BANK APPLICATION

Actions:

1) **Login**: This is used to login for particular person. 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.

Output:

Login Page

WELCOME TO ONLINE BANKING

Enter username   sai

Enter password   sai123

Submit Query

Admin Page

Welcome User sai **logout**

ID	UserName	Password	UserType	Update	Delete
3	sai	sai123	ADMIN	update user	delete user
5	sudha	sudha123	EMPLOYEE	update user	delete user
6	sravya	sravya123	EMPLOYEE	update user	delete user

add account
add user transfer
transactions account details

Add Account Page

WELCOME

Enter name

Enter balance

Enter address

Enter phone

Enter email

Enter aadharCard

Enter birthDate

Enter panNumber

Select account Type   SAVINGS ▾

Submit Query

WELCOME

Enter name	nagu
Enter balance	10000
Enter address	amp
Enter phone	9948085566
Enter email	n.n@gmail.com
Enter aadharCard	26378628716
Enter birthDate	01/01/1999
Enter panNumber	6782676
Select account Type	SAVINGS

Submit Query

After adding account

Welcome user sai logout

AccountId	Name	Balance	Address	Phone	Email	AadharCard	BirthDate	PanNumber	AccountType	Update	Delete
1	pavan	5000.0	AMP	83974849	s.s@gmail.com	156278	12/12/2000	hwips	SAVINGS	update account	delete account
2	pavan	8000.0	amp	8978959412	p.p@gmail.com	8989998789	01/02/1999	gdh78789	SAVINGS	update account	delete account
5	sravya	7000.0	jpt	899876876	j.j@gmail.com	6567674	04/05/2000	ggf678	SAVINGS	update account	delete account
7	nagu	10000.0	amp	9948085566	n.n@gmail.com	26378628716	01/01/1999	6782676	SAVINGS	update account	delete account

add account add user transfer transactions

Add User Page

Enter username	vamsi	
Enter password	vamsi123	
Select user type	EMPLOYEE	

Submit Query

After Adding User

Welcome User sai logout

ID	UserName	Password	UserType	Update	Delete
3	sai	sai123	ADMIN	update user	delete user
5	sudha	sudha123	EMPLOYEE	update user	delete user
6	sravya	sravya123	EMPLOYEE	update user	delete user
7	vamsi	vamsi123	EMPLOYEE	update user	delete user

add account
add user transfer
transactions account details

Deposit amount in account

Welcome

Enter account number: [1]

Enter amount to be deposit: [1000]

[transfer amount]

Welcome user sai **logout**

AccountId	Name	Balance	Address	Phone	Email	AadharCard	BirthDate	PanNumber	AccountType	Update	Delete
1	pavan	6000.0	AMP	83974849	s.s@gmail.com	156278	12/12/2000	hwips	SAVINGS	update account	delete account
2	pavan	8000.0	amp	8978959412	p.p@gmail.com	8989998789	01/02/1999	gdh78789	SAVINGS	update account	delete account
5	sravya	7000.0	jpt	899876876	j.j@gmail.com	6567674	04/05/2000	ggf678	SAVINGS	update account	delete account
7	nagu	10000.0	amp	9948085566	n.n@gmail.com	26378628716	01/01/1999	6782676	SAVINGS	update account	delete account

add account   add user   transfer   transactions

Browser — Insert title here — localhost:8080/Banking/accountdetails?accountTypes=SAVINGS&accountTypes=CURRENT

Welcome user sai logout

AccountId	Name	Balance	Address	Phone	Email	AadharCard	BirthDate	PanNumber	AccountType	Update	Delete
1	pavan	6000.0	AMP	83974849	s.s@gmail.com	156278	12/12/2000	hwips	SAVINGS	update account	delete account
2	pavan	8000.0	amp	8978959412	p.p@gmail.com	8989998789	01/02/1999	gdh78789	SAVINGS	update account	delete account
5	sravya	7000.0	jpt	899876876	j.j@gmail.com	6567674	04/05/2000	ggf678	SAVINGS	update account	delete account
7	nagu	10000.0	amp	9948085566	n.n@gmail.com	26378628716	01/01/1999	6782676	SAVINGS	update account	delete account

add account   add user   transfer   transactions

MySQL 8.0 Command Line Client

```
3 rows in set (0.00 sec)

mysql> select * from transaction_table;
+------+--------+-------------------------+------------------------------+---------+-----------------+---------------+
| txId | amount | timestamp               | txInfo                       | txType  | from_account_Id_fk | to_account_Id_fk |
+------+--------+-------------------------+------------------------------+---------+-----------------+---------------+
|    1 |   1000 | 2020-12-03 12:11:49.528000 | deposit in 1              | DEPOSIT  |               1 |             1 |
|    2 |   1000 | 2020-12-03 17:09:08.135000 | withdraw from 1 deposit in 2 | TRANSFER |               1 |             2 |
+------+--------+-------------------------+------------------------------+---------+-----------------+---------------+
2 rows in set (0.00 sec)

mysql> select * from account_table;
+-----------+-------------+-------------+---------+---------+------------+------------------+--------+-----------+-------------+
| accountId | aadharCard  | accountType | address | balance | birthDate  | email            | name   | panNumber | phone       |
+-----------+-------------+-------------+---------+---------+------------+------------------+--------+-----------+-------------+
|         1 | 156278      | SAVINGS     | AMP     |    6000 | 2000-12-12 | s.s@gmail.com    | pavan  | hwips     | 83974849    |
|         2 | 8989998789  | SAVINGS     | amp     |    8000 | 1999-02-01 | p.p@gmail.com    | pavan  | gdh78789  | 8978959412  |
|         5 | 6567674     | SAVINGS     | jpt     |    7000 | 2000-05-04 | j.j@gmail.com    | sravya | ggf678    | 899876876   |
|         7 | 26378628716 | SAVINGS     | amp     |   10000 | 1999-01-01 | n.n@gmail.com    | nagu   | 6782676   | 9948085566  |
+-----------+-------------+-------------+---------+---------+------------+------------------+--------+-----------+-------------+
4 rows in set (0.00 sec)

mysql> select * from bank_user_table;
+----+-----------+----------+----------+
| id | password  | userType | username |
+----+-----------+----------+----------+
|  3 | sai123    | ADMIN    | sai      |
|  5 | sudha123  | EMPLOYEE | sudha    |
|  6 | sravya123 | EMPLOYEE | sravya   |
|  7 | vamsi123  | EMPLOYEE | vamsi    |
+----+-----------+----------+----------+
4 rows in set (0.00 sec)

mysql> select * from transaction_table;
+------+--------+-------------------------+------------------------------+---------+-----------------+---------------+
| txId | amount | timestamp               | txInfo                       | txType  | from_account_Id_fk | to_account_Id_fk |
+------+--------+-------------------------+------------------------------+---------+-----------------+---------------+
|    1 |   1000 | 2020-12-03 12:11:49.528000 | deposit in 1              | DEPOSIT  |               1 |             1 |
|    2 |   1000 | 2020-12-03 17:09:08.135000 | withdraw from 1 deposit in 2 | TRANSFER |               1 |             2 |
|    3 |   1000 | 2020-12-03 17:45:13.580000 | deposit in 1              | DEPOSIT  |               1 |             1 |
+------+--------+-------------------------+------------------------------+---------+-----------------+---------------+
3 rows in set (0.00 sec)

mysql>
```
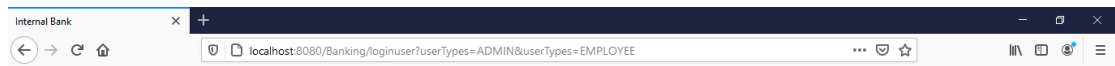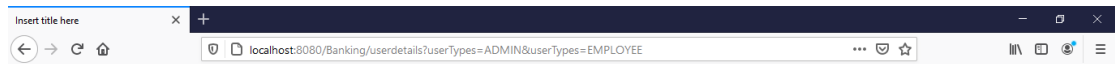
localhost:8080/Banking/loginuser?userTypes=ADMIN&userTypes=EMPLOYEE

WELCOME TO ONLINE BANKING

Enter username   sudha

Enter password   sudha123

Submit Query

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localhost:8080/Banking/userdetails?userTypes=ADMIN&userTypes=EMPLOYEE

Welcome User sudha logout

ID	UserName	Password	UserType	Update	Delete
3	sai	sai123	ADMIN		
5	sudha	sudha123	EMPLOYEE		
6	sravya	sravya123	EMPLOYEE		
7	vamsi	vamsi123	EMPLOYEE		

add account

localhost:8080/Banking/addaccount.do

WELCOME

Enter name

Enter balance

Enter address

Enter phone

Enter email

Enter aadharCard

Enter birthDate

Enter panNumber

Select account Type   SAVINGS

Submit Query