

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.

10) ShowAllTransactions: Show all transactions is used to display transaction history

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.

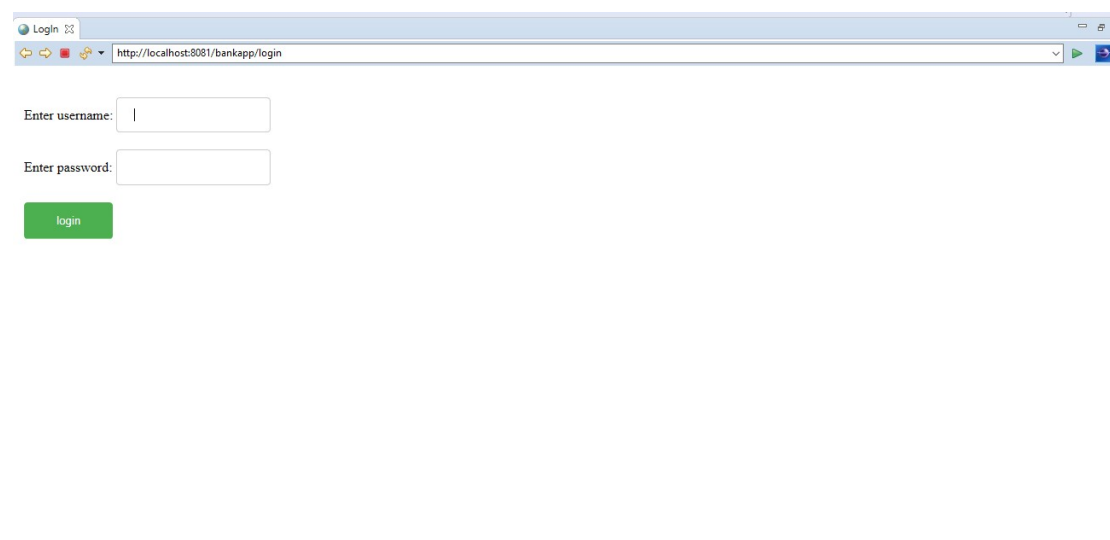
Updating User/Account:

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.

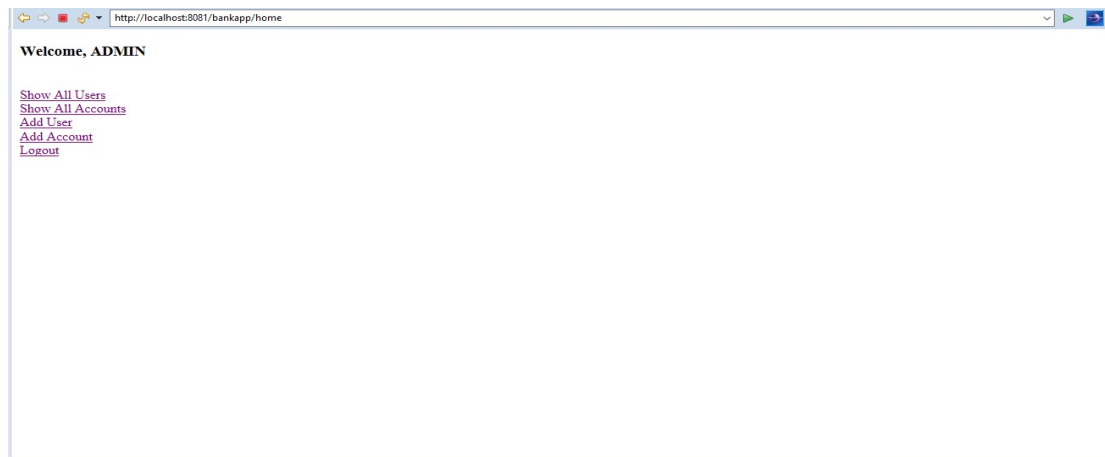
Output:

Login Page:



The screenshot shows a web browser window with the title 'Login'. The address bar displays 'http://localhost:8081/bankapp/login'. The page content includes two text input fields: 'Enter username:' and 'Enter password:'. Below the password field is a green button labeled 'login'.

Admin Home Page:



ShowAllUsers Page:

The screenshot shows a web browser window with the URL `http://localhost:8081/bankapp/showallusers`. The page displays a table with the following data:

id	username	userType	address	phone	email	update	delete
1	sadhi	ADMIN	vizag	8985634547	sadhi@gmail.com	update user	delete user
2	manu	MANAGER	rajam	8765432578	manu@gmail.com	update user	delete user
4	jhanu	CLERK	vijayawada	8765456798	jhanu@gmail.com	update user	delete user
5	keeru	MANAGER	hyderabad	8654345679	keeru@gmail.com	update user	delete user

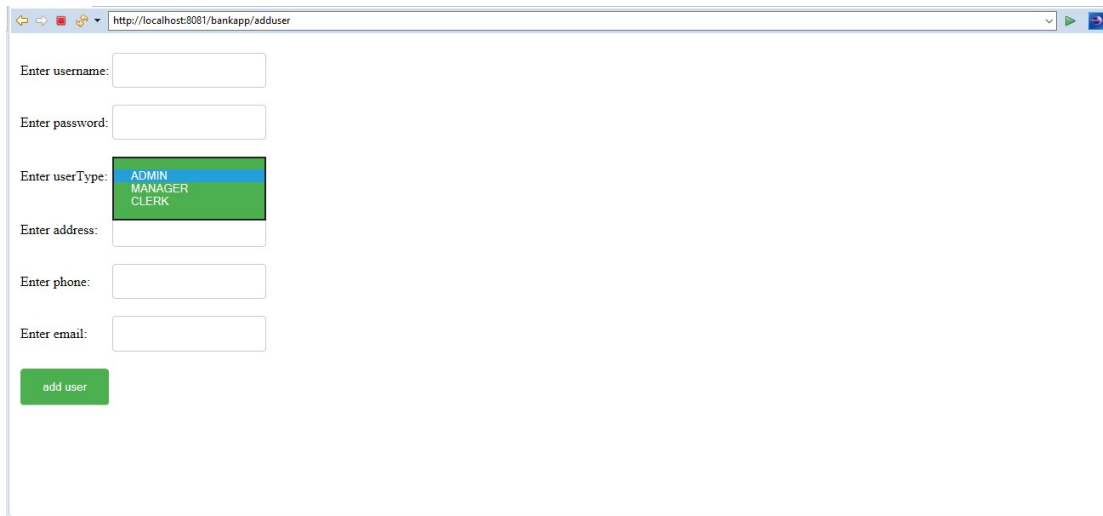
UpdateUser Page:

The screenshot shows a web browser window with the URL `http://localhost:8081/bankapp/updateuser?id=1`. The page contains a form with the following fields and values:

Enter username	sadhi
Enter password	#Sadhi123
Enter userType	ADMIN
Enter address	vizag
Enter phone	8985634547
Enter email	sadhi@gmail.com

Below the form is a green button labeled "Submit Query".

AddUser Page:



Enter username:

Enter password:

Enter userType:

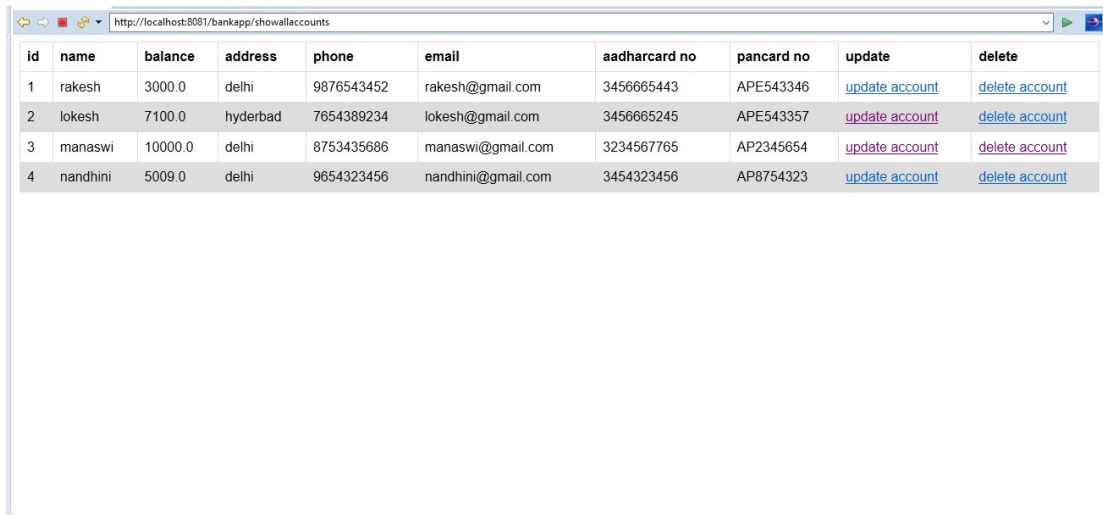
ADMIN
MANAGER
CLERK

Enter address:

Enter phone:

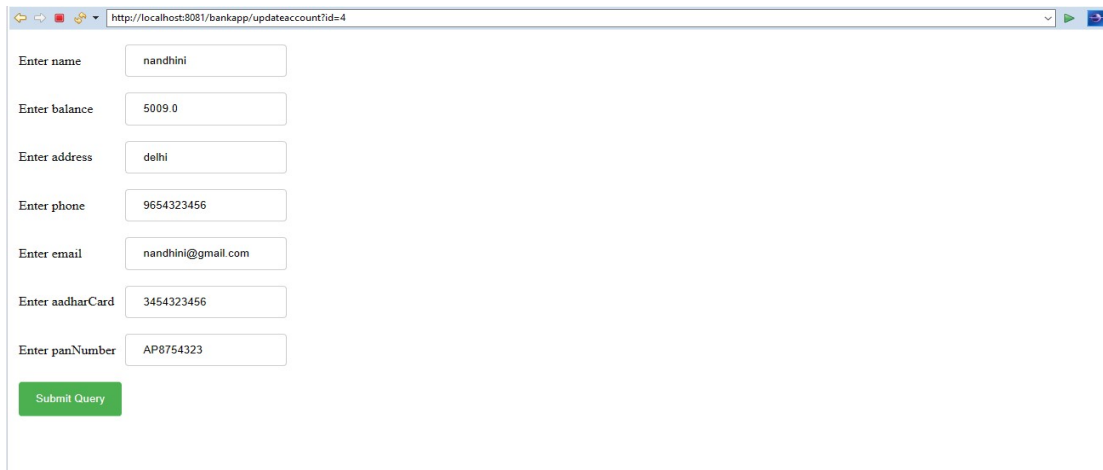
Enter email:

ShowAllAccounts Page:



id	name	balance	address	phone	email	aadharcard no	pancard no	update	delete
1	rakesh	3000.0	delhi	9876543452	rakesh@gmail.com	3456665443	APE543346	update account	delete account
2	lokesh	7100.0	hyderabad	7654389234	lokesh@gmail.com	3456665245	APE543357	update account	delete account
3	manaswi	10000.0	delhi	8753435686	manaswi@gmail.com	3234567765	AP2345654	update account	delete account
4	nandhini	5009.0	delhi	9654323456	nandhini@gmail.com	3454323456	AP8754323	update account	delete account

UpdateAccount Page:



Enter name

Enter balance

Enter address

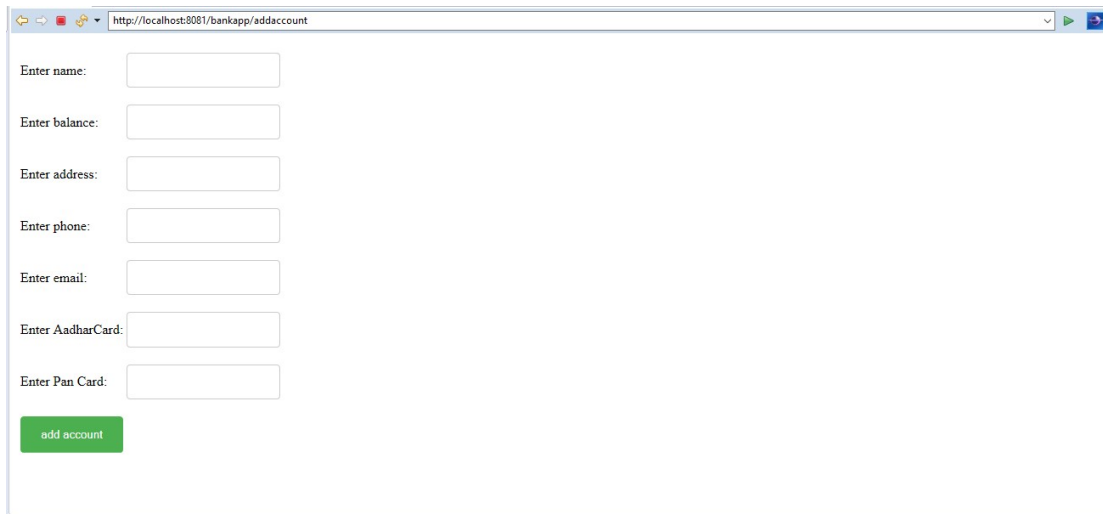
Enter phone

Enter email

Enter aadharCard


Enter panNumber

AddAccount Page:



A screenshot of a web browser window showing the 'AddAccount' page. The address bar displays 'http://localhost:8081/bankapp/addaccount'. The page contains a vertical list of input fields with labels: 'Enter name:', 'Enter balance:', 'Enter address:', 'Enter phone:', 'Enter email:', 'Enter AadharCard:', and 'Enter Pan Card:'. Below these fields is a green button labeled 'add account'.

Manager Home Page:



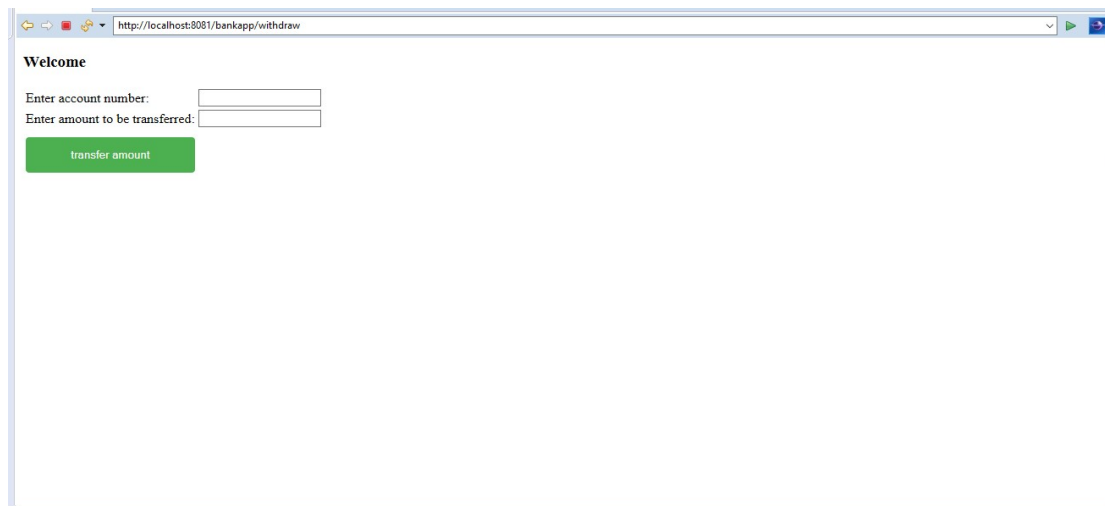
A screenshot of a web browser window showing the 'Manager Home' page. The address bar displays 'http://localhost:8081/bankapp/home'. The page features a 'Welcome, MANAGER' message followed by a list of links: 'Show All Accounts', 'Add Account', 'Transfer', 'Withdraw', 'Deposit', and 'Logout'.

Transfer Page:



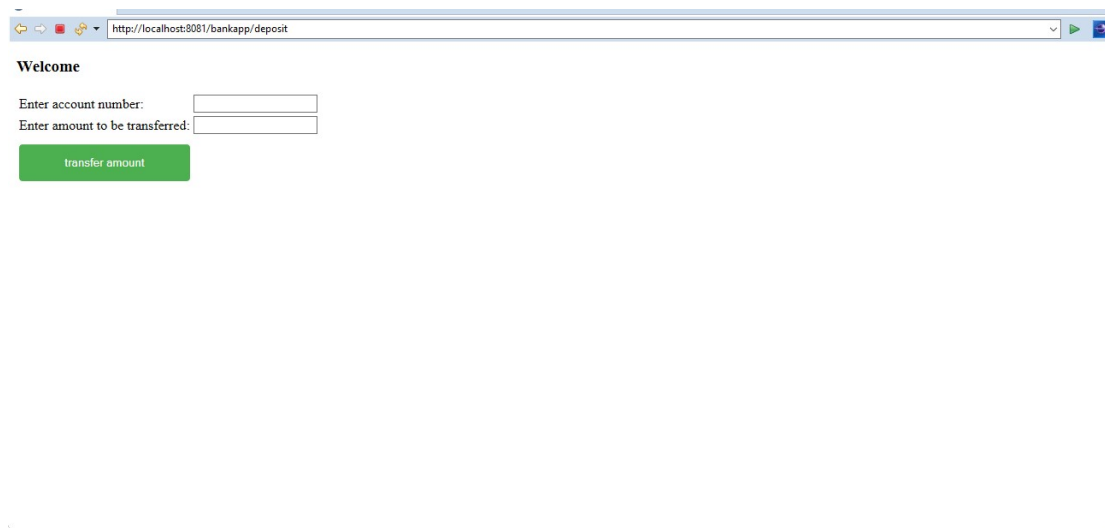
A screenshot of a web browser window showing the 'Transfer' page. The address bar displays 'http://localhost:8081/bankapp/transfer'. The page contains three input fields with labels: 'Enter from account', 'Enter to account', and 'Enter amount'. Below these fields is a green button labeled 'Submit Query'.

Withdraw Page:



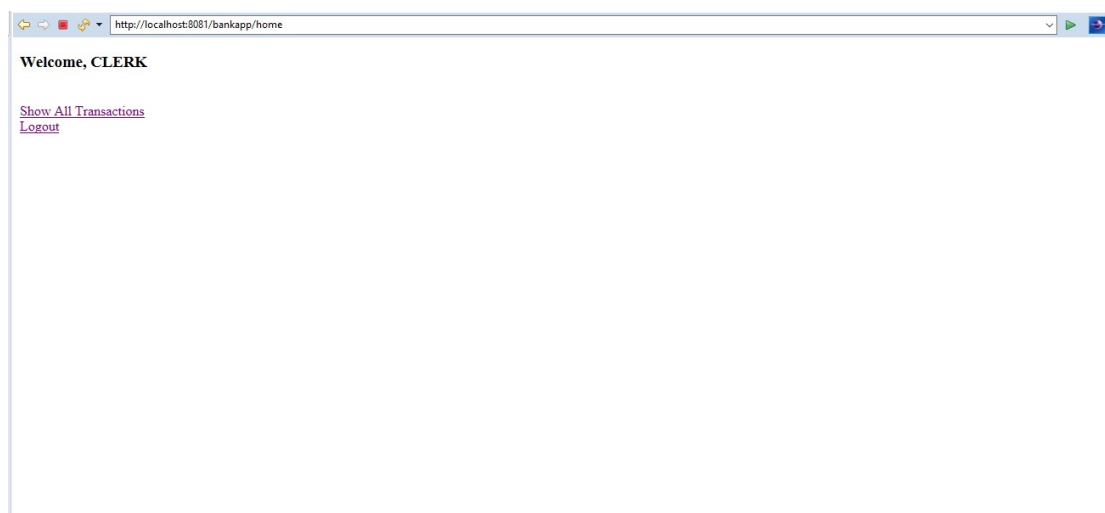
A screenshot of a web browser window showing the 'Withdraw Page'. The address bar displays 'http://localhost:8081/bankapp/withdraw'. The page content includes a 'Welcome' heading, two input fields for 'Enter account number:' and 'Enter amount to be transferred:', and a green button labeled 'transfer amount'.

Deposit Page:



A screenshot of a web browser window showing the 'Deposit Page'. The address bar displays 'http://localhost:8081/bankapp/deposit'. The page content includes a 'Welcome' heading, two input fields for 'Enter account number:' and 'Enter amount to be transferred:', and a green button labeled 'transfer amount'.

Clerk Home Page:



A screenshot of a web browser window showing the 'Clerk Home Page'. The address bar displays 'http://localhost:8081/bankapp/home'. The page content includes a 'Welcome, CLERK' heading, a link for 'Show All Transactions', and a link for 'Logout'.

ShowAllTransactions Page:

http://localhost:8081/bankapp/showalltransactions				
id	transactionInfo	date	amount	transaction Type
1	transfer to another account	01/12/2020	300.0	TRANSFER
2	transfer from another account	01/12/2020	300.0	TRANSFER
3	transfer to another account	02/12/2020	1000.0	TRANSFER
4	transfer from another account	02/12/2020	1000.0	TRANSFER
5	deposit amount	02/12/2020	100.0	DEPOSIT