: "View all Transactions" and "Logout". The console window shows the following SQL query:

```
roles0_.role as role2_i_0_
from
roles roles0
where
roles0_.User_uid=?
```

Transactions:

The screenshot shows the Spring Tool Suite 4 interface. The browser window displays the Transactions page with a table titled "All the transactions". The table has the following columns: txId, txInfo, timestamp, amount, and txType. The table contains 16 rows of transaction data.

txId	txInfo	timestamp	amount	txType
1	Withdraw amount	2020-12-02 22:12:34.655	50.0	WITHDRAW
2	Transfer amount	2020-12-02 22:12:35.168	50.0	TRANSFER
3	Withdraw amount	2020-12-03 17:10:53.687	500.0	WITHDRAW
4	Deposit amount	2020-12-03 17:10:54.401	500.0	DEPOSITE
5	Transfer amount	2020-12-03 17:10:54.42	500.0	TRANSFER
6	Deposit amount	2020-12-03 17:11:20.253	100.0	DEPOSITE
7	Withdraw amount	2020-12-03 17:28:28.879	100.0	WITHDRAW
8	Deposit amount	2020-12-03 17:28:29.13	100.0	DEPOSITE
9	Transfer amount	2020-12-03 17:28:29.336	100.0	TRANSFER
10	Deposit amount	2020-12-03 17:29:48.917	1000.0	DEPOSITE
11	Withdraw amount	2020-12-03 17:30:58.474	300.0	WITHDRAW
12	Transfer Money	2020-12-03 19:22:14.405	500.01	TRANSFER
13	Deposit Money	2020-12-03 19:22:16.011	100.5	DEPOSITE
14	Withdraw Money	2020-12-03 19:22:16.715	2000.6	WITHDRAW
15	Transfer Money	2020-12-03 19:22:16.949	50.9	TRANSFER
16	Deposit Money	2020-12-03 19:22:17.315	150.6	DEPOSITE

