

Bank Management System

Submitted by:

Anurag Mahajan (20BCE0859)
Ayushman Khuntia (20BCE2615)
Ishita Chauhan (20BCE2109)

in partial fulfilment for the award of the degree of

BACHELOR OF TECHNOLOGY

in

COMPUTER SCIENCE AND ENGINEERING



VIT[®]

Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

School of Computer Science and Engineering
Vellore Institute of Technology, Vellore

CERTIFICATE

This is to certify that the thesis entitled “**Bank Management System**” submitted by

Anurag Mahajan (20BCE0859)
Ayushman Khuntia (20BCE2615)
Ishita Chauhan (20BCE2109)

for the award of the degree of *Bachelor of Technology in Programme*, is a record of bonafide work carried out under **Dr. Jayakumar K** as per the VIT code of academic and research ethics.

The contents of this report have not been submitted and will not be submitted either in part or in full, for the award of any other degree or diploma in this institute or any other institute or university. The thesis fulfills the requirements and regulations of the University and meets the necessary standards for submission.

Place : Vellore

Date : 14th November, 2022

Table of Contents

Abstract	3
Introduction	
i. Problem Statement	3
ii. Technical Specifications	4
Existing System Problems	4
Proposed System Design	
i. Module Description	5
ii. UML Diagrams	6-8
Results	10-26
Conclusion	27
References	27

Abstract

In the 21st century, people still struggle to make use of the manual banking system. Every citizen is required to physically go to a bank and provide legions of paperwork to open a new bank account or to update their existing account in any sort of manner. This socio-economic issue has inspired us to come up with a fully flexible bank management system that provides remote banking services. This web-based solution offers online banking services which can be accessed by new and existing users of the bank.

The user gets a very interactive and responsive page to perform all the operations by sitting in their places instead of standing in a queue. First, the user has to sign up for the first time to their account and link their bank account with the application. Later on, he/ she can just login into the page. After logging in, the user can perform all the operations for which he had to visit the bank. He/ She can apply for a loan, get their bank balances, give feedback for the application usage experience or can transfer money to some other account, or receive money from another account.

Introduction

1. Problem Statement

At present most of the banking applications are yet to overcome the rapidly growing attacks on their customer private data. Issues such as fraud operating within a conventional environment. However current systems are still trying to cope with the existing institutional structure, which is really meant for usual banking system only and not managing their customer's information more effectively. Lack of adequate security measure is making it really challenging to successfully transform the bank customers' management systems from where it is now to where it should be. This challenge still lingers.

2. Technical Specifications

- HTML
- CSS
- JavaScript
- Bootstrap
- SCSS
- PHP
- MySQL

Existing System Problems

Although the basic type of services offered by a bank depends upon the type of bank and the country, services provided usually include: Taking deposits from their customers and issuing current or checking accounts and savings accounts to individuals and business. Extending loans to individuals and business, Cashing cheque. Facilitating money transactions such as wire transfer and cashiers' cheque, Consumer & commercial financial advisory services, financial transaction can be performed through many different channels. In addition to this, the user interfaces of the currently available solutions are extraordinarily complicated and challenging to use for no discernible reason.

Proposed System Design

1. Module Description

For admin Module

1. This system allows the admin to login with username and password
2. This system allows the admin to add a Bank branch details
3. This system allows the admin to accept or reject a manager/customer
4. This system allows the admin to approve or reject customer transaction request
5. This system allows the admin to View Managers & Customers details

For Manager Module

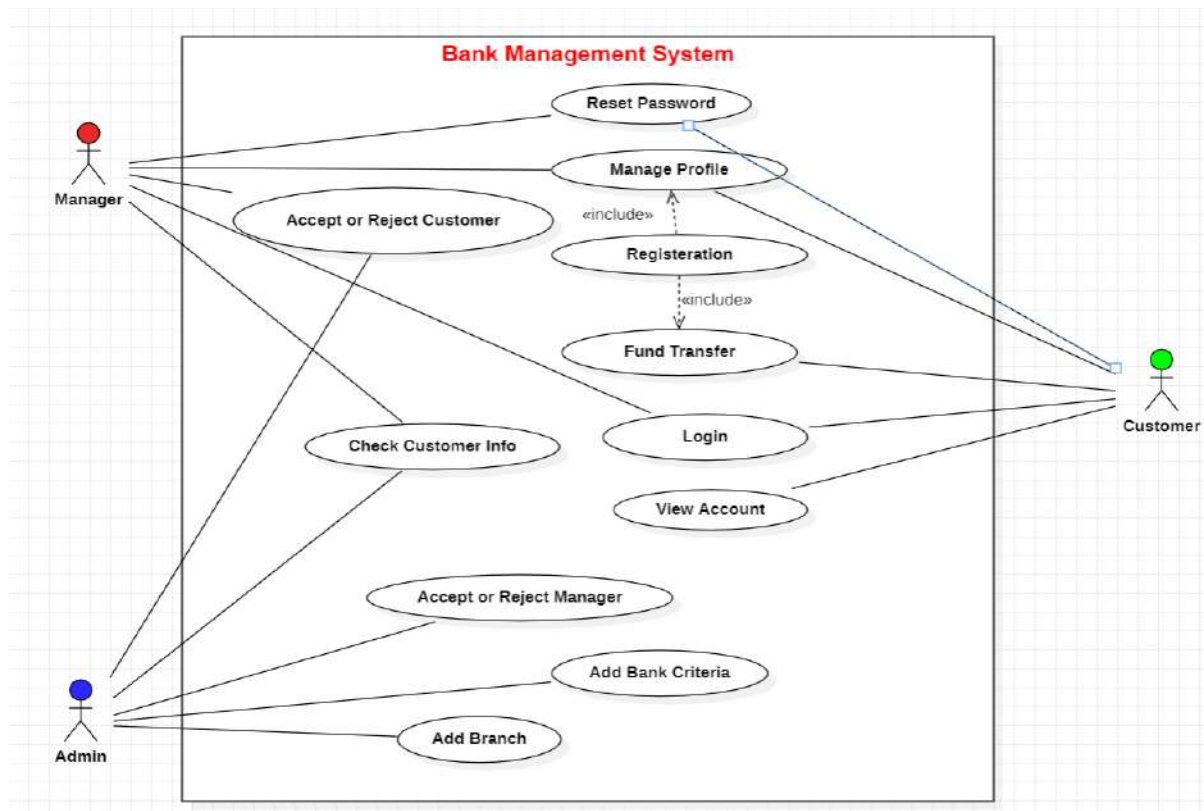
1. This system allows the manager to register
2. This system allows the manager to login with email and password
3. This system allows the manager to accept/reject branch customers
4. This system allows the manager to view customer transactions
5. This system allows the manager to update personal information
6. This system allows the manager to reset password if password is forgotten
7. This system allows the manager to Register New Customer

For Customer Module

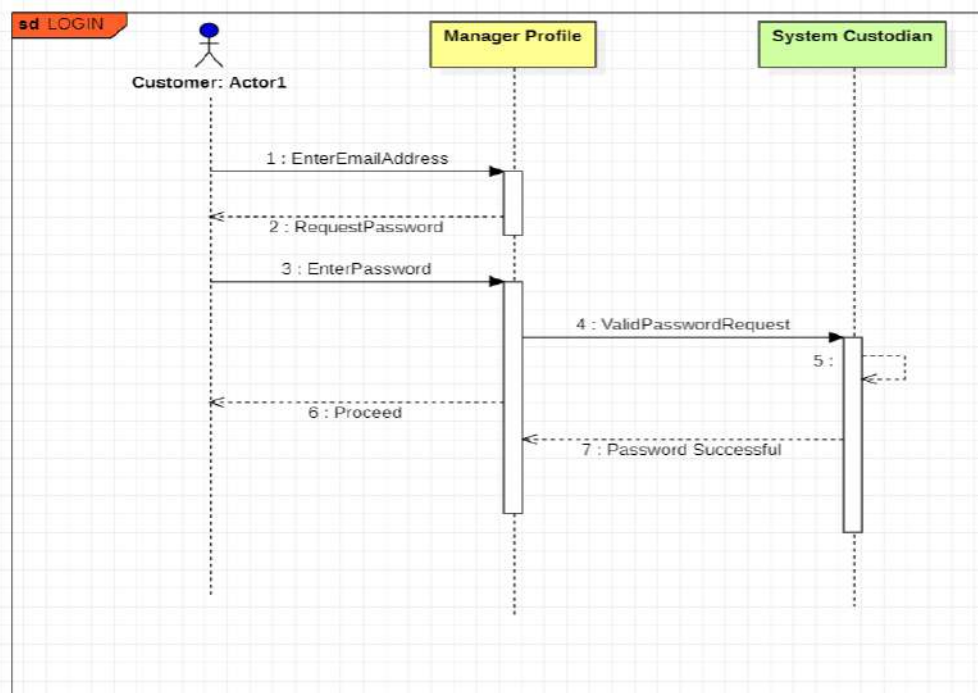
1. This system allows the customer to login with email and password
2. This system allows the customer to update personal details
- 3 This system allows the customer to reset password if password is forgotten
4. This system allows the customer to view his/her account balance
5. This system allows the customer to transfer money from his account to another account
6. This system allows the customer to recover password
7. This system allows the customer to change password
8. This system allows the customer to delete profile
9. This system allows the customer to choose image point.

2. UML Diagrams

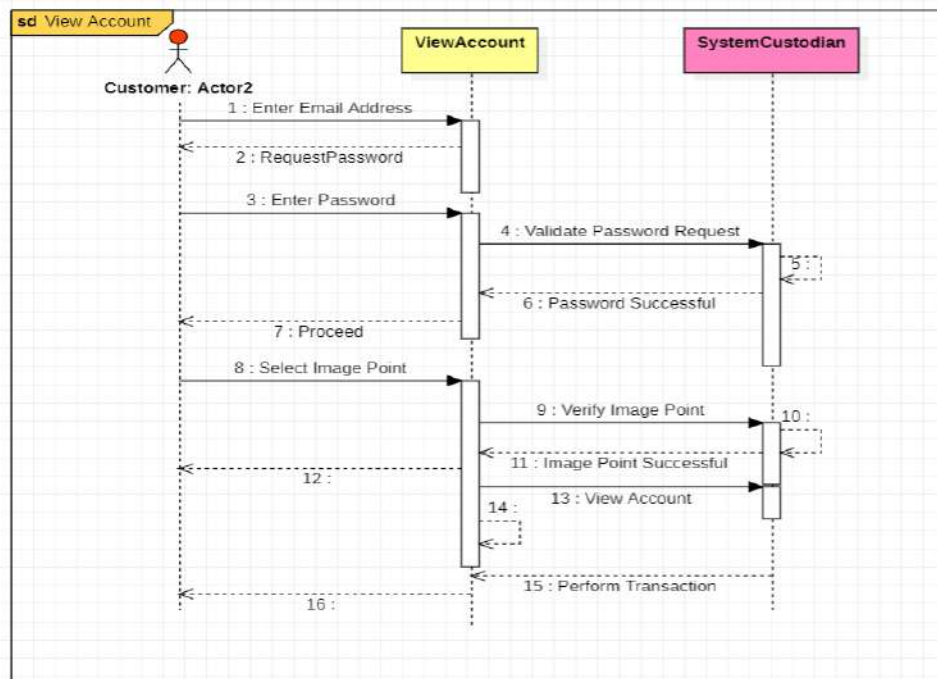
- USE CASE DIAGRAM



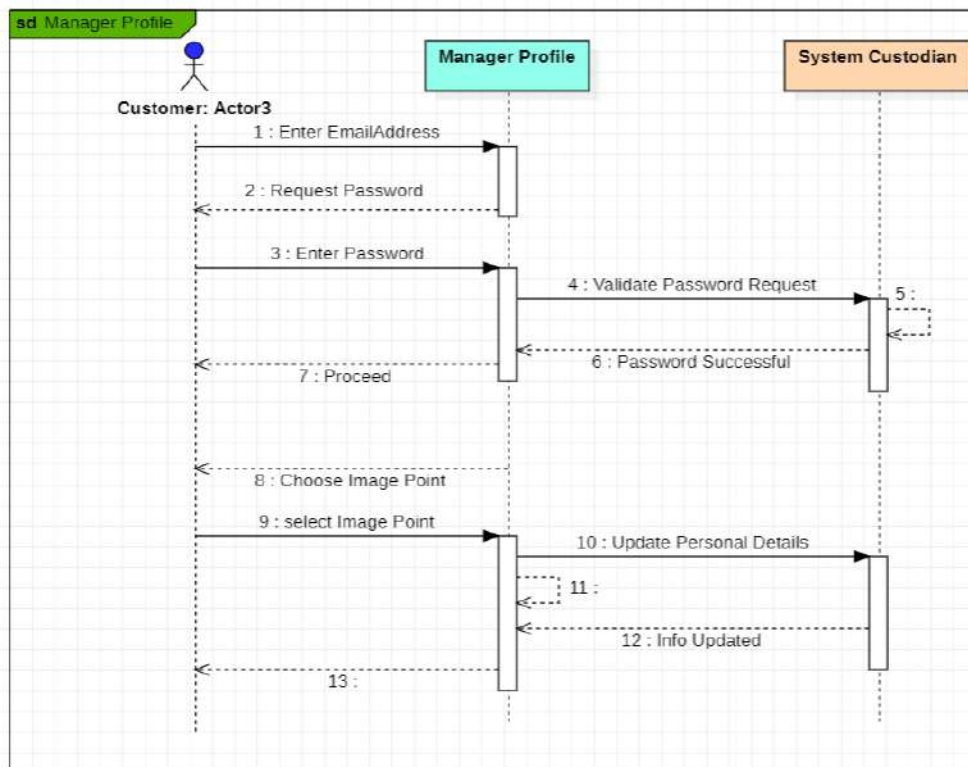
- SEQUENCE DIAGRAM FOR LOGIN



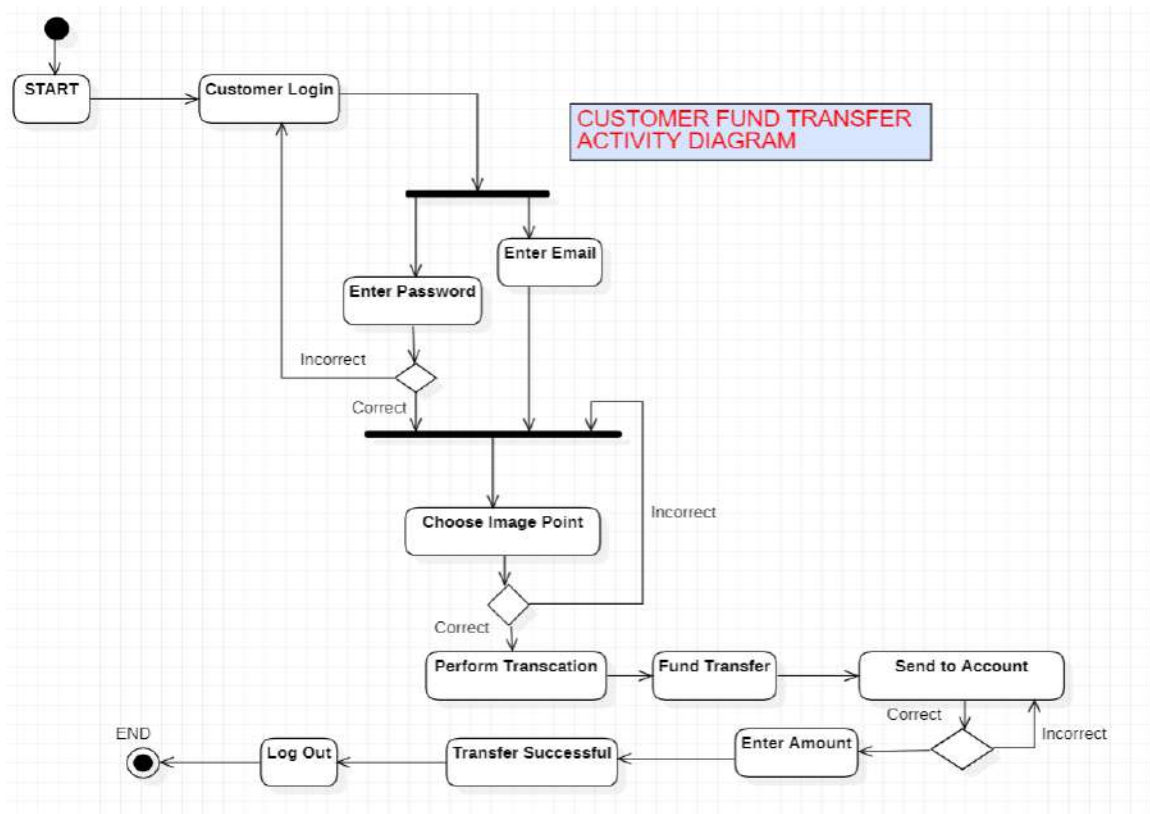
- **SEQUENCE DIAGRAM FOR VIEW ACCOUNT**



- **SEQUENCE DIAGRAM FOR MANAGER PROFILE**

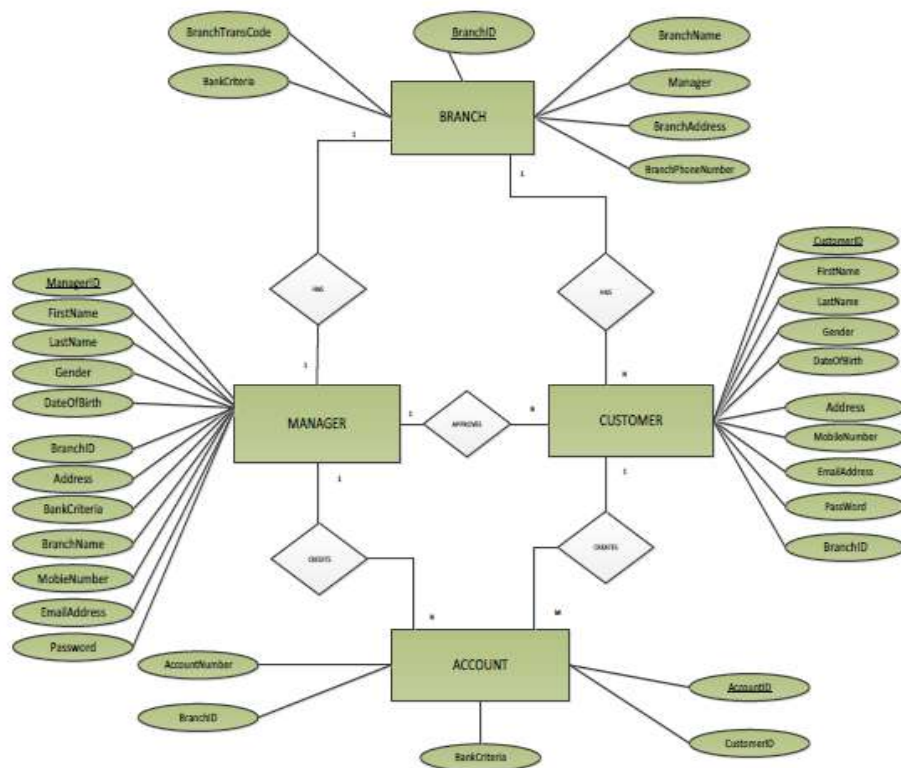


- CUSTOMER FUND TRANSFER ACTIVITY DIAGRAM:**

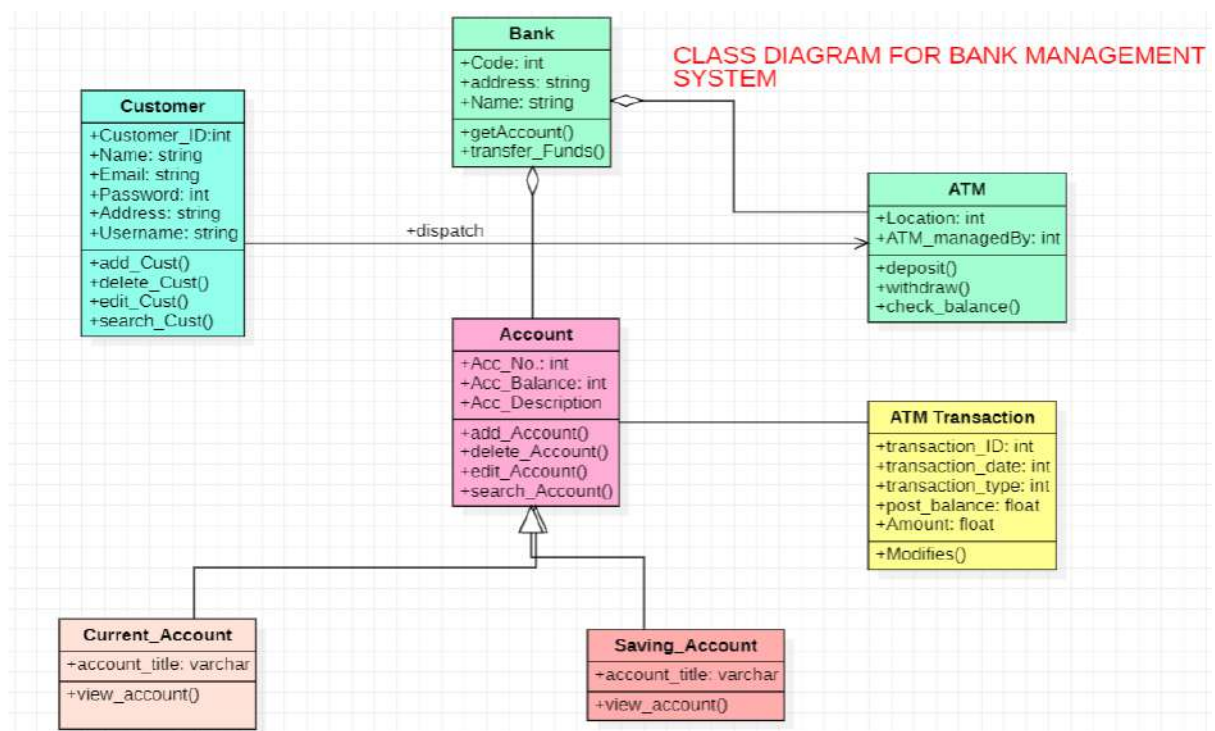


Results

• ER DIAGRAM:

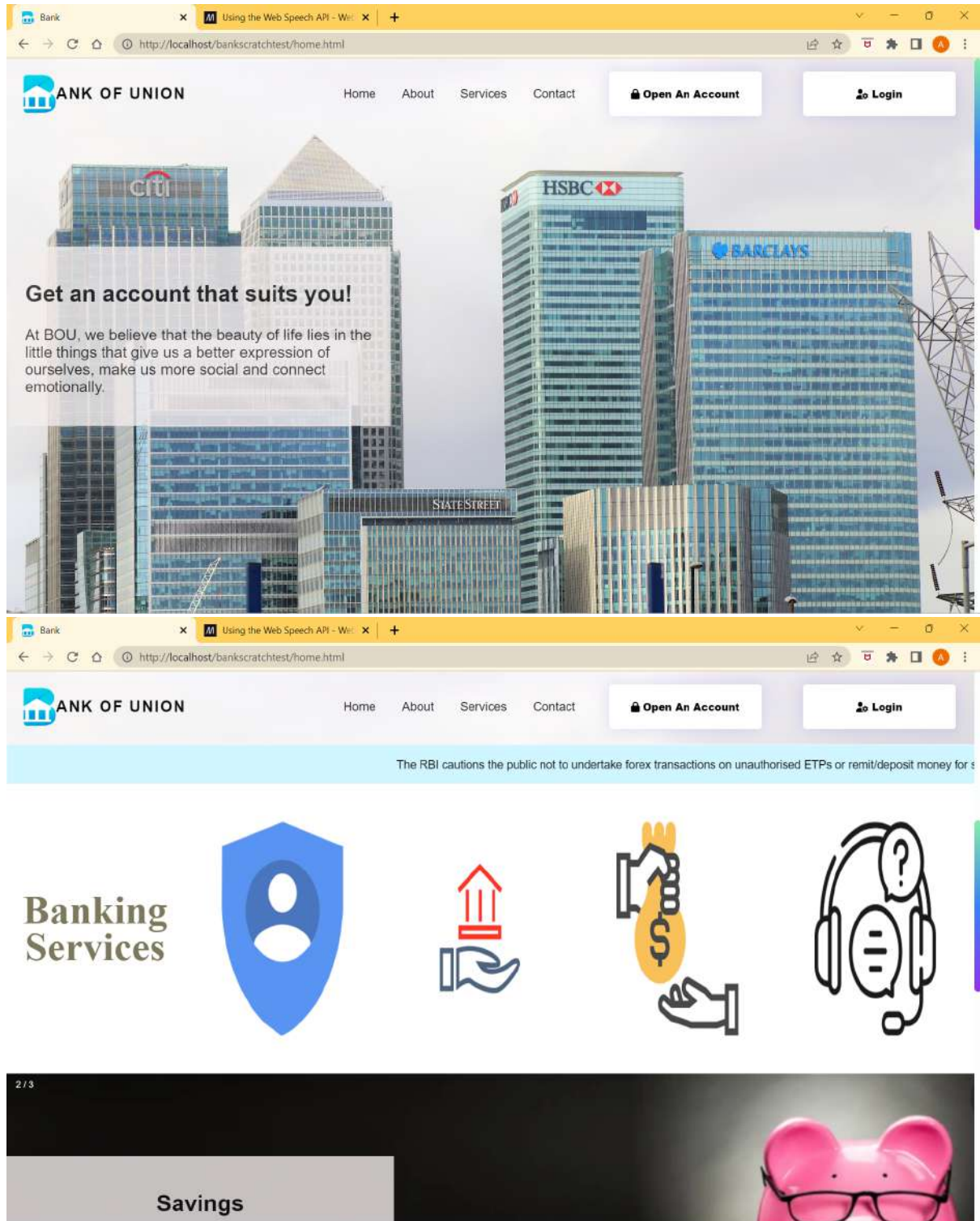


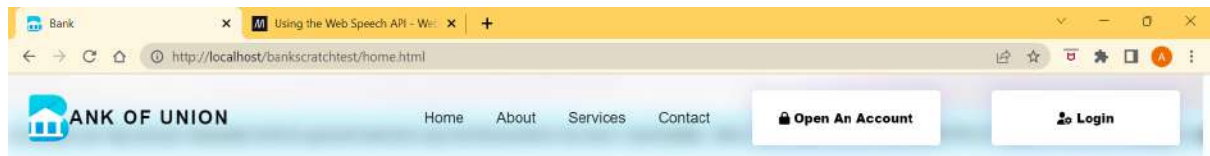
• CLASS DIAGRAM:



Screenshots

Home page



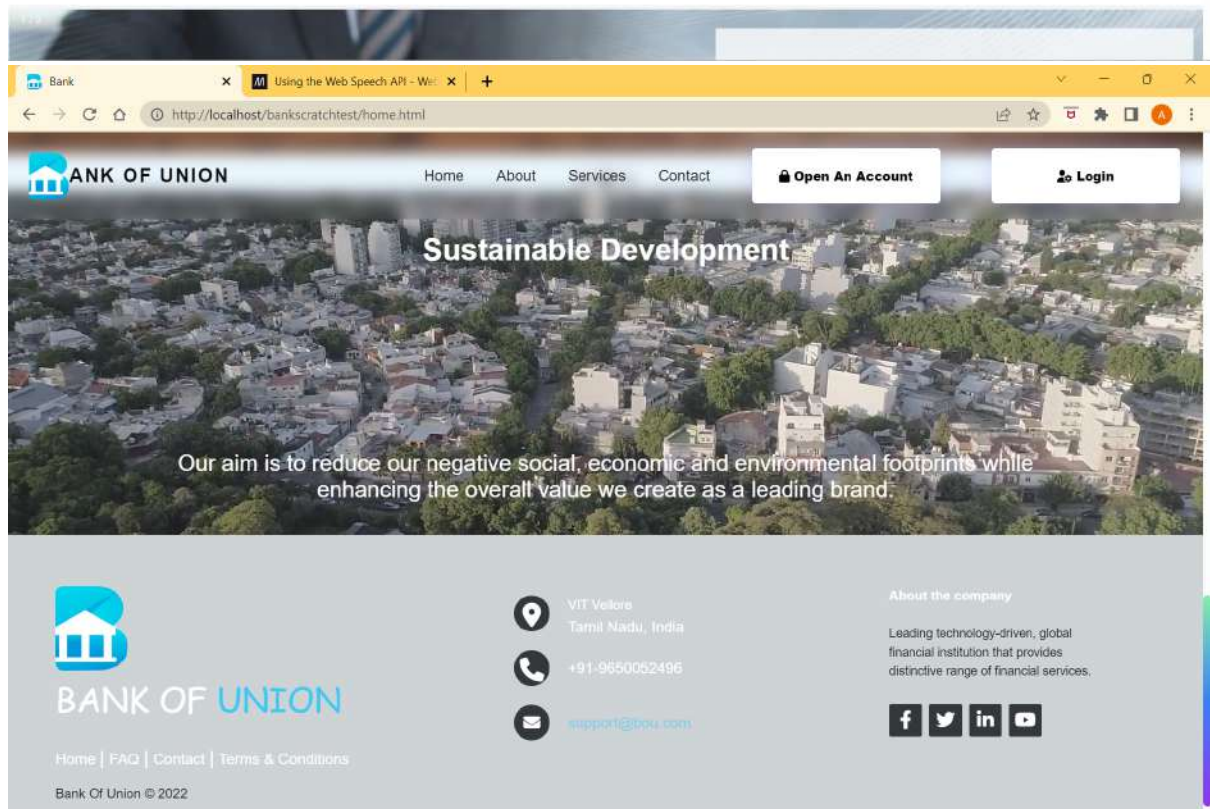


Banking Services



WAYS TO BANK

- [ONLINE](#)
- [BRANCH](#)
- [ATM](#)



Login page

The screenshot shows a web browser window with the URL `http://localhost/bankscratchtest/login2.php#`. The page is titled "Personal Internet Banking Login". It features a white login box on the left and a blue "Hello, User!" section on the right. The login box contains fields for "Email" and "Password", a "Forgot your password?" link, and "Sign In" and "ADMIN" buttons. The blue section contains the text "Hello, User!", a subtext "Enter your account details and start banking.", and an "Open An Account" button. The footer of the page reads "Bank Of Union © 2022".

Personal Internet Banking Login

Sign in
to use your account

Email

Password

[Forgot your password?](#)

Sign In

ADMIN

Hello, User!
Enter your account details and start banking.

[Open An Account](#)

Bank Of Union © 2022

Open account page

The screenshot shows a web browser window with the URL `http://localhost/bankscratchtest/openacc.html`. The page is titled "Registration Form" and includes the "ANK OF UNION" logo. It contains a registration form with fields for "Full Name *", "Father name *", "Your email *", "Date of birth *", "Phone number *", "What is your gender?" (with radio buttons for Male and Female), "Enter your Aadhaar Card Number in given format." (with three masked input fields), "Upload PAN" (with a "Choose File" button and "No file chosen" text), and "Account Type" (a dropdown menu currently showing "Current Account"). A blue "Submit" button is at the bottom. The footer of the page reads "Bank Of Union © 2022".

ANK OF UNION

Registration Form
Please read our Terms and condions before registering!

Full Name *

Father name *

Your email *

Date of birth *

Phone number *

What is your gender?

☐ Male

☐ Female

Enter your Aadhaar Card Number in given format.

####

Upload PAN

[Choose File](#) No file chosen

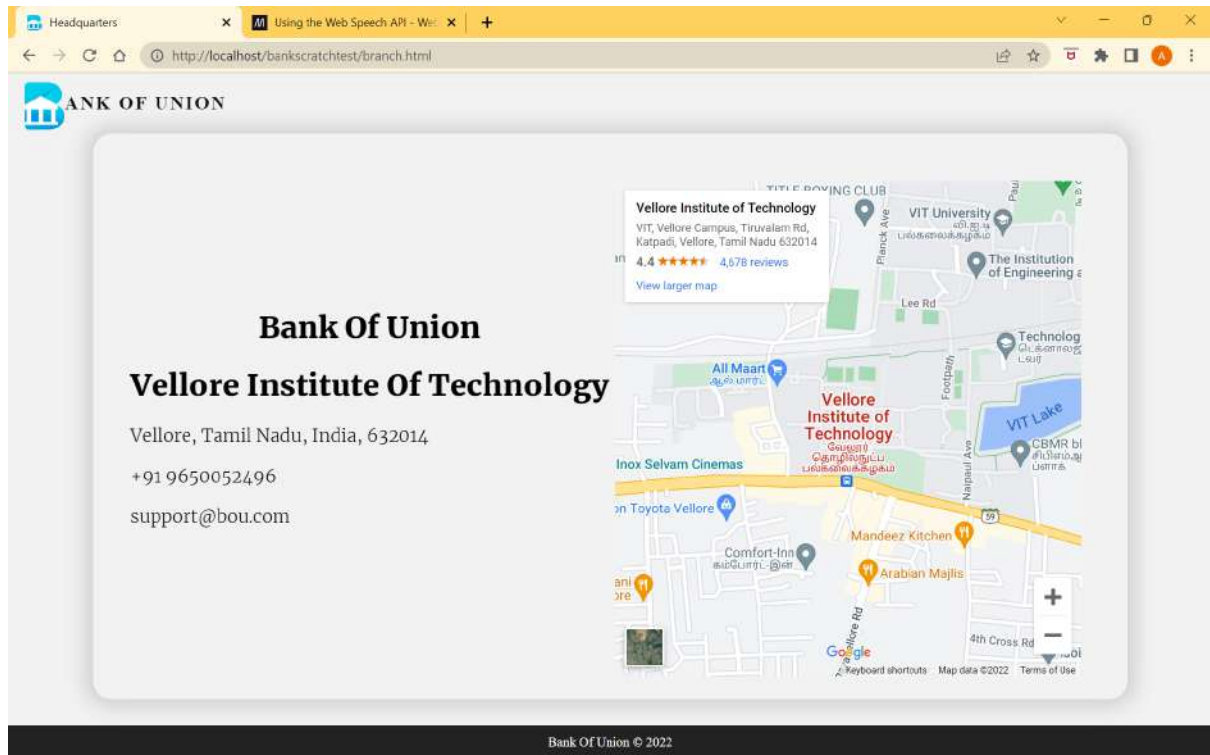
Account Type

Current Account

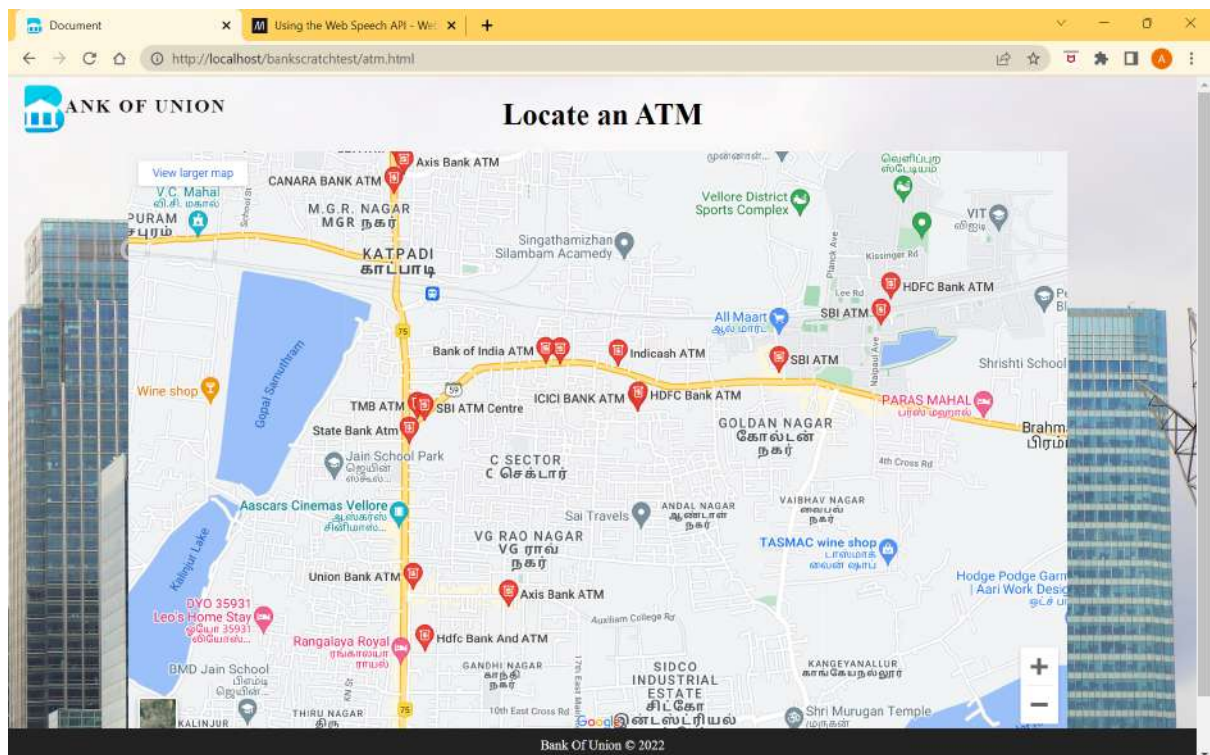
Submit

Bank Of Union © 2022

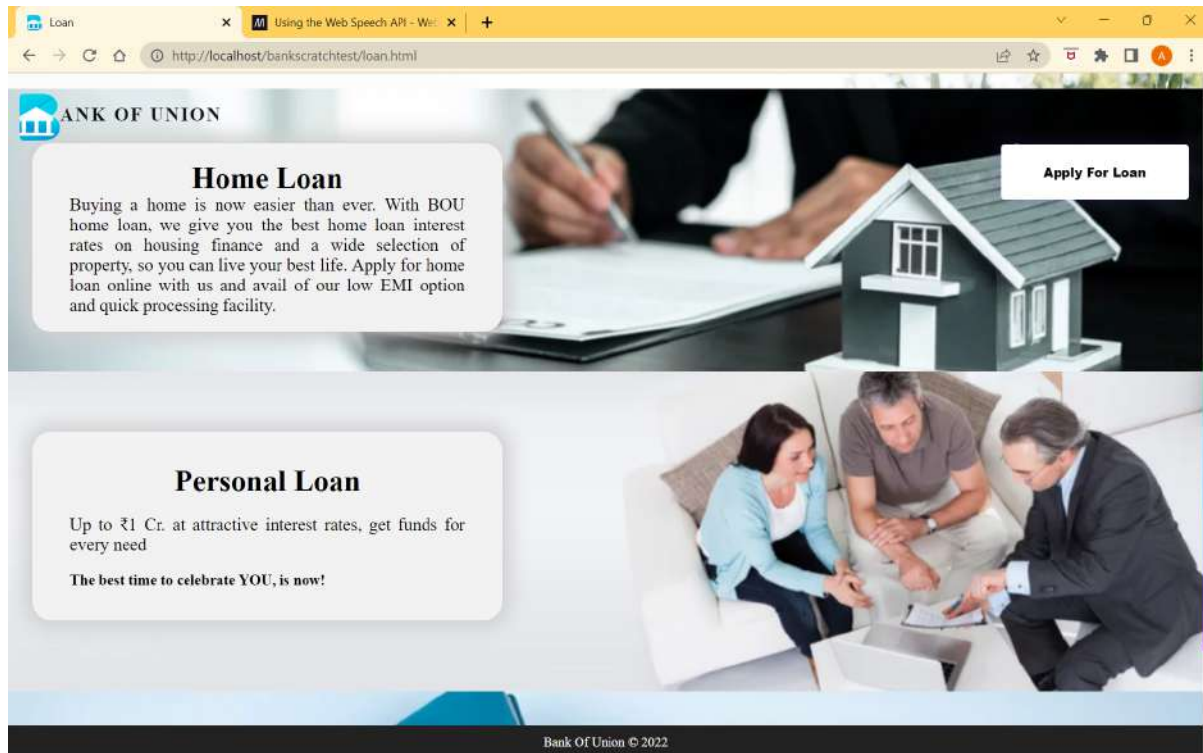
Main branch page



Nearest atm locator page



Loan page



The screenshot shows a web browser window with the URL `http://localhost/bankscratchtest/loan.html`. The page features the Bank of Union logo and two main loan categories: Home Loan and Personal Loan. The Home Loan section includes a description of the benefits and an 'Apply For Loan' button. The Personal Loan section includes a description of the loan amount and interest rates, and a celebratory message. The background of the page shows a person signing documents and a house model, and a family sitting on a sofa.

ANK OF UNION

Home Loan

Buying a home is now easier than ever. With BOU home loan, we give you the best home loan interest rates on housing finance and a wide selection of property, so you can live your best life. Apply for home loan online with us and avail of our low EMI option and quick processing facility.

[Apply For Loan](#)

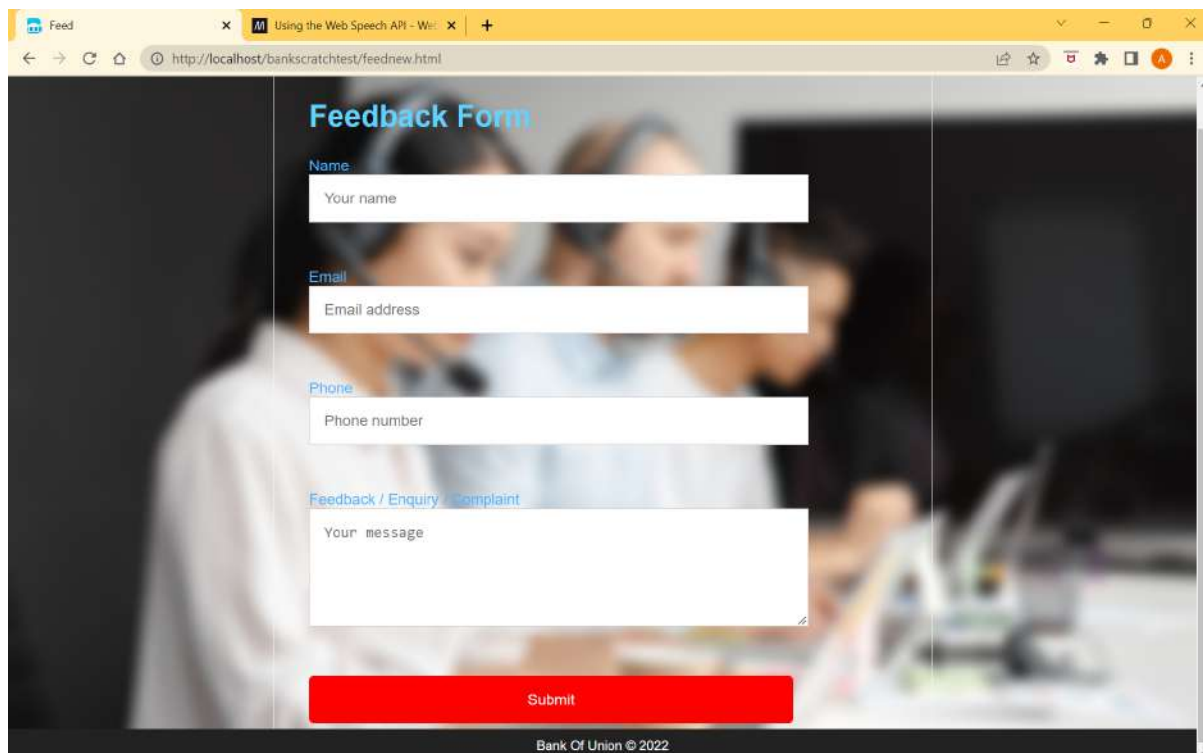
Personal Loan

Up to ₹1 Cr. at attractive interest rates, get funds for every need

The best time to celebrate YOU, is now!

Bank Of Union © 2022

Feedback



The screenshot shows a web browser window with the URL `http://localhost/bankscratchtest/feednew.html`. The page displays a 'Feedback Form' with fields for Name, Email, Phone, and a message. There is a 'Submit' button at the bottom. The background of the page shows a blurred image of people working at a desk.

Feedback Form

Name
Your name

Email
Email address

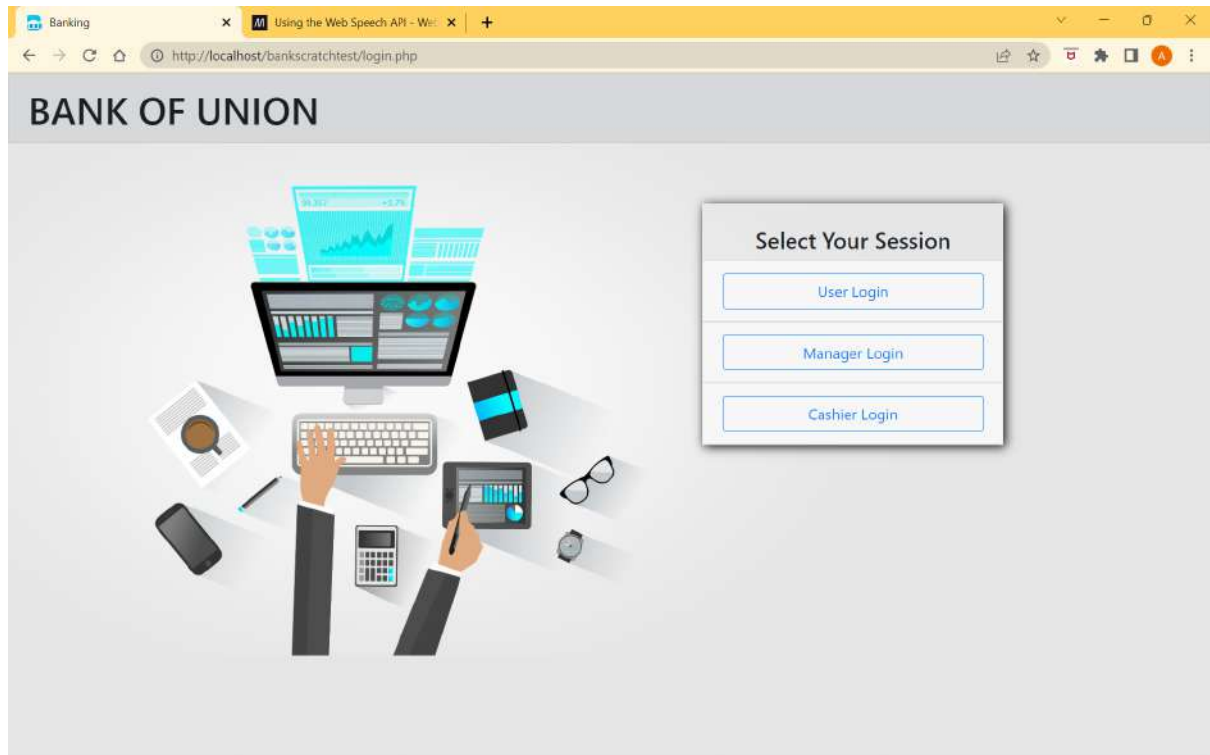
Phone
Phone number

[Feedback / Enquiry / Complaint](#)
Your message

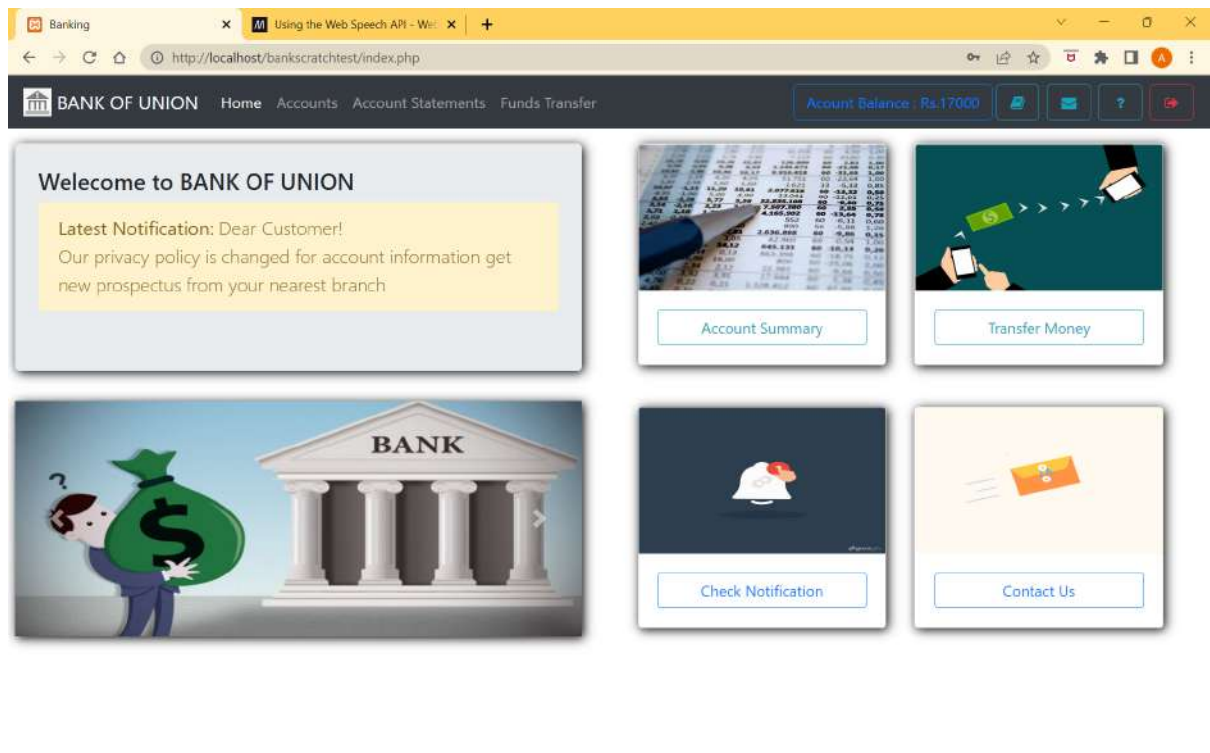
[Submit](#)

Bank Of Union © 2022

Admin login page



Main user after login page



Funds transfer

Banking

Using the Web Speech API - Web

http://localhost/bankscratchtest/transfer.php

BANK OF UNION Home Accounts Account Statements Funds Transfer

Account Balance: Rs.17000

Funds Transfer

New Transfer

Enter Receiver Account number

Get Account Info

Transfer History

Transfer have been made for Rs.2000 from your account at 2022-11-12 19:36:19 in account no.123

Transfer have been made for Rs.1000 from your account at 2022-11-11 19:35:44 in account no.123

BANK OF UNION

Account statement

Banking

Using the Web Speech API - Web

http://localhost/bankscratchtest/statements.php

BANK OF UNION Home Accounts Account Statements Funds Transfer

Account Balance: Rs.17000

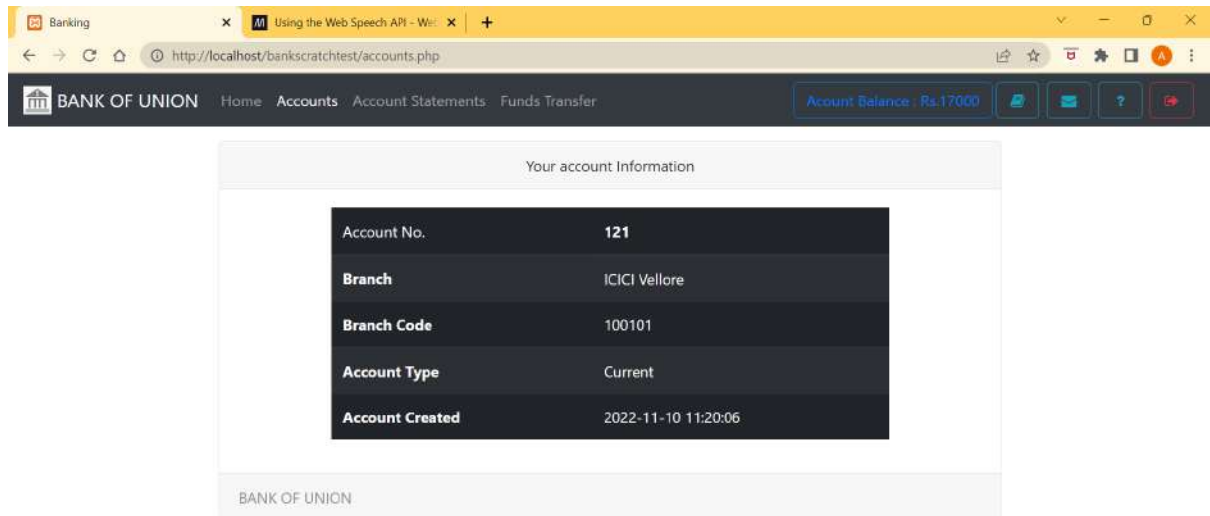
Transaction made against you account

Transfer have been made for Rs.2000 from your account at 2022-11-12 19:36:19 in account no.123

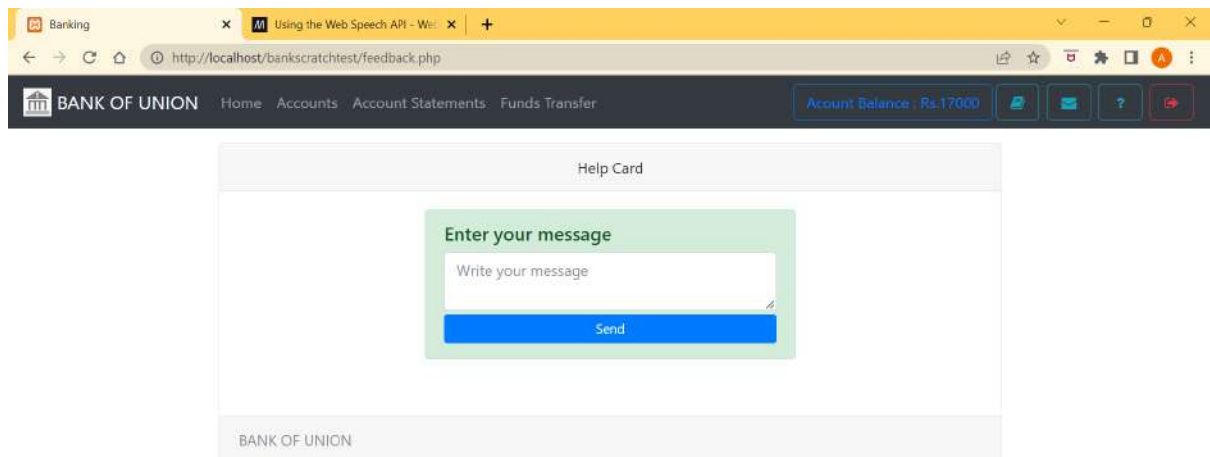
Transfer have been made for Rs.1000 from your account at 2022-11-11 19:35:44 in account no.123

BANK OF UNION

User account info



Send message to manager page



Manager after login page

The screenshot shows a web browser window with the URL `http://localhost/bankscratchtest/mindex.php`. The page header includes the "BANK OF UNION" logo and navigation links: Home, Accounts, Add New Account, and Feedback. A "Welcome Manager" button is visible in the top right. The main content area is titled "All accounts" and displays a table with the following data:

#	Holder Name	Account No.	Branch Name	Current Balance	Account type	Contact	
1	Ayushman Khuntia	121	ICICI Vellore	Rs.17000	Current	9650052496	View Send Notice Delete
2	Ishita Chauhan	122	SBI Chennai	Rs.50000	Saving	9473389256	View Send Notice Delete
3	Anurag Mahajan	123	ICICI Vellore	Rs.63000	Saving	9984463829	View Send Notice Delete
4	Jayakumar K.	124	SBI Chennai	Rs.500000	Current	8824596483	View Send Notice Delete

The footer of the page displays "BANK OF UNION".

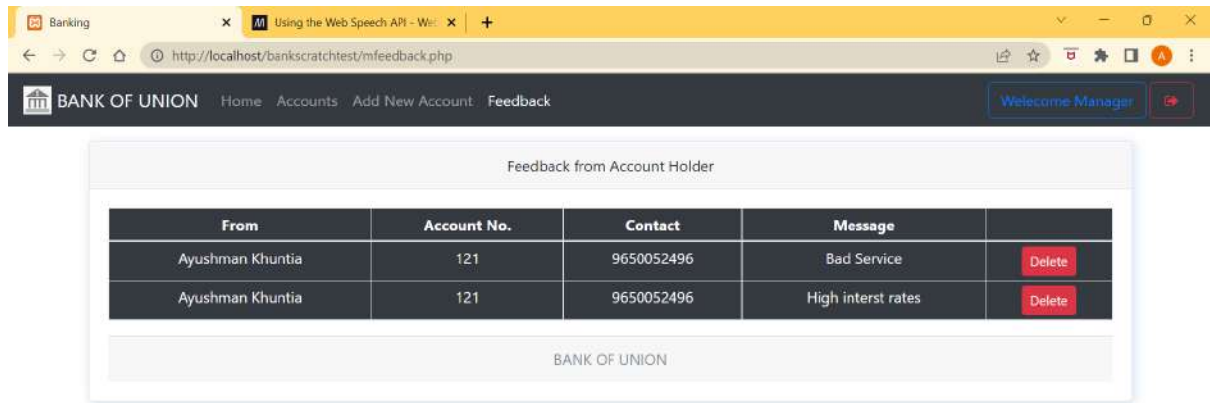
Manager add account page

The screenshot shows a web browser window with the URL `http://localhost/bankscratchtest/maddnew.php`. The page header includes the "BANK OF UNION" logo and navigation links: Home, Accounts, Add New Account, and Feedback. A "Welcome Manager" button is visible in the top right. The main content area is titled "New Account Forum" and contains a form with the following fields:

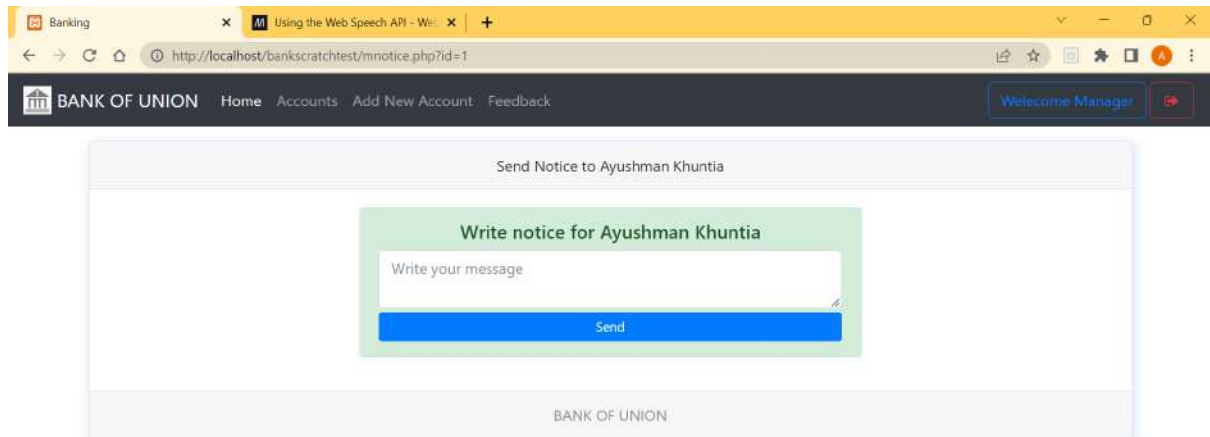
Name	<input type="text"/>	CNIC	<input type="text"/>
Account Number	<input type="text" value="1668263938"/>	Account Type	<input type="text" value="Saving"/>
City	<input type="text"/>	Address	<input type="text"/>
Email	<input type="text"/>	Password	<input type="text"/>
Deposit	<input type="text"/>	Source of income	<input type="text"/>
Contact Number	<input type="text"/>	Branch	<input type="text" value="Please Select.."/>

At the bottom of the form, there are two buttons: "Save Account" and "Reset". The footer of the page displays "BANK OF UNION".

Feedback from users page



Send notice to user page



View user details

Account profile for Ayushman Khuntia #121

Name	Ayushman Khuntia	Account No	121
Branch Name	ICICI Vellore	Branch Code	100101
Current Balance	17000	Account Type	Current
Cnic	3210375555426	City	Vellore
Contact Number	9650052496	Address	VIT

BANK OF UNION

For offline Cashier after login page

Account Information

Enter Account Number

Enter Account number

Get Account Info

BANK OF UNION

Cashier transaction page after entering account number

The screenshot shows a web browser window with the URL `http://localhost/bankscratchtest/cindex.php`. The page header includes the Bank of Union logo and a 'Welcome Cashier' message. The main content area is titled 'Account Information' and contains a form for entering account details and transaction options.

Account Information

Enter Account Number

Enter Account number

Account No.
123

Account Holder Name.
Anurag Mahajan

Account Holder Bank Name.
BANK OF UNION

Bank Balance
Rs.63000

Transaction Process.

Write Check Number

Write Amount for withdraw

Write Check Number

Write Amount for deposit

BANK OF UNION

Database

The screenshot shows the phpMyAdmin interface for the `net_banking` database. The left sidebar shows the database structure, and the main area displays a table structure view.

Filters

Containing the word:

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> branch	<input type="checkbox"/> Browse <input type="checkbox"/> Structure <input type="checkbox"/> Search <input type="checkbox"/> Insert <input type="checkbox"/> Empty <input type="checkbox"/> Drop	2	InnoDB	latin1_swedish_ci	16.0 K B	-
<input type="checkbox"/> feedback	<input type="checkbox"/> Browse <input type="checkbox"/> Structure <input type="checkbox"/> Search <input type="checkbox"/> Insert <input type="checkbox"/> Empty <input type="checkbox"/> Drop	2	InnoDB	latin1_swedish_ci	16.0 K B	-
<input type="checkbox"/> login	<input type="checkbox"/> Browse <input type="checkbox"/> Structure <input type="checkbox"/> Search <input type="checkbox"/> Insert <input type="checkbox"/> Empty <input type="checkbox"/> Drop	5	InnoDB	latin1_swedish_ci	16.0 K B	-
<input type="checkbox"/> notice	<input type="checkbox"/> Browse <input type="checkbox"/> Structure <input type="checkbox"/> Search <input type="checkbox"/> Insert <input type="checkbox"/> Empty <input type="checkbox"/> Drop	1	InnoDB	latin1_swedish_ci	16.0 K B	-
<input type="checkbox"/> otheraccounts	<input type="checkbox"/> Browse <input type="checkbox"/> Structure <input type="checkbox"/> Search <input type="checkbox"/> Insert <input type="checkbox"/> Empty <input type="checkbox"/> Drop	3	InnoDB	latin1_swedish_ci	16.0 K B	-
<input type="checkbox"/> transaction	<input type="checkbox"/> Browse <input type="checkbox"/> Structure <input type="checkbox"/> Search <input type="checkbox"/> Insert <input type="checkbox"/> Empty <input type="checkbox"/> Drop	2	InnoDB	latin1_swedish_ci	16.0 K B	-
<input type="checkbox"/> useraccounts	<input type="checkbox"/> Browse <input type="checkbox"/> Structure <input type="checkbox"/> Search <input type="checkbox"/> Insert <input type="checkbox"/> Empty <input type="checkbox"/> Drop	4	InnoDB	latin1_swedish_ci	16.0 K B	-
7 tables	Sum	19	InnoDB	utf8mb4_general_ci	112.0 K B	0 B

☐ Check all

Table name: Number of columns:

Branch

The screenshot shows the phpMyAdmin interface with the 'branch' table selected in the 'net_banking' database. The table contains two rows of data.

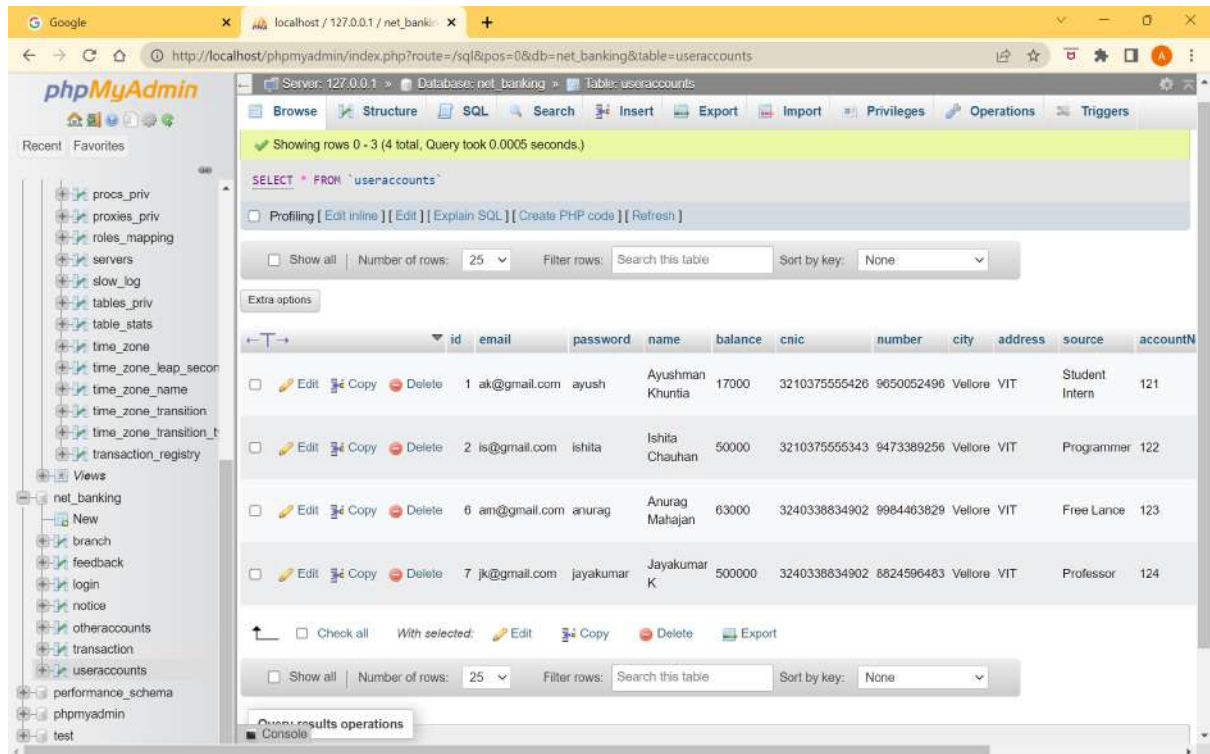
branchid	branchNo	branchName
1	100101	ICICI Vellore
2	100505	SBI Chennai

Feedback

The screenshot shows the phpMyAdmin interface with the 'feedback' table selected in the 'net_banking' database. The table contains two rows of data.

feedbackId	message	userid	date
6	Bad Service	1	2022-11-11 19:36:31
7	High interst rates	1	2022-11-12 19:37:02

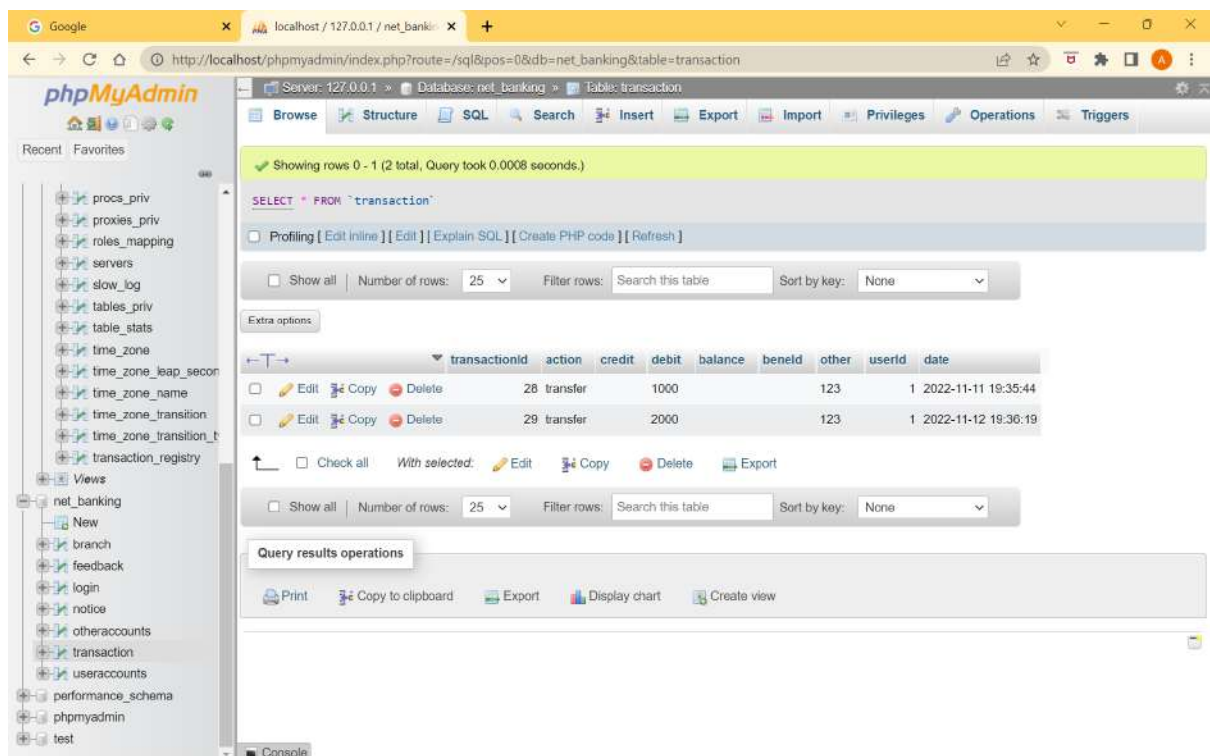
User accounts



The screenshot shows the phpMyAdmin interface for the 'net_banking' database. The 'useraccounts' table is selected, and the SQL query 'SELECT * FROM `useraccounts`' is executed. The results show 4 rows of user data.

	id	email	password	name	balance	cnic	number	city	address	source	accountN
<input type="checkbox"/>	1	ak@gmail.com	ayush	Ayushman Khuntia	17000	3210375555426	9650052496	Vellore	VIT	Student Intern	121
<input type="checkbox"/>	2	is@gmail.com	ishita	Ishita Chauhan	50000	3210375555343	9473389256	Vellore	VIT	Programmer	122
<input type="checkbox"/>	6	am@gmail.com	anurag	Anurag Mahajan	63000	3240338834902	9984463829	Vellore	VIT	Free Lance	123
<input type="checkbox"/>	7	jk@gmail.com	jayakumar	Jayakumar K	500000	3240338834902	8824596483	Vellore	VIT	Professor	124

Transaction



The screenshot shows the phpMyAdmin interface for the 'net_banking' database. The 'transaction' table is selected, and the SQL query 'SELECT * FROM `transaction`' is executed. The results show 2 rows of transaction data.

	transactionid	action	credit	debit	balance	beneld	other	userid	date
<input type="checkbox"/>	28	transfer		1000			123	1	2022-11-11 19:35:44
<input type="checkbox"/>	29	transfer		2000			123	1	2022-11-12 19:36:19

Implementation Transaction

Google Banking

http://localhost/bankscratchtest/transfer.php

BANK OF UNION Home Accounts Account Statements Funds Transfer Account Balance : Rs.63000

Funds Transfer

New Transfer

Enter Receiver Account number

Get Account Info

Account No.
121

Account Holder Name.
Ayushman Khuntia

Account Holder Bank Name.
BANK OF UNION

Enter Amount for tranfer.
2000

Transfer

Transfer History

You have made no transfer yet.

Google Banking

http://localhost/bankscratchtest/transfer.php

localhost says

Transfer Successfull

OK

Google Banking +

http://localhost/bankscratchtest/transfer.php

BANK OF UNION Home Accounts Account Statements Funds Transfer Account Balance: Rs.51000

Funds Transfer

New Transfer

Enter Receiver Account number

Get Account Info

Transfer History

Transfer have been made for Rs.2000 from your account at 2022-11-14 09:28:30 in account no.121

BANK OF UNION

Add account

Google Banking +

http://localhost/bankscratchtest/madnew.php

BANK OF UNION Home Accounts Add New Account Feedback Welcome Manager

New Account Forum


Name	Piyush Singh	CNIC	123456789
Account Number	1668398387	Account Type	Current
City	Ranchi	Address	Mirzapur
Email	ps@gmail.com	Password	*****
Deposit	10000	Source of income	Police
Contact Number	9650052443	Branch	SBI Chennai

Save Account Reset

BANK OF UNION

Google Banking +

http://localhost/bankscratchtest/maddnew.php

 **BANK OF UNION** Home Accounts Add New Account Feedback

Welcome Manager

Account added Successfully

New Account Forum

Name	<input type="text"/>	CNIC	<input type="text"/>
Account Number	1668398500	Account Type	Saving
City	<input type="text"/>	Address	<input type="text"/>
Email	<input type="text"/>	Password	<input type="text"/>
Deposit	<input type="text"/>	Source of income	<input type="text"/>
Contact Number	<input type="text"/>	Branch	Please Select..

[Save Account](#) [Reset](#)

BANK OF UNION

Conclusion

We have successfully designed, develop and implemented this Bank Management system which provides a more secured approach in managing bank customer's information and strengthens the relationships between banks and their customers by providing the right solutions that uses a multi-level security to improve customer satisfaction. We, therefore, encourages other developers of similar application to think twice on how best they can improve in developing a more secured system that will meet the challenges we face today especially on the banking sector and other financial institutions.

References

- <https://www.zenithbank.com>
- <https://www.sc.com/in/>
- <https://www.yesbank.in>
- <https://www.hdfcbank.com>
- <https://home.barclays>
- <https://www.jpmorganchase.com>
- <https://www.goldmansachs.com>

Link to Project Demo and Code files:

https://drive.google.com/drive/folders/1JX_w92a_7MRkwymJfOomA2bU9ZGYUQIA?usp=sharing

