

A
 PROJECT ON
“ONLINE WEB PORTAL FOR STUDENT AND TEACHER”

SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE COURSE OF
DIPLOMA IN ADVANCED COMPUTING FROM CDAC



SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY
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CERTIFICATE

This is to certify that the project work under the title

'E-Banking System'

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in partial fulfillment of the requirement for award of Diploma in Advanced Computing Course.

Project Guide

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ABSTRACT

The Bank Management System is a comprehensive software solution designed to streamline and automate various banking operations. It aims to provide efficient management of customer accounts, transactions, staff, and other essential banking functions. This system offers features such as account creation, deposit and withdrawal management, customer relationship management, and reporting capabilities.

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INTRODUCTION

In today's fast-paced world, banks serve as the backbone of the economy by facilitating financial transactions, providing loans, and offering various banking services to individuals and businesses. With the increasing complexity of banking operations and the growing demand for seamless customer service, there arises a need for efficient management systems to streamline banking processes. The Bank Management System project aims to address these challenges by providing a comprehensive software solution designed to automate and enhance various banking operations.

The goal of this project:

The primary goal of the Bank Management System project is to develop a robust software application that empowers banks and financial institutions to manage their operations effectively. The project seeks to achieve the following objectives:

- Automate routine banking tasks such as account management, transaction processing, customer relationship management.
- Improve operational efficiency by reducing manual efforts, minimizing errors, and optimizing resource utilization.
- Enhance customer service by providing quick and accurate responses to inquiries, facilitating seamless transactions, and offering personalized banking experiences.
- Ensure data security, confidentiality, and compliance with regulatory requirements to maintain trust and confidence among customers.
- Generate comprehensive reports and analytics to help bank managers make informed decisions, monitor performance, and identify areas for improvement.

PRODUCT OVERVIEW AND SUMMARY

Objective:

The primary goal of the Bank Management System project is to create a dynamic software application designed to enhance the efficiency and effectiveness of banking and financial institutions. This project aims to achieve the following objectives: -

- Automate common banking tasks like managing accounts, processing transactions, managing customer relationships, making banking operations smoother and faster.
- Improve efficiency by reducing manual work, minimizing mistakes, and making better use of resources.
- Enhance customer service by providing quick and accurate responses to questions, making transactions seamless, and offering personalized banking experiences.
- Ensure data security, privacy, and compliance with regulations to maintain customer trust.
- Provide detailed reports and analysis to help bank managers make informed decisions, track performance, and find ways to improve.

Scope: -

The Bank Management System project encompasses a comprehensive array of functionalities designed to address diverse aspects of e-banking operations. The project scope includes, but is not limited to, the following key modules:

1. Account Management Module: This module enables bank personnel to efficiently create, update, and oversee customer accounts, spanning savings, current, and fixed deposit accounts.
2. Transaction Processing Module: Ensuring secure and seamless transaction processing, this module facilitates activities such as deposits, withdrawals, fund transfers, and bill payments.
3. Customer Relationship Management (CRM) Module: Fostering improved customer satisfaction and loyalty, this module centralizes customer interactions, inquiries, complaints, and feedback for streamlined management and resolution.
4. Reporting and Analytics Module: Providing valuable insights into banking operations, financial performance, and regulatory adherence, this module generates a variety of reports and analytics to support informed decision-making and compliance monitoring.

Significance:

The Bank Management System project holds significant importance for both banks and their customers. By leveraging modern technology and best practices in software development, the project aims to revolutionize the way banks operate and interact with their clients. Key benefits of the project include:

Improved Efficiency: Automation of routine tasks leads to faster processing times, reduced errors, and increased productivity among bank staff.

Enhanced Customer Experience: The system provides customers with convenient access to banking services, personalized interactions, and timely assistance.

Better Risk Management: Advanced security features and compliance mechanisms help mitigate risks associated with data breaches, fraud, and regulatory non-compliance.

Functional Requirements

| Use Case Diagram for Customer:-

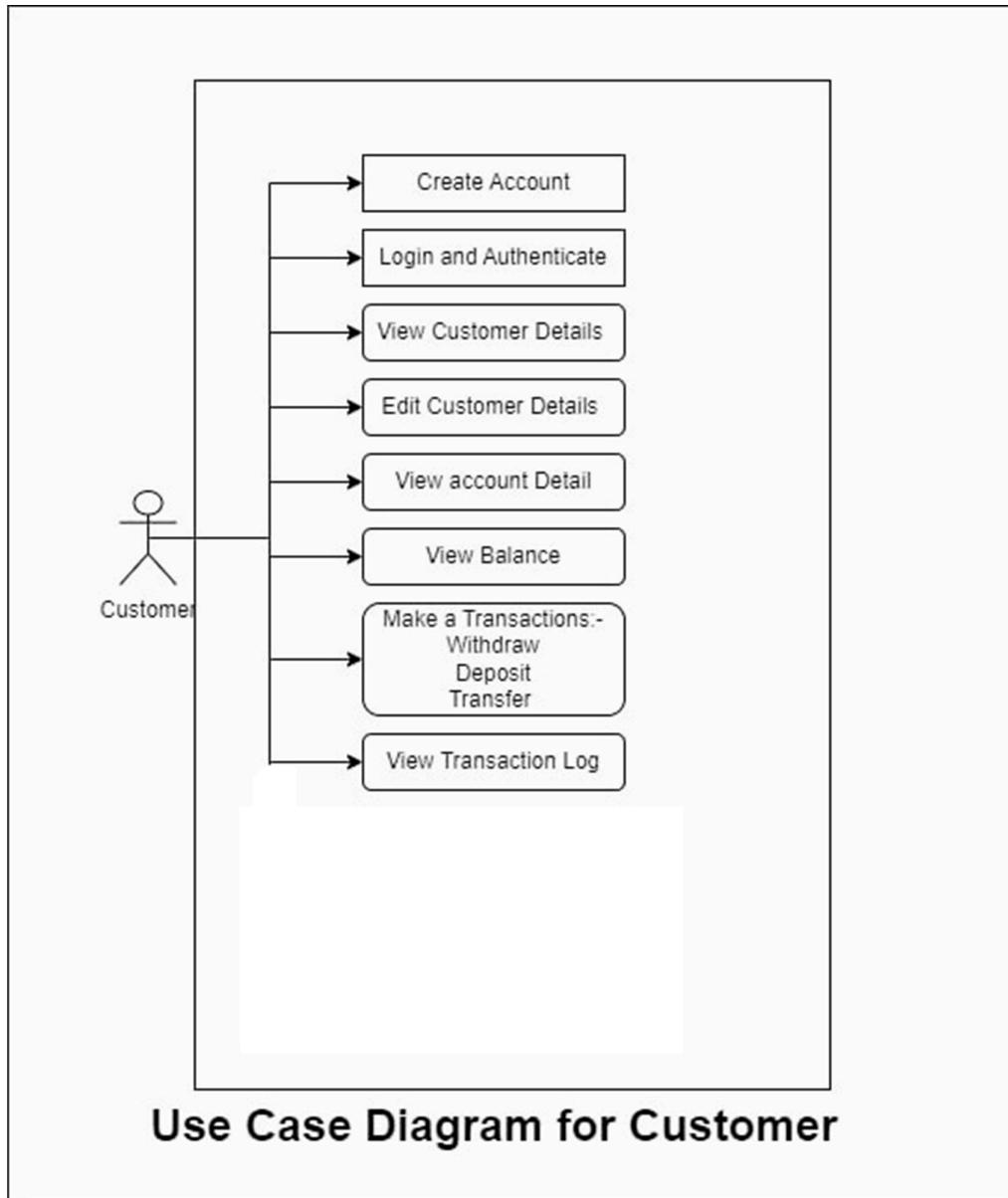
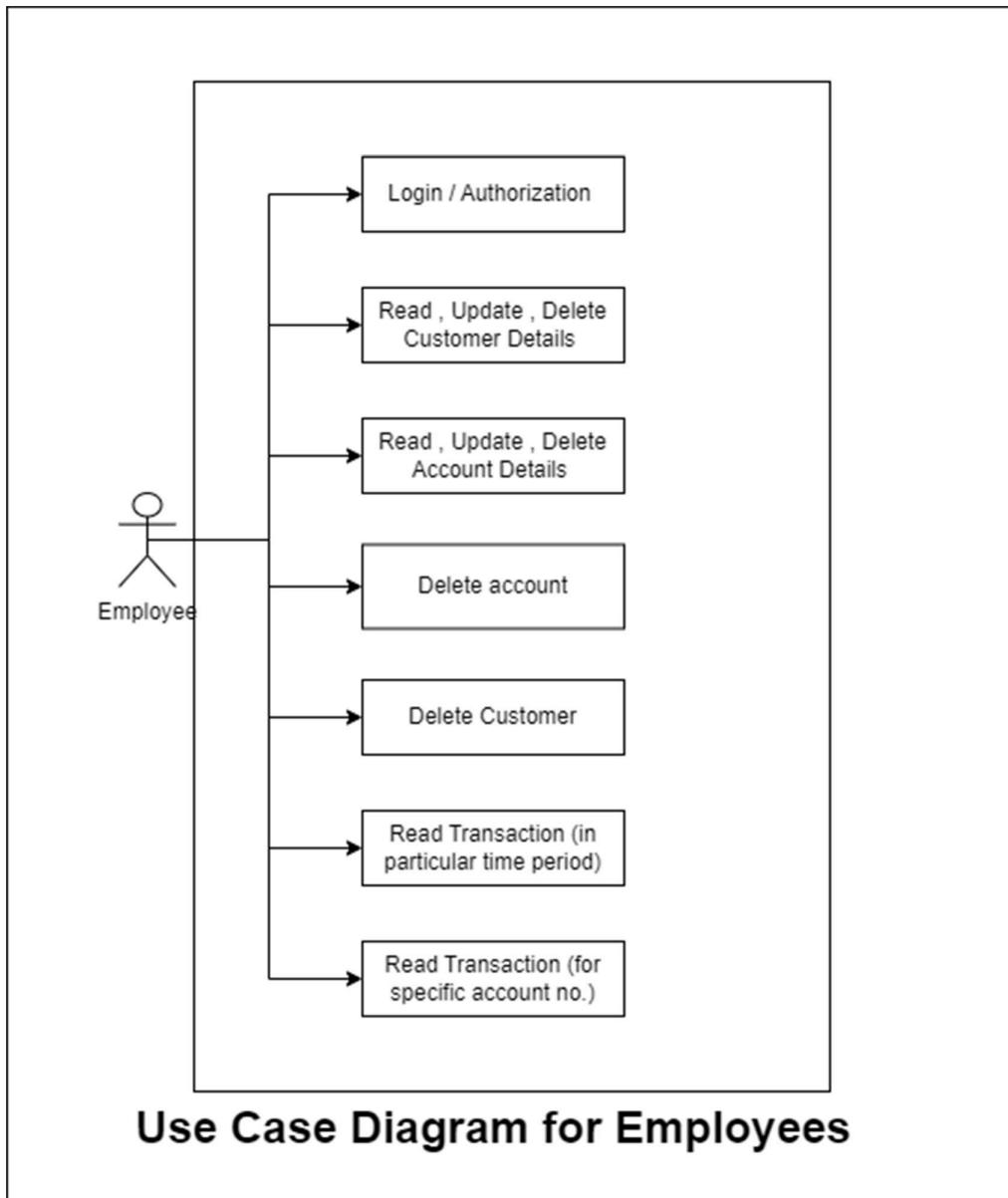


Fig. 1

Use Case Diagram for Employee: -



Non - Functional Requirements

Usability Requirement:

The e-banking application must prioritize ease of use, featuring a straightforward user interface that can be navigated intuitively, without the need for extensive tutorials. Employing multiple views for modularity is essential, particularly considering the mobile application context. The application should seamlessly integrate usability principles to ensure effectiveness, sophistication, and user satisfaction.

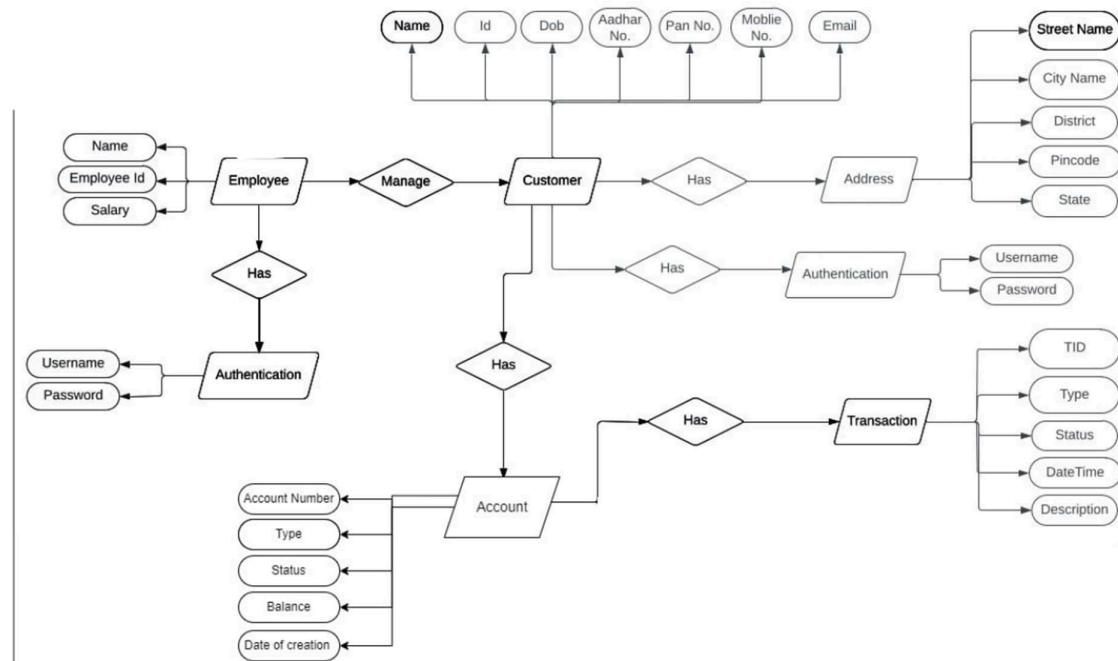
Moreover, adherence to standard design principles, such as maintaining color and contrast integrity, is imperative. The interface design should cater to users of all abilities, including those with disabilities like hearing impairment, low vision, or blindness. Accessibility features should be seamlessly integrated, allowing all users to engage with the application efficiently.

Furthermore, developers must consider sound implementation as an alternative to visual cues, ensuring that any auditory feedback enhances user understanding without unnecessary distractions. Designing the application to accommodate diverse user needs and preferences, including intuitive navigation, accessibility features, and thoughtful sound design, will contribute to an inclusive and user-friendly e-banking experience.

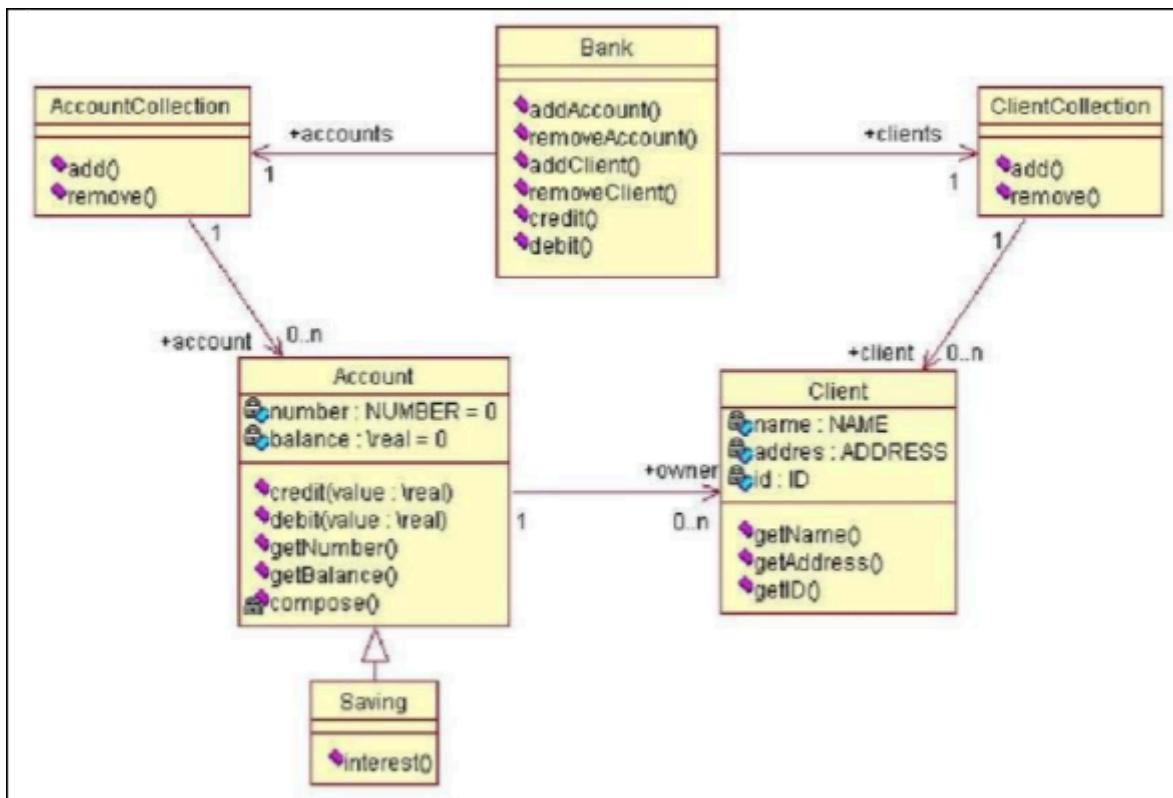
Data Model

Database:

For efficient storage of user data pertaining to step counting and sleep tracking, our choice is to utilize a MySQL database. This selection is based on its seamless integration within the Android operating system, offering a robust and reliable solution for our e-banking project's data management needs.



ER DIAGRAM (fig 3)



Class diagram

SCREEN SHOTS OF USER INTERFACE

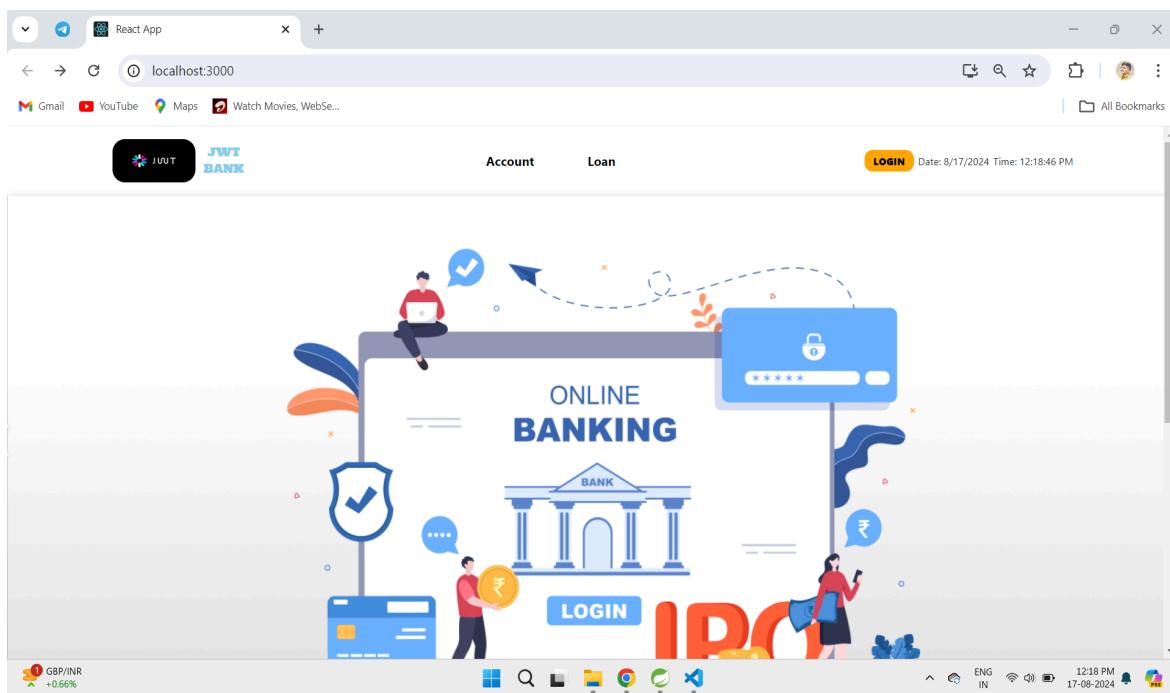
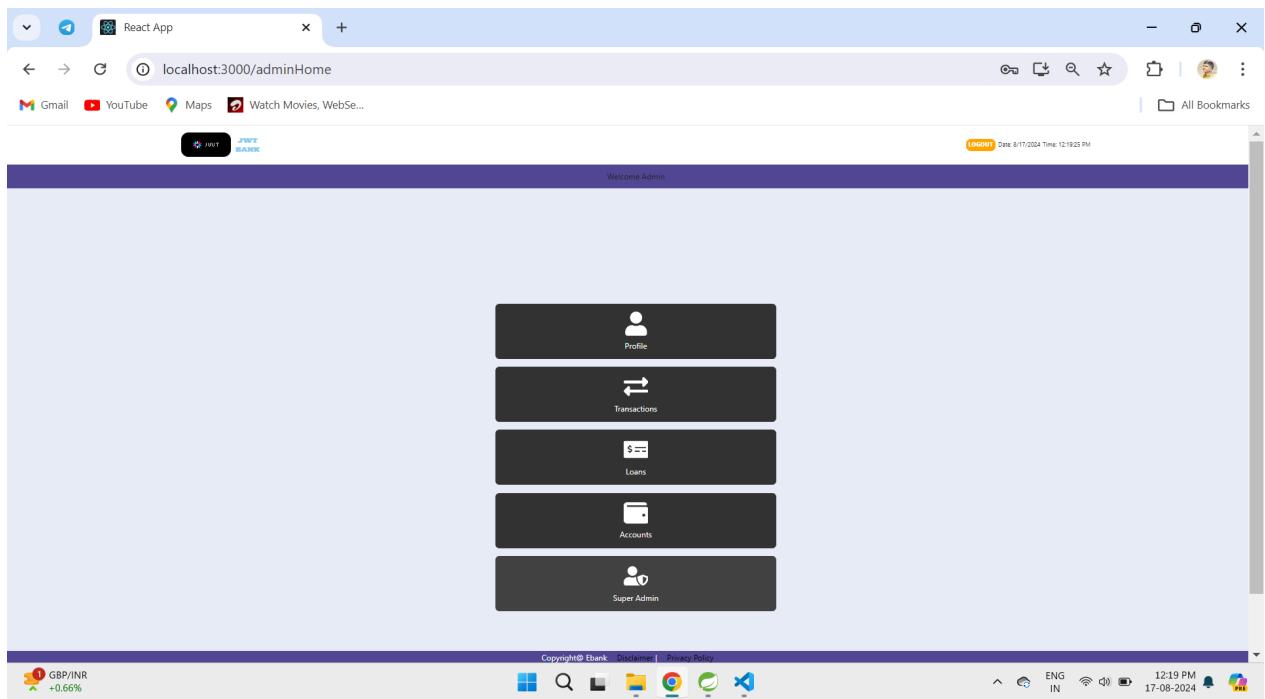


Fig. 4 Dashboard



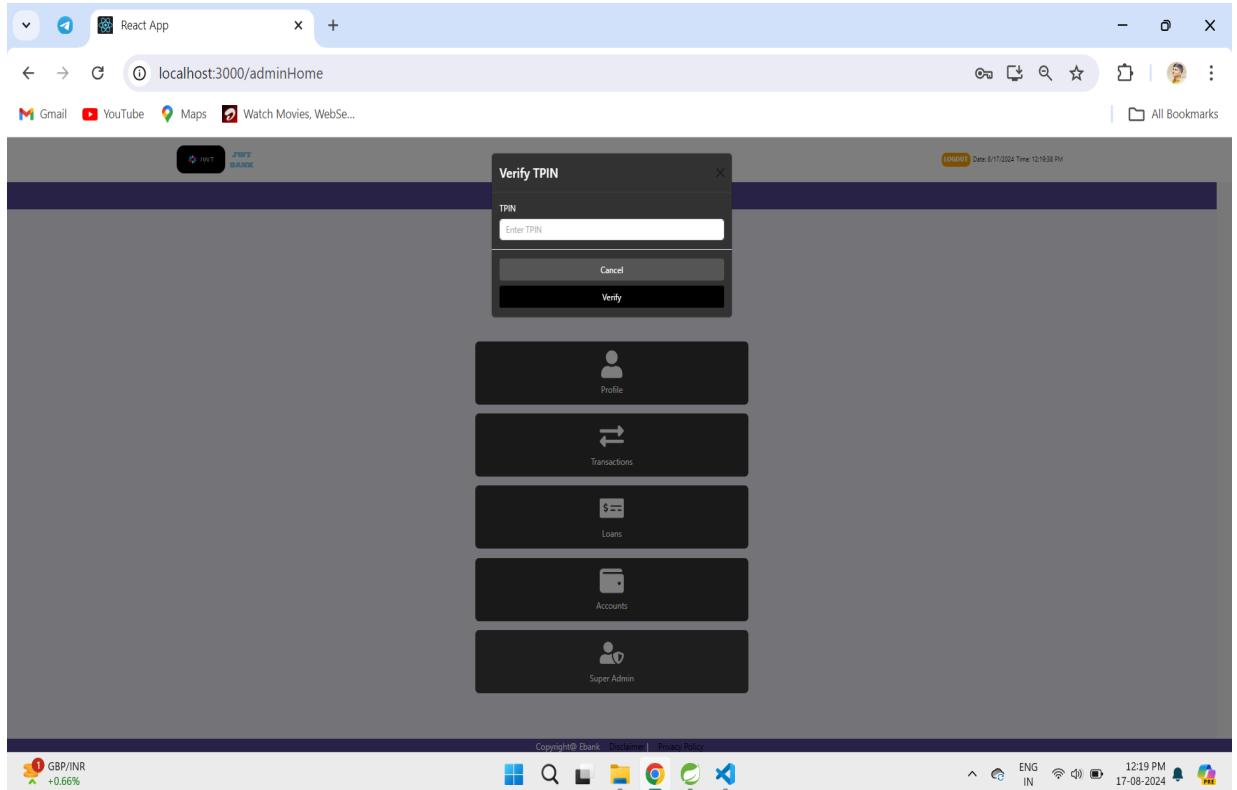


Fig. 5 About Us

A screenshot of a web browser window titled "React App" showing the URL "localhost:3000/manage-admins". The page displays a table titled "Manage Admins" with the following data:

React App

localhost:3000/accounts/activated

Gmail YouTube Maps Watch Movies, WebSe...

JWT BANK

Pending Accounts Active Accounts Deactivated Accounts Suspended Accounts Home Deposit

Active Accounts

Account No	Action
AC00003	Deactivate
AC00022	Deactivate
AC00029	Deactivate
AC00057	Deactivate

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React App

localhost:3000/accounts/pending

Gmail YouTube Maps Watch Movies, WebSe...

JWT BANK

Pending Accounts Active Accounts Deactivated Accounts Suspended Accounts Home Deposit

Customers with Status False

Customer ID	First Name	Last Name	Email	Aadhaar No	PAN No	Action
8	Q	NARVE	abc@gmail.com	123456852363	asdfg1234R	Approve

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29°C Partly sunny

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The screenshot shows a web application window titled "React App" with the URL "localhost:3000/accounts/depositPage". The page has a purple header with tabs for "Pending Requests", "Active Requests", "Completed Requests", "Home", and "Logout". Below the header is a "Deposit" section with fields for "Enter sender account number", "Enter receiver account number", "Enter amount", "Enter PSC code", and "Enter address (optional)". At the bottom are "Cancel" and "Send" buttons.

Fig. 8

Fig. 9

The screenshot shows a web application window titled "React App" with the URL "localhost:3000/ATransactions". The page has a purple header with tabs for "Pending Requests", "Active Requests", "Completed Requests", "Home", and "Logout". Below the header is a "Transactions" section with a table. The table has columns: TransactionId, CreatedOn, TransactionType, Amount, Description, ReceiverAccountNo, SenderAccountNo, Balance, PaymentId, LastPaymentId, and Status. The table contains 10 rows of transaction data. At the bottom right, there are buttons for "Row per page" (10), "1-10 of 51", and a search bar.

TransactionId	CreatedOn	TransactionType	Amount	Description	ReceiverAccountNo	SenderAccountNo	Balance	PaymentId	LastPaymentId	Status
TRP_00002	2024-05-17T00:00:00Z	DEBIT	P5000.00	Loan Disbursement	A00001		P00000.00			SUCCESS
TRP_00004	2024-05-17T11:00:00Z	CREDIT	P5000.00	Shopping	A00001		P00000.00	P0000001		SUCCESS
TRP_00005	2024-05-17T11:00:00Z	CREDIT	P5000.00	Shopping	A00001		P00000.00	P0000001		SUCCESS
TRP_00006	2024-05-17T11:15:00Z	DEBIT	P5000.00	GROCERY	A00002		P00000.00	P0000002		SUCCESS
TRP_00007	2024-05-17T11:16:00:00Z	CREDIT	P5000.00	GROCERY	A00001		P00000.00	P0000002		SUCCESS
TRP_00008	2024-05-17T11:17:00Z	DEBIT	P5000.00	G	A00002		P00000.00	P0000003		SUCCESS
TRP_00009	2024-05-17T11:17:30Z	CREDIT	P5000.00	G	A00001		P00000.00	P0000003		SUCCESS
TRP_00010	2024-05-17T11:20:00Z	DEBIT	P5000.00	self	A00002		P00000.00	P0000004		SUCCESS

React App

localhost:3000/myprofile

Gmail YouTube Maps Watch Movies, WebSe...

Logout Date: 8/17/2024 Time: 12:21:18 PM

JWTC BANK

My Account Transfer Funds Account Statement Loan Check Balance

Quick Links

Account Statement

Profile

Advertisements

My Profile

First Name: VARAD Middle Name: KISHOR Last Name: KULKARNI Date of Birth: 15-08-2004

Gender: Select Gender Aadhaar No: 424511466596 PAN No: BNCEP3921C Account Type: saving

Email: vkkulkam2251@gmail.com Phone Number: 2083882489 Update Contact Details

Password: Confirm Password: Update Password

TPIN: Update TPIN

CAD/INR +0.27%

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React App

localhost:3000/ownfundtransfer

Gmail YouTube Maps Watch Movies, WebSe...

Logout Date: 8/17/2024 Time: 12:22:14 PM

JWTC BANK

My Account Transfer Funds Account Statement Loan Check Balance

Quick Links

Account Statement

Profile

Advertisements

Payment to Self

Sender Account No.* AC00057 Enter receiver account number

Amount.* Enter amount Transaction Type.* DEBIT

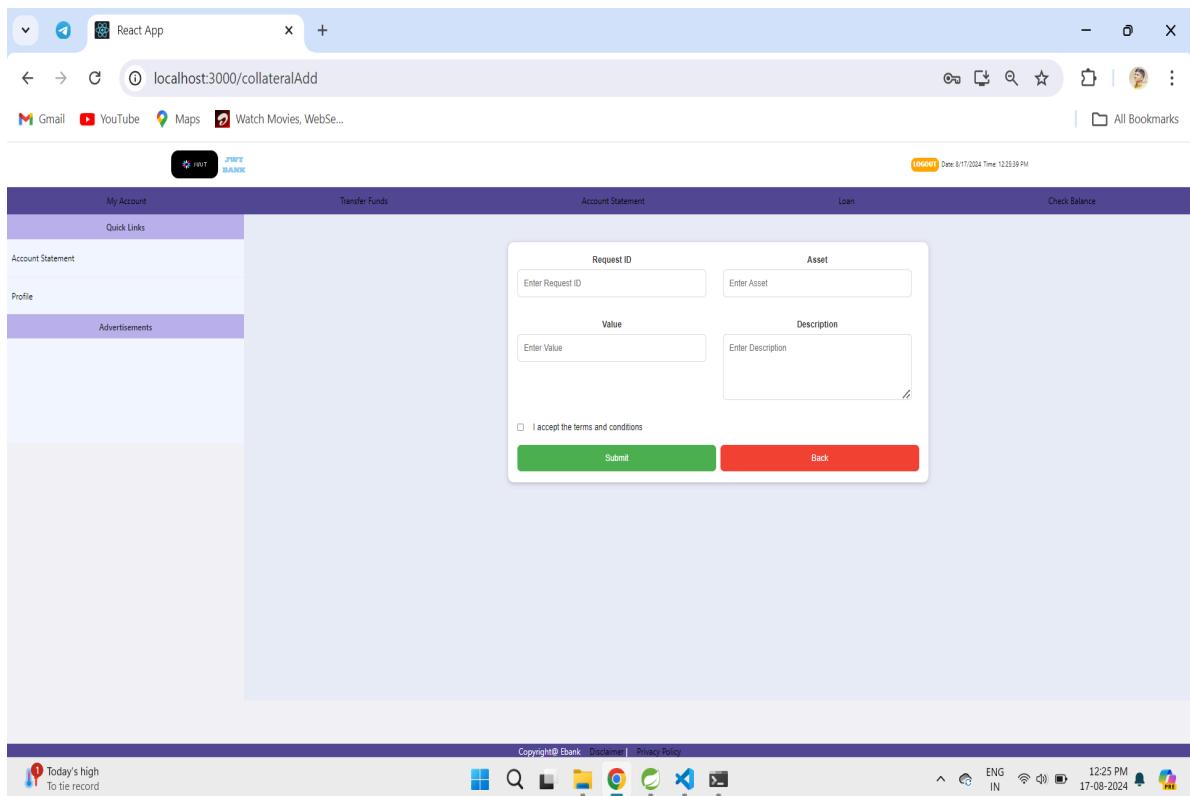
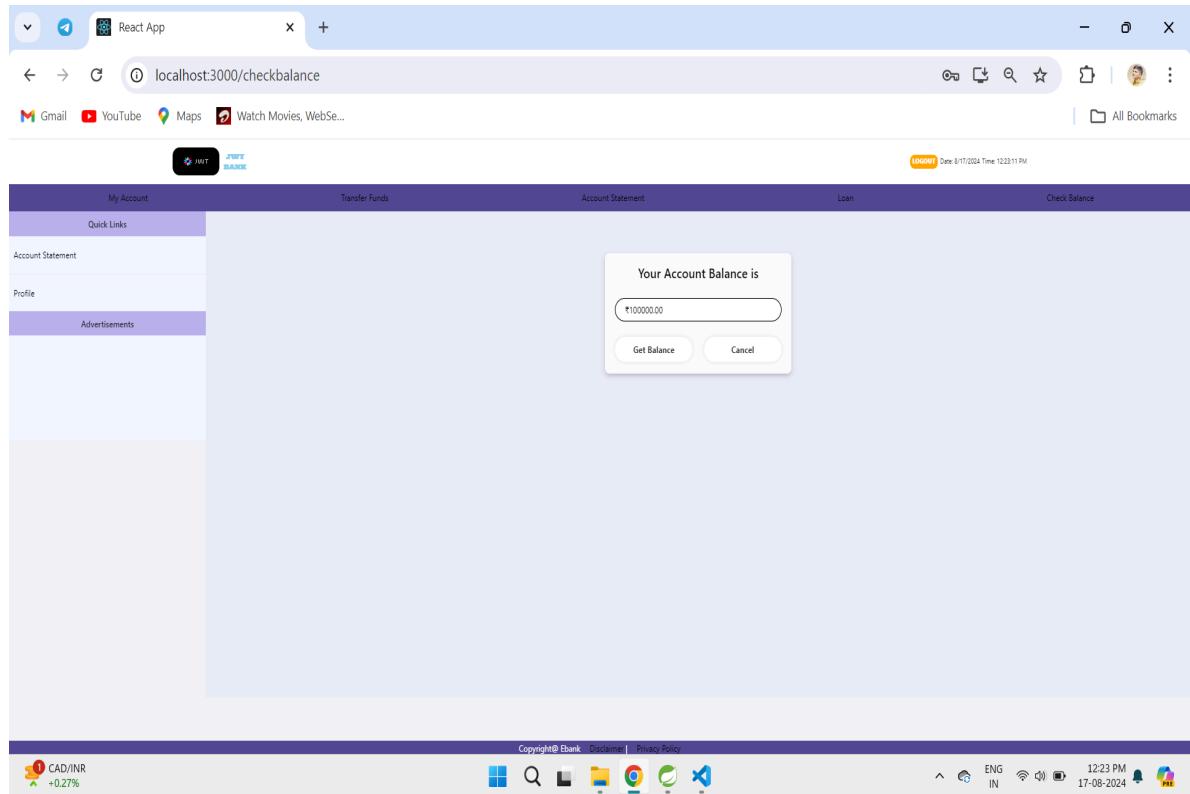
IFSC Code.* Enter IFSC code Description Enter a description (optional)

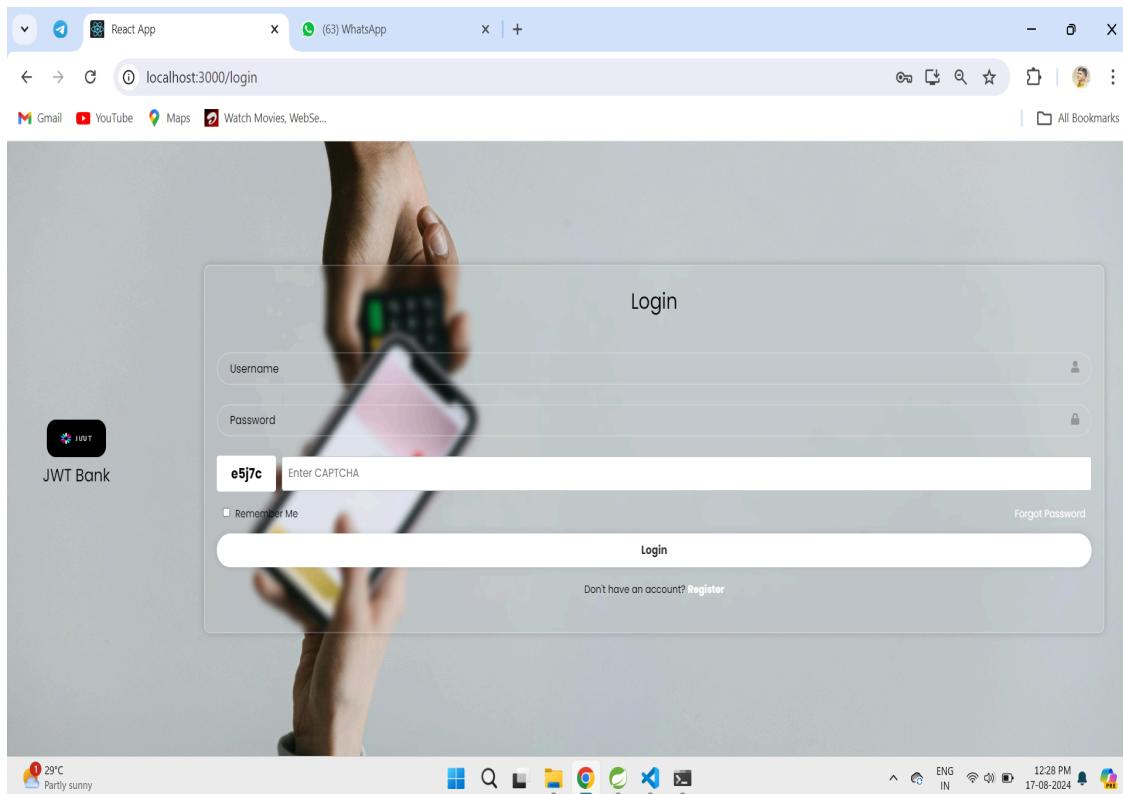
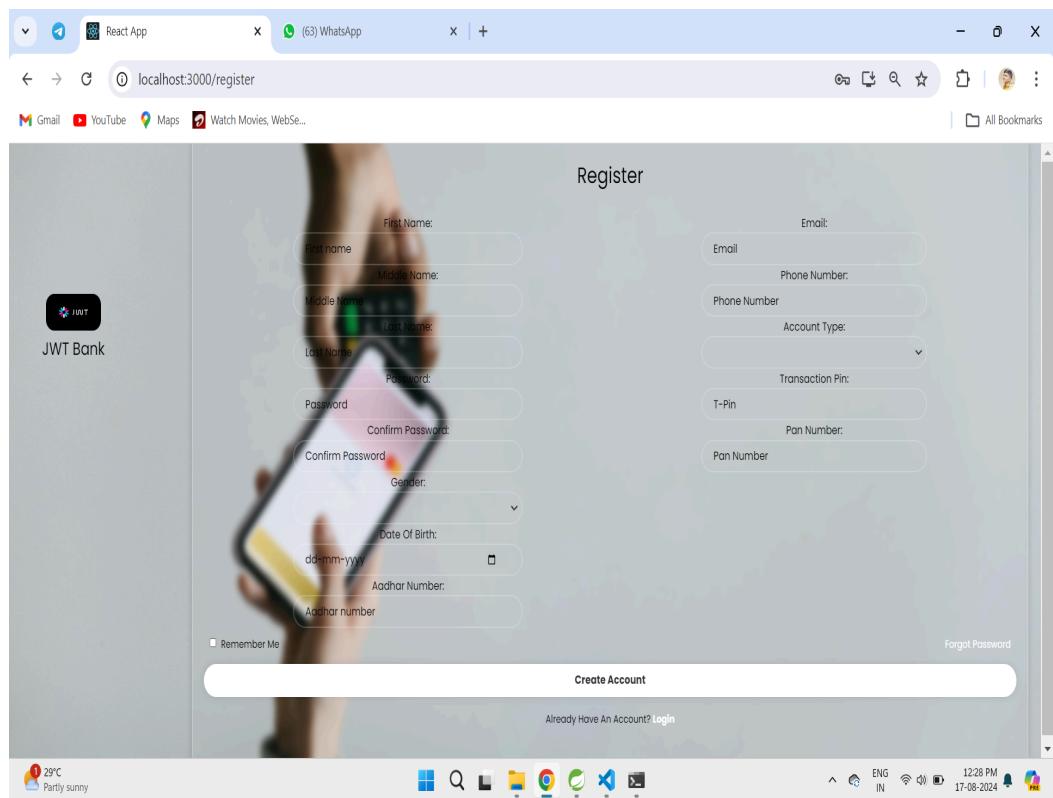
Submit Back

CAD/INR +0.27%

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Conclusion:

In conclusion, the implementation of the e-banking project stands as a testament to addressing the dynamic needs of customers and employees in the banking sector. This initiative has successfully provided customers with convenient access to essential banking services like money transfers, withdrawals, and transaction history, all through a user-friendly interface.

Through this platform, customers enjoy round-the-clock accessibility, reducing reliance on physical banking infrastructure and enhancing overall satisfaction. Meanwhile, employees benefit from streamlined transaction management tools, empowering them to efficiently monitor customer transactions while upholding stringent security measures.

The e-banking project's commitment to robust security protocols ensures the safety and confidentiality of customer data and financial transactions, thereby fostering trust and confidence among users.

In essence, the e-banking project represents a significant leap in banking technology, offering a comprehensive solution that caters to the diverse needs of stakeholders. By embracing digital innovation, the banking sector can achieve greater efficiency, accessibility, and security, ultimately elevating the banking experience for all involved.

Future Work:

The e-banking project lays a solid foundation for future enhancements and advancements within the banking industry. Here are some potential future scope areas:

Advanced Security Measures: Continuously evolving security threats necessitate the integration of cutting-edge security technologies such as biometric authentication, machine learning algorithms for fraud detection, and blockchain for immutable transaction records. Strengthening security measures will ensure the safety of customer data and transactions in the face of emerging cyber threats.

Enhanced Personalization: Utilizing data analytics and artificial intelligence, banks can offer personalized services tailored to individual customer preferences and financial behaviors. Predictive analytics can anticipate customer needs, providing proactive financial advice and personalized product recommendations, thereby enhancing customer engagement and loyalty.

Expansion of Digital Services: As digital adoption continues to rise; banks can expand their digital offerings beyond traditional banking services. This includes integrating third-party services such as insurance, investment, and bill payment platforms into the e-banking ecosystem, providing customers with a comprehensive suite of financial solutions in one convenient platform.

Mobile Banking Innovations: With the proliferation of smartphones and mobile devices, the future of banking lies in mobile-first solutions. Investing in mobile banking innovations such as mobile wallets, contactless payments, and voice-activated banking services will cater to the evolving preferences of digitally savvy customers, driving greater convenience and accessibility.

In conclusion, the future scope of e-banking is vast and promising, offering opportunities for innovation, personalization, and sustainability. By embracing emerging technologies and customer-centric approaches, banks can stay ahead of the curve and continue to meet the evolving needs of customers in an increasingly digital world.

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