



Darshan University

A Project Report on

“Bank Management System”

Under the subject

Software Engineering (2301CS405)

B. Tech, Semester – IV

Computer Science & Engineering Department

Submitted By

Student Name: Malay Mansukh Panara

Enrolment No.:23010101184

Academic Year

(2024-2025)

Internal Guide

Prof. R. B. Gondaliya

Darshan University

Dean-DIET

Dr. Gopi Sanghani

Darshan University



**Computer Science & Engineering
Department
Darshan University**

DECLARATION

We hereby declare that the SRS, submitted along with the **Software Engineering (2301CS405)** for entitled “**Bank Management System**” submitted in partial fulfilment for the Semester-5 of **Bachelor Technology (B. Tech)** in **Computer Science and Engineering (CSE)** Department to Darshan University, Rajkot, is a record of the work carried out at **Darshan University, Rajkot** under the supervision of R. B. Gondaliya and that no part of any of report has been directly copied from any students’ reports, without providing due reference.

Malay Mansukh Panara

Student’s Signature

Date: _____



**Computer Science & Engineering
Department
Darshan University**

CERTIFICATE

This is to certify that the SRS on “**Bank Management System**” has been satisfactorily prepared by **Malay Mansukh Panara (23010101184)** under my guidance in the fulfillment of the course **Software Engineering (2301CS405)** work during the academic year 2024-2025.

Internal Guide
Prof. R. B. Gondaliya
Darshan University

Dean-DIET
Dr. Gopi Sanghani
Darshan University

ACKNOWLEDGEMENT

I wish to express my sincere gratitude to my project guide Prof. R. B. Gondaliya and all the faculty members for helping me through my project by giving me the necessary suggestions and advices along with their valuable co-ordination in completing this work.

I also thank my parents, friends and all the members of the family for their precious support and encouragement which they had provided in completion of my work. In addition to that, I would also like to mention the Darshan University personals who gave me the permission to use and experience the valuable resources required for the project from the University premises.

Thus, in conclusion to the above said, I once again thank the faculties and members of **Darshan University** for their valuable support in completion of the project.

Thanking You

Malay Mansukh Panara

ABSTRACT

A Bank Management System is a software application designed to streamline and automate the day-to-day operations of a bank, ensuring efficiency, security, and convenience for both customers and bank staff. This system provides a comprehensive platform for managing core banking activities, such as account creation, deposits, withdrawals, fund transfers, loan processing, and transaction tracking.

The primary goal of this system is to enhance operational efficiency by reducing manual workload and minimizing errors through digitized processes. It also aims to improve customer experience by offering features like online banking, real-time account updates, and secure access to banking services.

By integrating modern technologies such as cloud computing, data encryption, and mobile banking, the system caters to the dynamic needs of customers while ensuring scalability and reliability for financial institutions. This system serves as a backbone for digital transformation in the banking sector, fostering trust, efficiency, and growth.

Main purpose of this system is to reduce human efforts as much as possible.

Table of Contents

List of Figures.....	I
List of Tables.....	II
1 Introduction.....	1
1.1 Product perspective	1
1.2 Product Features.....	1
1.2.1 There are four different users who will be using this product:.....	1
1.2.2 The features that are required for the Customer are:	1
1.2.3 The features that are required for the Branch Manager are:	1
1.2.4 The features that are required for the Customer Service Representative (CSR) are:	1
1.2.5 The features that are required for the Administration are:	1
1.3 Functional Requirement	2
1.3.1 Customer	2
1.3.2 Branch Manager	2
1.3.3 Customer Service Representative (CSR)	2
1.3.4 Administration	3
1.4 Non-Functional Requirement	3
1.4.1 Usability:	3
1.4.2 Accuracy:	3
1.4.3 Availability:	3
1.4.4 Maintainability:.....	3
2 Design and Implementation Constraints.....	4
2.1 Use case diagram	4
2.2 Activity diagram and Swimlane diagram	5
2.3 Sequence diagram.....	8
2.4 State diagram.....	10
2.5 Class diagram	11
2.6 Data flow diagram.....	12
2.6.1 Context diagram (level-0)	12
2.6.2 DFD Level-1.....	12
3 External interface requirement (Screens)	13
3.1 Screen-1: Register Account.....	13
3.2 Screen-2: Apply for loan.....	14
3.3 Screen-3: Loan Status.....	15
3.4 Screen-4: Credit card application.....	17
3.5 Screen-5: Loan History	18
3.6 Screen-6: Policy Enforcement	19
3.7 Screen-7: System Updates and Maintenance	20

3.8	Screen-8: Customer Service Representative Tools	21
3.9	Screen-9: Account Statement	23
3.10	Screen-10: Customer Support.....	24
4	Database design	25
4.1	List of Tables	25
5	Stories and Scenario	27
5.1	Story-1: New Account opening	27
5.1.1	Scenario# S1.1	27
5.1.2	Scenario# S1.2	27
5.2	Story-2: Fund Transfer Between Accounts	28
5.2.1	Scenario# S2.1	28
5.2.2	Scenario# S2.2	28
5.3	Story-3: Loan Application Process	28
5.3.1	Scenario# S3.1	29
5.3.2	Scenario# S3.2	29
6	Test cases	30
7	References.....	35

List of Figures

Figure 2.1-1 Use case diagram for Bank management system	4
Figure 2.2-1 Activity diagram for Transaction of money	5
Figure 2.2-2 Activity diagram for Loan Issue	6
Figure 2.2-3 Swimlane diagram for transaction of money	7
Figure 2.3-1 Sequence diagram for apply for loan	8
Figure 2.3-2 Sequence diagram for opening an account	9
Figure 2.4-1 State diagram of Loan payment	10
Figure 2.4-2 State diagram for Bank account	10
Figure 2.5-1 Class diagram for Bank Management System	11
Figure 2.6-1 Context diagram for Bank management system	12
Figure 2.6-2 DFD level-1 for Bank management system	12
Figure 3.1-1 Screen-1: Register Account	13
Figure 3.2-1 Screen-2: Apply for loan	14
Figure 3.3-1 Screen-3: Loan Status	15
Figure 3.4-1 Screen-4: Credit card application	17
Figure 3.5-1 Screen 5: Loan History	18
Figure 3.6-1 Screen 6: Policy Enforcement	19
Figure 3.7-1 Screen 7: System Updates and Maintenance	20
Figure 3.8-1 Screen 8: Customer Service Representative Tools	21
Figure 3.9-1 Screen 9: Account Statement	23
Figure 3.10-1 Screen 10: Customer Support	24

List of Tables

Table 3.1-1 Screen element of Register Account	13
Table 3.2-1 Screen element of Apply for loan.....	14
Table 3.3-1 Screen element of Loan Status.....	15
Table 3.4-1 Screen element of Credit card Application	17
Table 3.5-1 Screen element of Loan history.....	18
Table 3.6-1 Screen Elements of Policy Enforcement	19
Table 3.7-1 Screen Elements of System Updates and Maintenance	20
Table 3.8-1 Screen Elements of Customer Service Representative Tools.....	21
Table 3.9-1 Screen Elements of Account Statement.....	23
Table 3.10-1 Screen Elements of Customer Support	24
Table 4.1-1 Table: Account.....	25
Table 4.1-2 Table: Loan	25
Table 4.1-3 Table: Transaction	25
Table 4.1-4 Table: Beneficiary	25
Table 4.1-5 Table: Customer	26
Table 4.1-6 Table: Employee	26

1 Introduction

1.1 Product perspective

The Bank Management System is a robust software solution designed to streamline banking operations such as account management, transactions, and loans. By automating processes, it enhances efficiency, reduces errors, and improves customer experiences with features like online banking and real-time updates. Integrating modern technologies, it ensures security, scalability, and adaptability for dynamic financial environments.

1.2 Product Features

1.2.1 There are four different users who will be using this product:

- Customer who will manage personal banking activities.
- Branch Manager who oversees branch operations.
- Customer Service Representative (CSR) who assists customers with banking services.
- Administration who manages system-wide operations and security.

1.2.2 The features that are required for the Customer are:

- Access account details, including balance and transaction history.
- Perform money transfers between accounts or to other users.
- Pay bills and set up recurring payments.
- Request for new banking services such as loans, credit cards, and savings accounts.
- Access online and mobile banking platforms.
- Report lost/stolen cards and request replacements.
- Set up notifications and alerts for account activity.

1.2.3 The features that are required for the Branch Manager are:

- Oversee daily branch operations and monitor staff performance.
- Approve or reject customer requests for loans or credit cards.
- Generate detailed reports on branch performance and customer activity.
- Manage branch-level inventory of cash and other resources.
- Monitor compliance with regulatory and bank-specific guidelines.
- Handle escalated customer issues and complaints.
- Track and analyse key metrics for branch growth and efficiency.

1.2.4 The features that are required for the Customer Service Representative (CSR) are:

- Assist customers in opening or closing accounts.
- Help customers update personal details such as address and phone number.
- Process requests for new debit or credit cards.
- Provide information on banking products and services.
- Resolve issues related to account transactions or discrepancies.
- Track and respond to customer inquiries and feedback.
- Process applications for loans or credit services under Branch Manager approval.

1.2.5 The features that are required for the Administration are:

- Handle user accounts and permissions for customers and staff.
- Monitor system-wide operations and security protocols.
- Generate and analyse financial and operational reports.
- Oversee database management, ensuring data integrity and backups.
- Implement and update system-wide policies and features.
- Ensure compliance with banking regulations and standards.

- Integrate third-party tools and services with the banking system.

1.3 Functional Requirement

1.3.1 Customer

- Account Login: Customers should be able to login their bank accounts.
- Fund Transfers: Customers should be able to transfer funds to other accounts, both within the bank and externally.
- Balance Inquiry: Customers should be able to view their account balance in real-time.
- Transaction History: Customers should have access to detailed transaction history, including deposits, withdrawals, and transfers.
- Bill Payments: Customers should be able to pay utility bills, loans, or other recurring payments through the system.
- Loan Application and Status: Customers should be able to apply for loans and view the status of their loan applications.
- ATM and Debit Card Application: Customers should be able to request, activate, deactivate, or report lost ATM or debit cards.
- Account Statements: Customers should be able to generate and download account statements for specific time periods.
- Customer Support: Customers should have access to a help desk or chat feature to resolve issues or get assistance.

1.3.2 Branch Manager

- Customer Account Approval: Approve or reject new account requests, update account details, and freeze/close accounts as needed.
- Employee oversight: Oversee employee accounts, assign roles, and monitor performance.
- Access Control: Approve or modify employee access to systems or modules based on roles.
- Transaction Monitoring: Audit transactions, approve high-value operations, and investigate suspicious activities.
- Loan oversight: Approve/reject loan applications, track repayments and overdue loans.
- Branch Operations: Oversee daily operations, including cash flow and inventory management.
- Report Generation: Generate reports on branch performance, cash summaries, and transactions.
- Compliance Monitoring: Ensure adherence to AML, KYC, and regulatory standards.
- Security Oversight: Resolve flagged activities and enforce secure access to sensitive data.
- Policy Enforcement: Conduct periodic checks to ensure compliance with bank policies and regulations.

1.3.3 Customer Service Representative (CSR)

- Customer Search and Details: The system shall enable CSRs to search and view customer profiles using account number, name, or phone number.
- Update Customer Information: The system shall allow CSRs to update customer contact details like address, email, and phone after verification.
- Open Account: CSRs shall be able to open new accounts.
- Close Account: CSRs shall be able to close existing ones.
- Modify Account: CSRs shall be able to modify account preferences like overdraft options.
- Transaction Assistance: The system shall support CSRs in assisting with fund transfers, check deposits, and account statement requests.
- Service Requests Logging: CSRs shall be able to log and track service requests such as card replacements, password resets, or complaint resolutions.

- Product Information: The system shall enable CSRs to provide details about banking products and recommend services based on customer needs.
- Identity Verification: The system shall ensure CSRs verify customer identity using KYC documents or OTPs before processing sensitive requests.
- Audit Logging: All actions performed by the CSR shall be logged for security and compliance purposes.
- Communication Tools: CSRs shall be able to send notifications, schedule appointments, and record interaction notes for customers.

1.3.4 Administration

- User oversight: The system shall allow the administrator to create, update, deactivate, or delete user accounts for employees, including CSRs and managers.
- Role and Permission: The system shall enable the administrator to assign roles and define permissions for different user categories (e.g., CSR, Teller, Branch Manager).
- Branch Handling: The administrator shall be able to oversee branch details, including branch locations, contact information, and operational hours.
- Audit and Log Monitoring: The system shall provide administrators access to audit logs of all user activities for monitoring and compliance.
- Policy and Parameter Configuration: The system shall allow the administrator to configure operational policies such as interest rates, loan criteria, and account maintenance fees.
- System Access Control: The system shall allow administrators to define login policies, such as password complexity, session timeouts, and multi-factor authentication.
- Report Generation: The system shall enable administrators to generate and download reports on operational metrics, user performance, and transaction summaries.
- System Updates and Maintenance: The system shall allow administrators to oversee software updates, monitor system health, and troubleshoot issues.

1.4 Non-Functional Requirement

1.4.1 Usability:

- The UI should be simple enough for everyone to understand and get the relevant information without any special training. Different languages can be provided based on the requirements.

1.4.2 Accuracy:

- The data stored about the books and the fines calculated should be correct, consistent, and reliable.

1.4.3 Availability:

- The System should be available for the duration when the library operates and must be recovered within an hour or less if it fails. The system should respond to the requests within two seconds or less.

1.4.4 Maintainability:

- The software should be easily maintainable and adding new features and making changes to the software must be as simple as possible. In addition to this, the software must also be portable.

2 Design and Implementation Constraints

2.1 Use case diagram

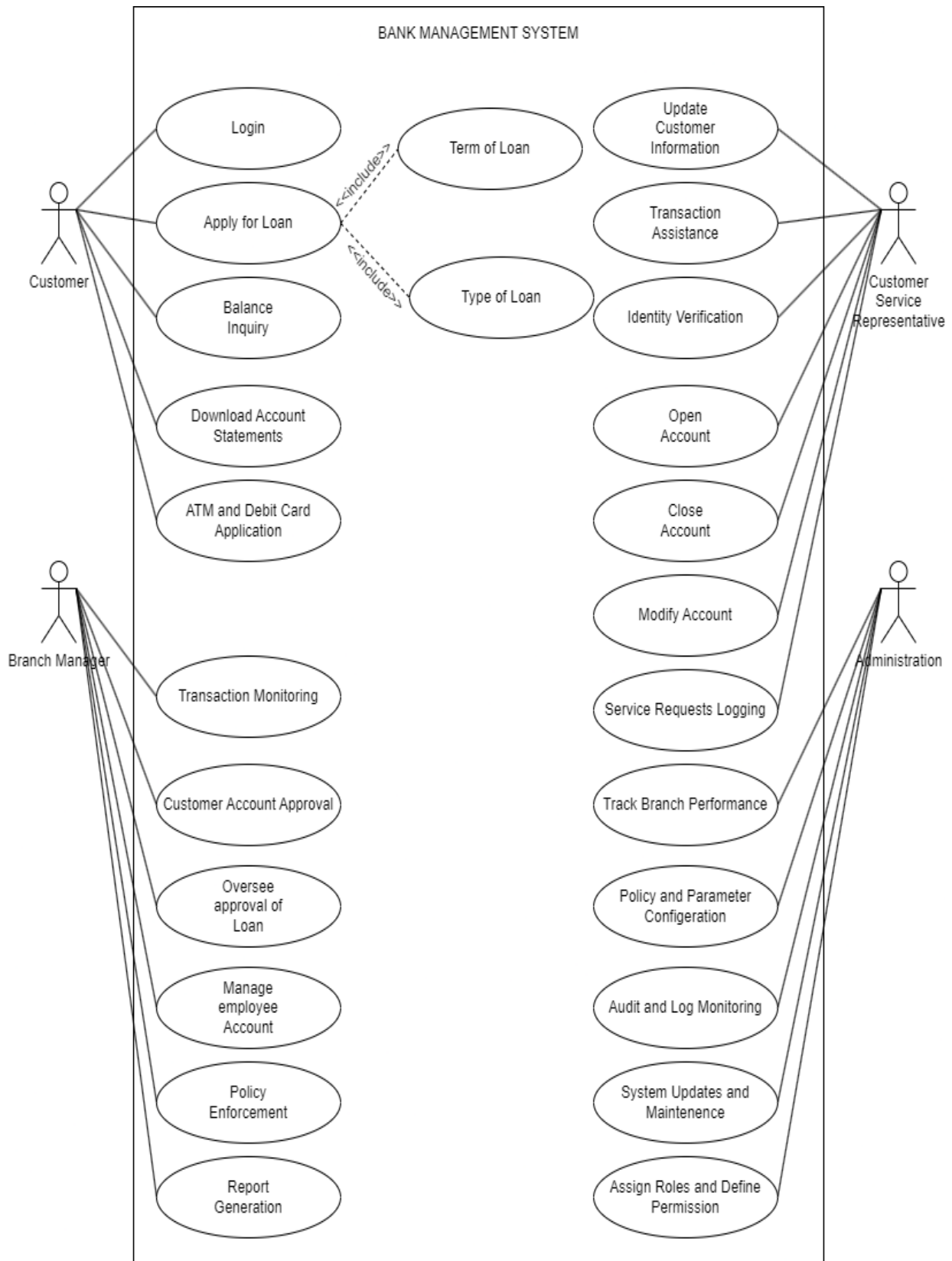


Figure 2.1-1 Use case diagram for Bank management system

2.2 Activity diagram and Swimlane diagram

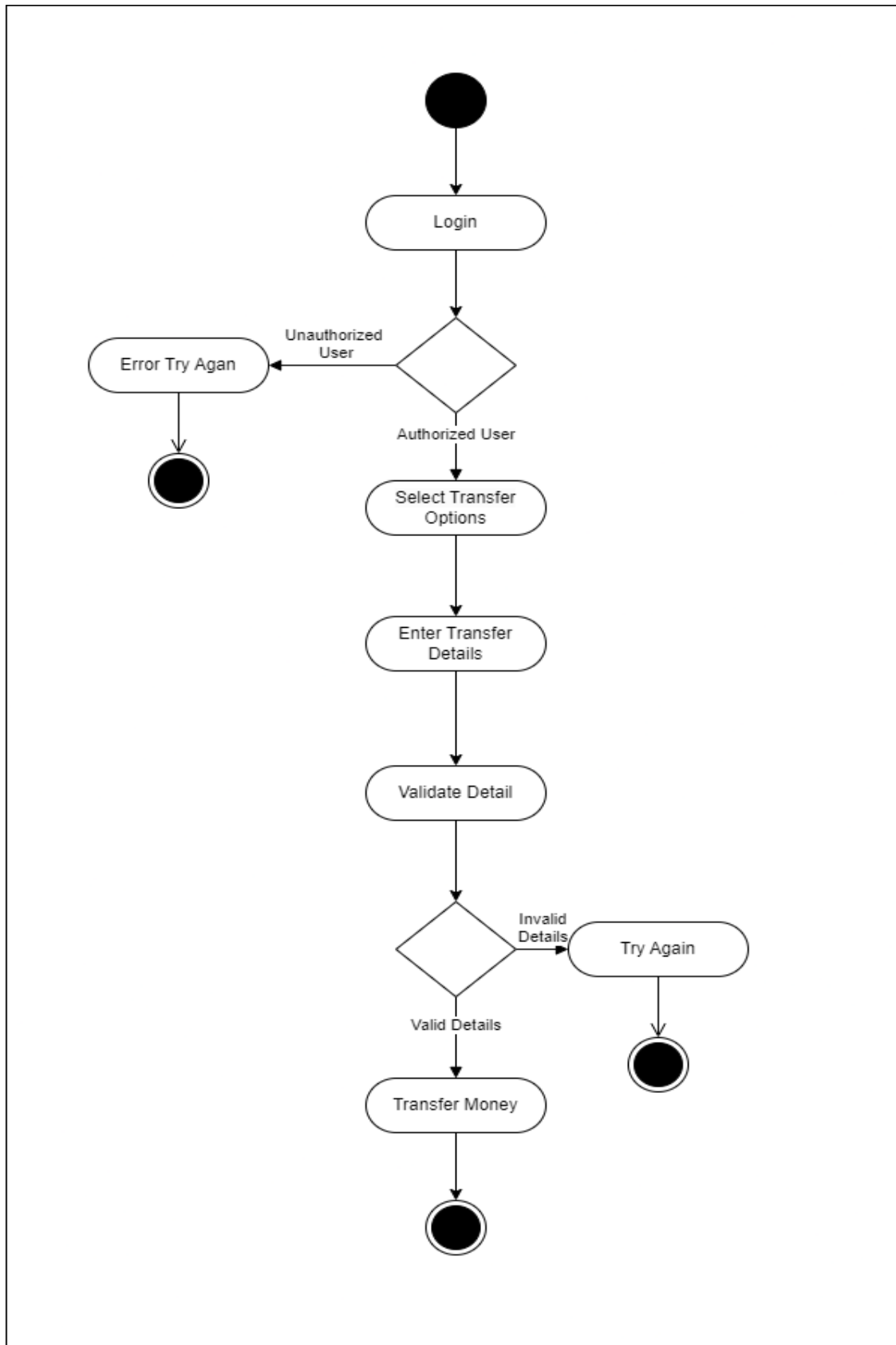


Figure 2.2-1 Activity diagram for Transaction of money

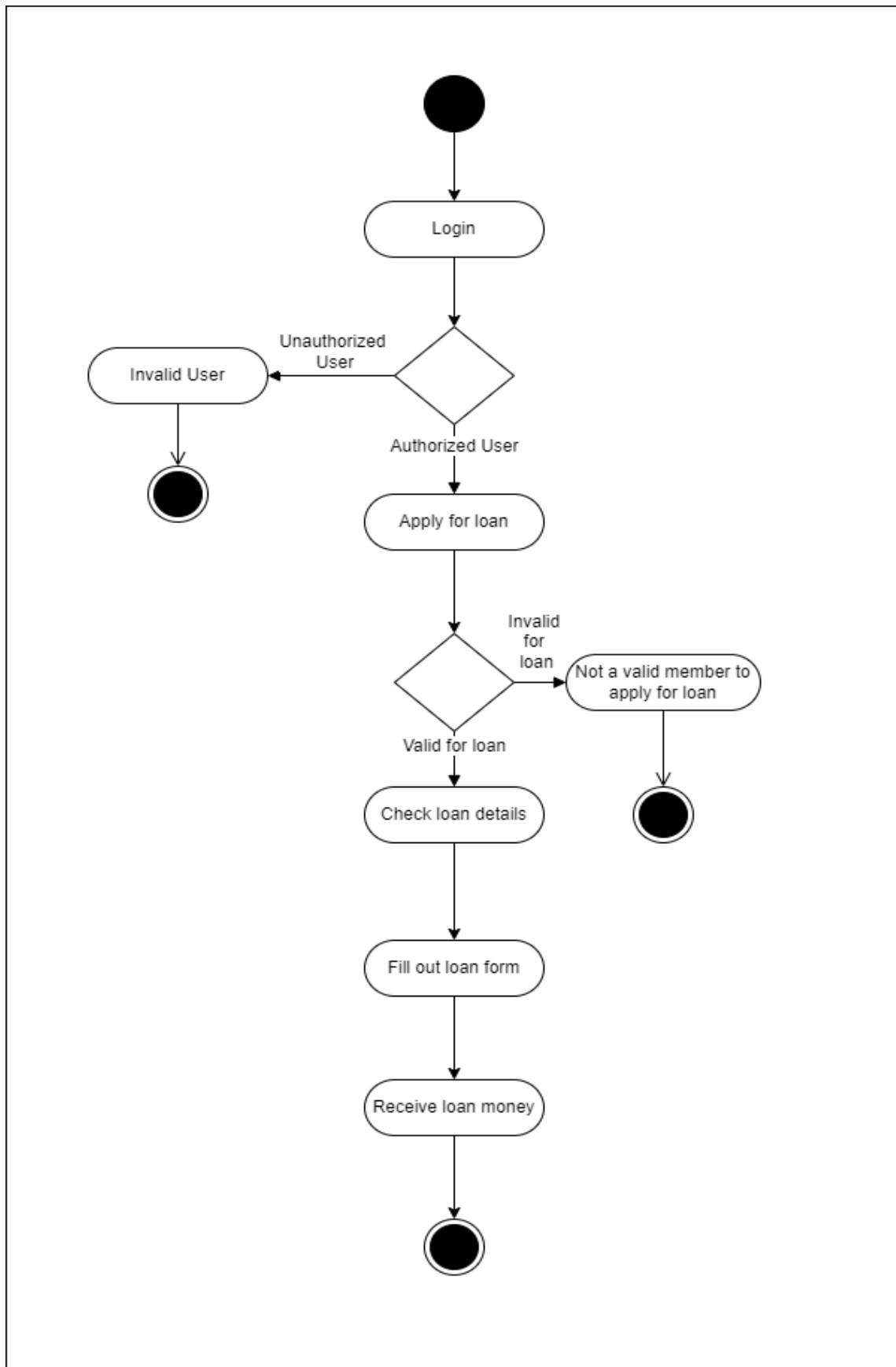


Figure 2.2-2 Activity diagram for Loan Issue

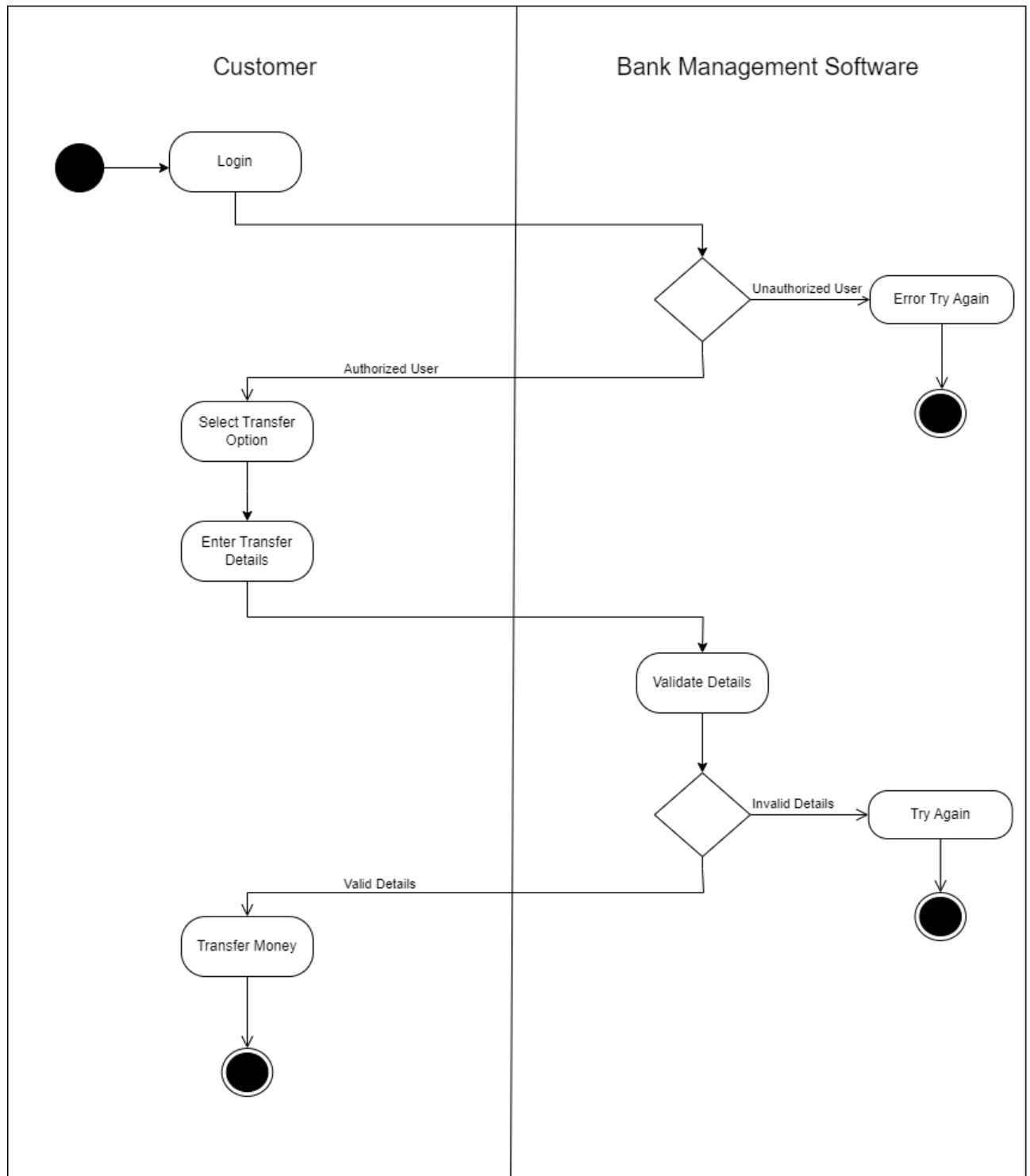


Figure 2.2-3 Swimlane diagram for transaction of money

2.3 Sequence diagram

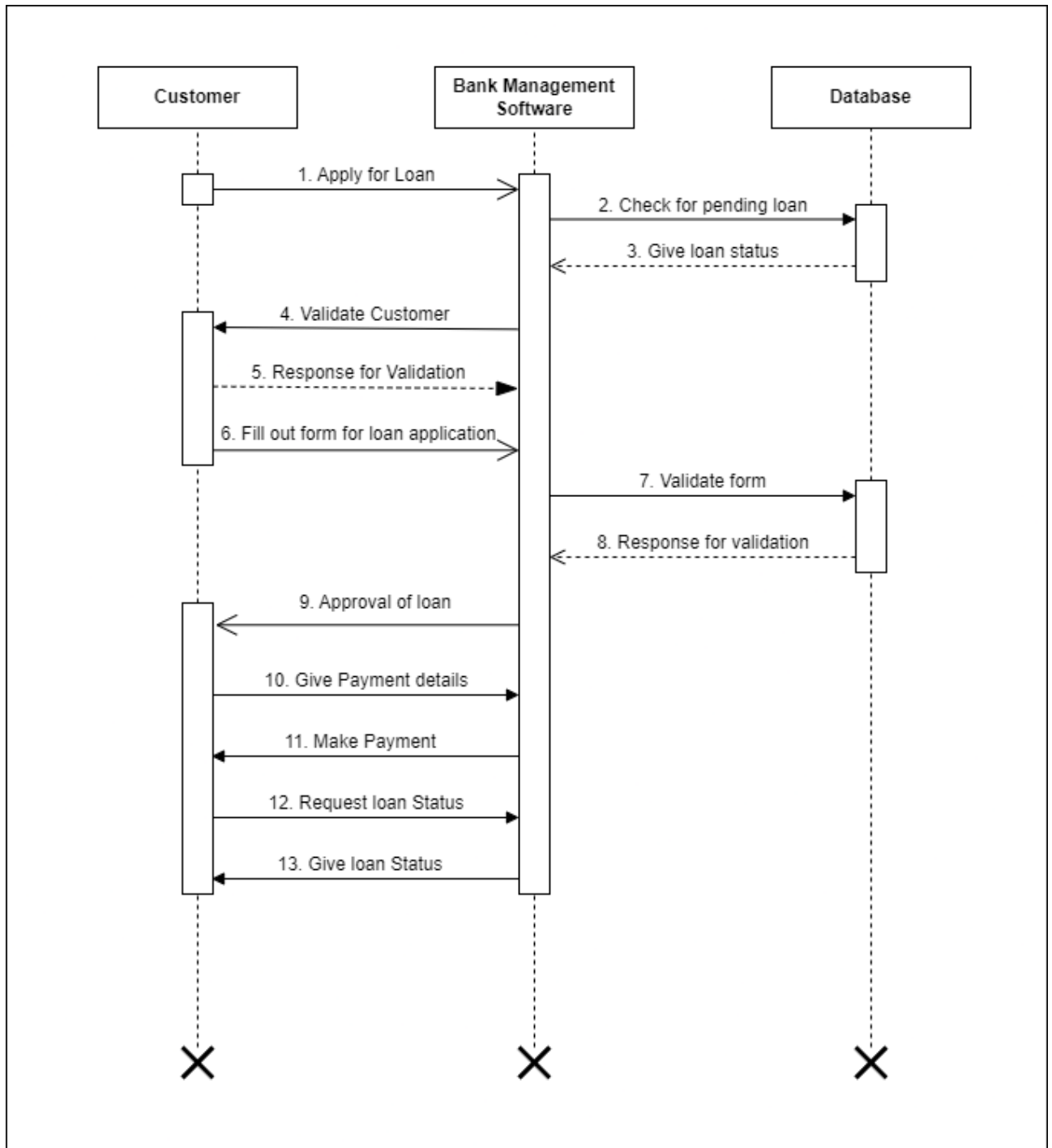


Figure 2.3-1 Sequence diagram for apply for loan

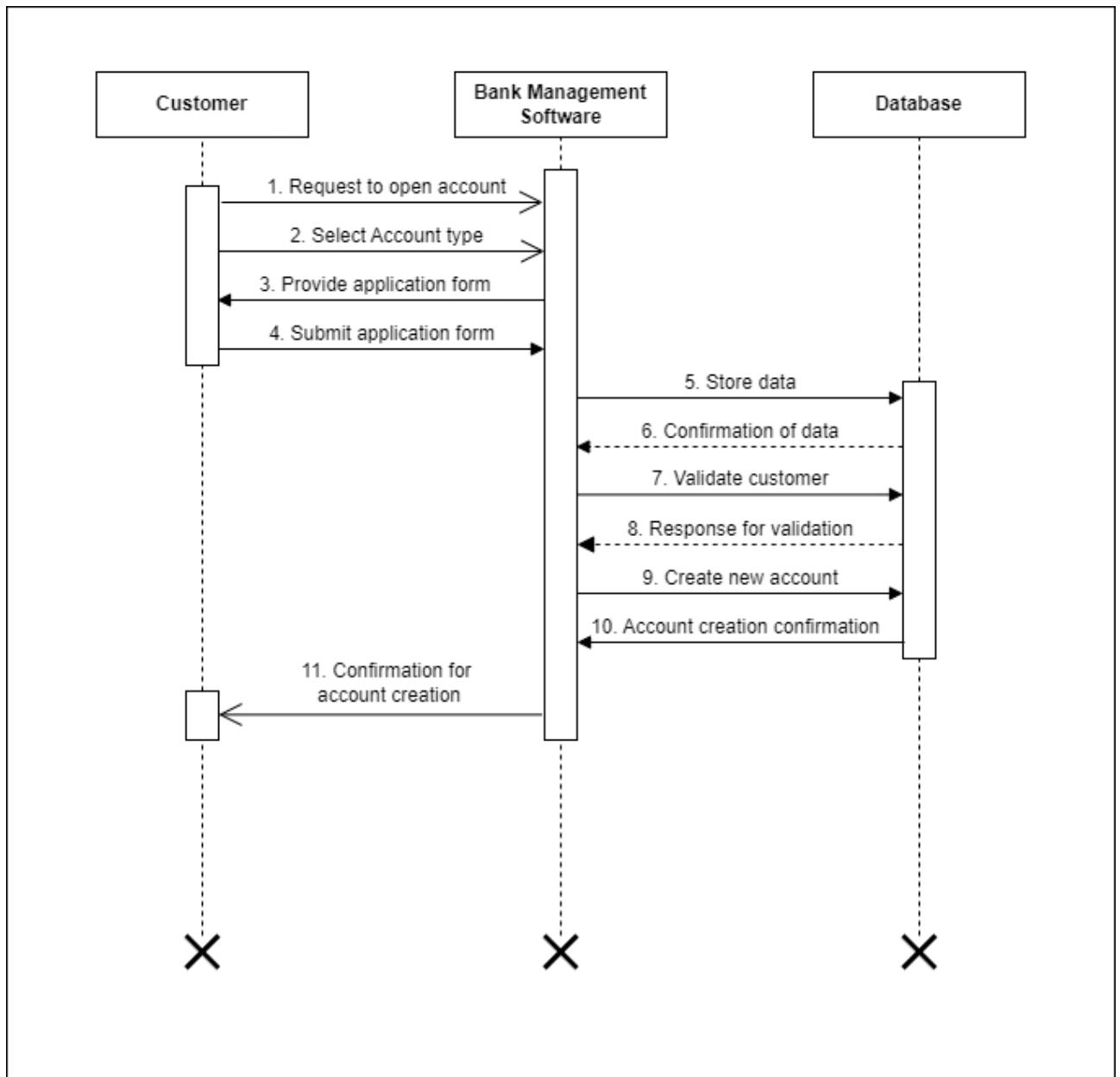


Figure 2.3-2 Sequence diagram for opening an account

2.4 State diagram

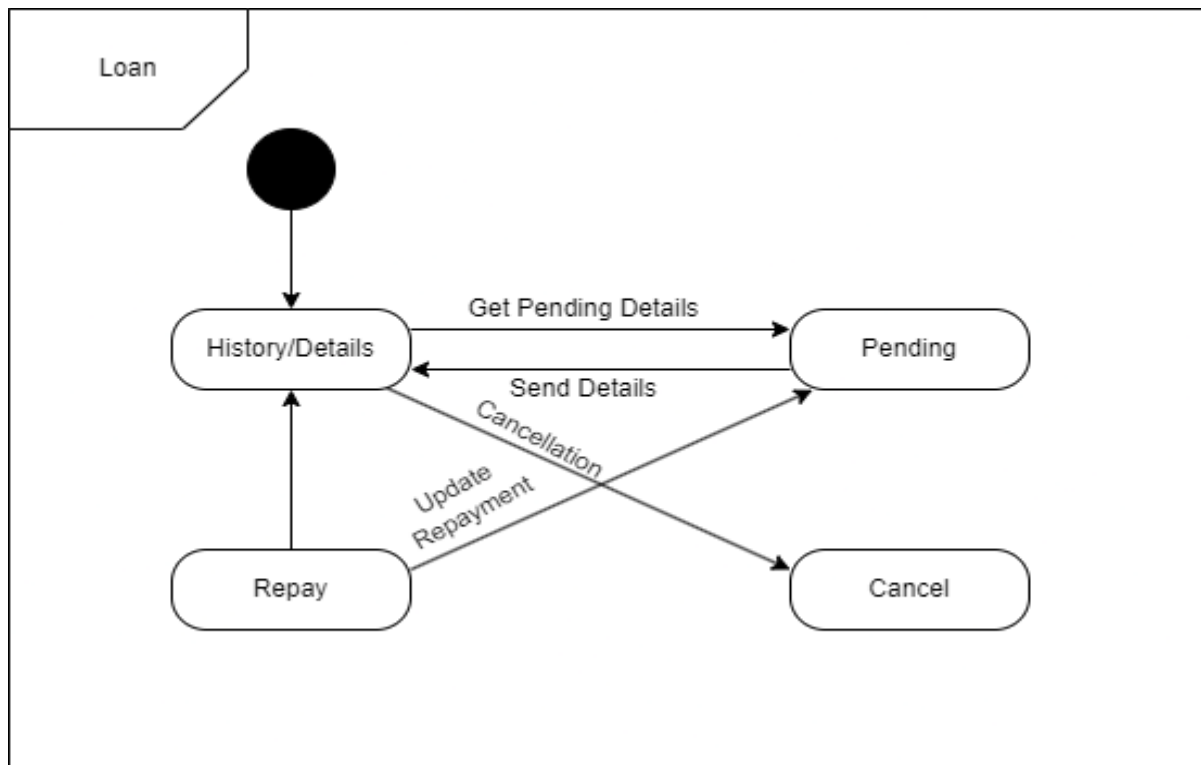


Figure 2.4-1 State diagram of Loan payment

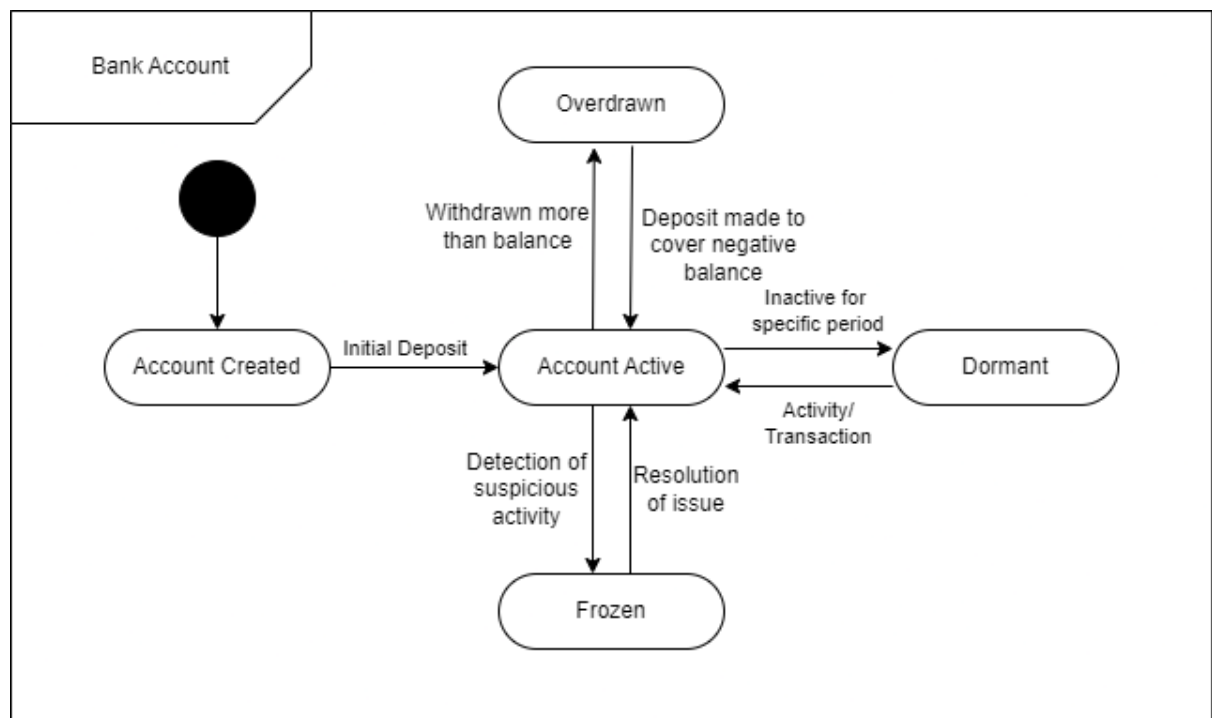


Figure 2.4-2 State diagram for Bank account

2.5 Class diagram

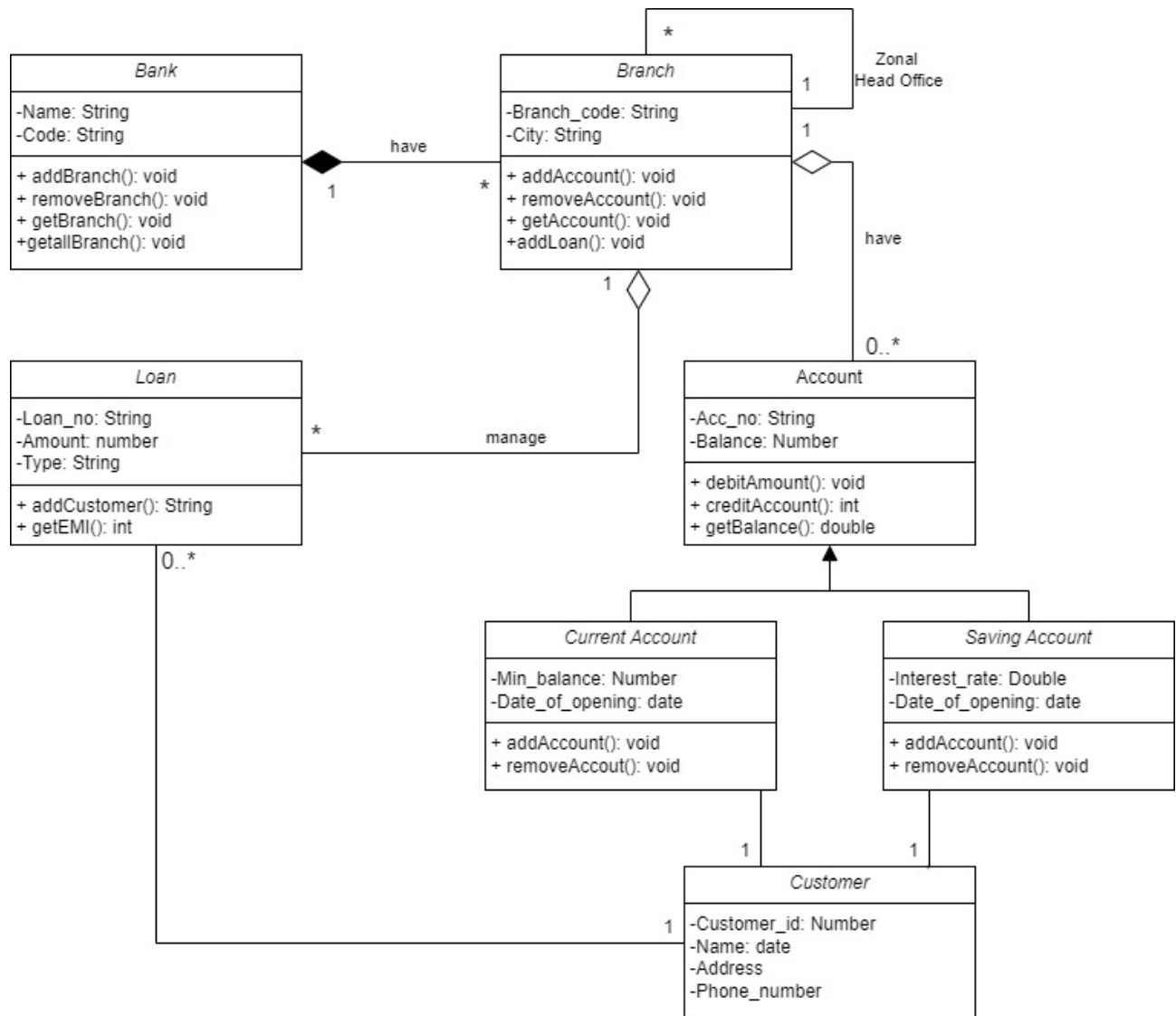


Figure 2.5-1 Class diagram for Bank Management System

2.6 Data flow diagram

2.6.1 Context diagram (level-0)

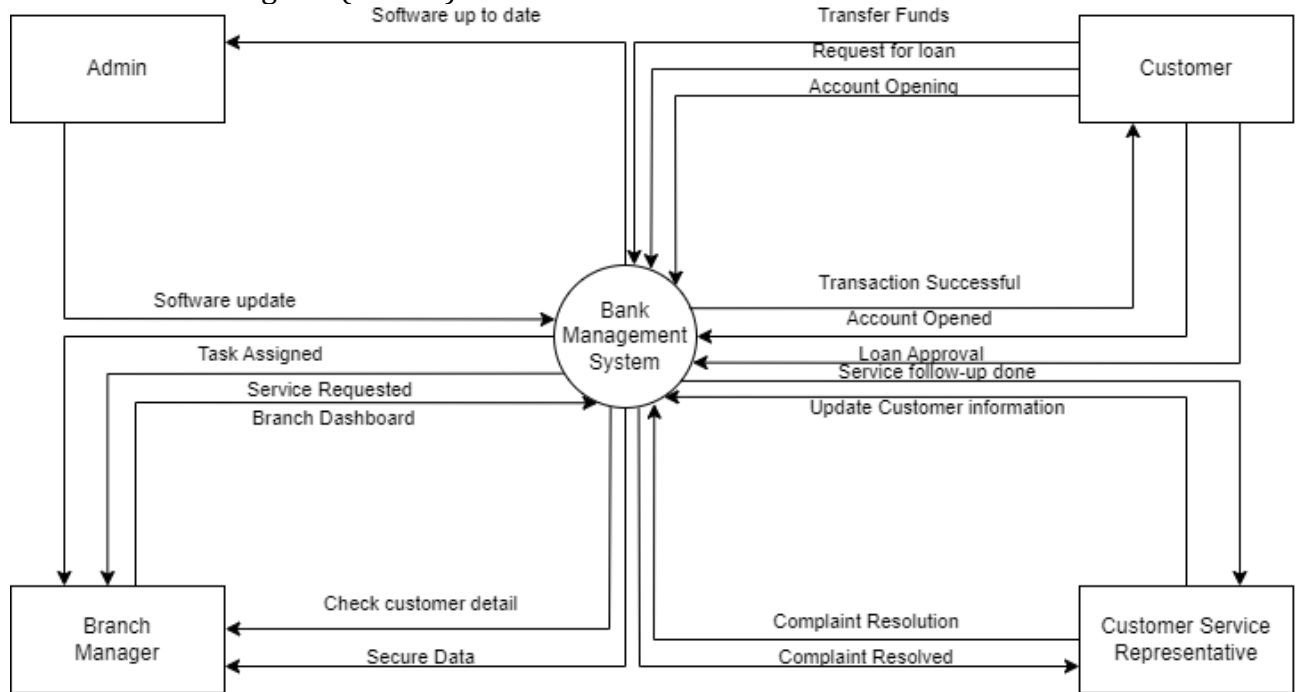


Figure 2.6-1 Context diagram for Bank management system

2.6.2 DFD Level-1

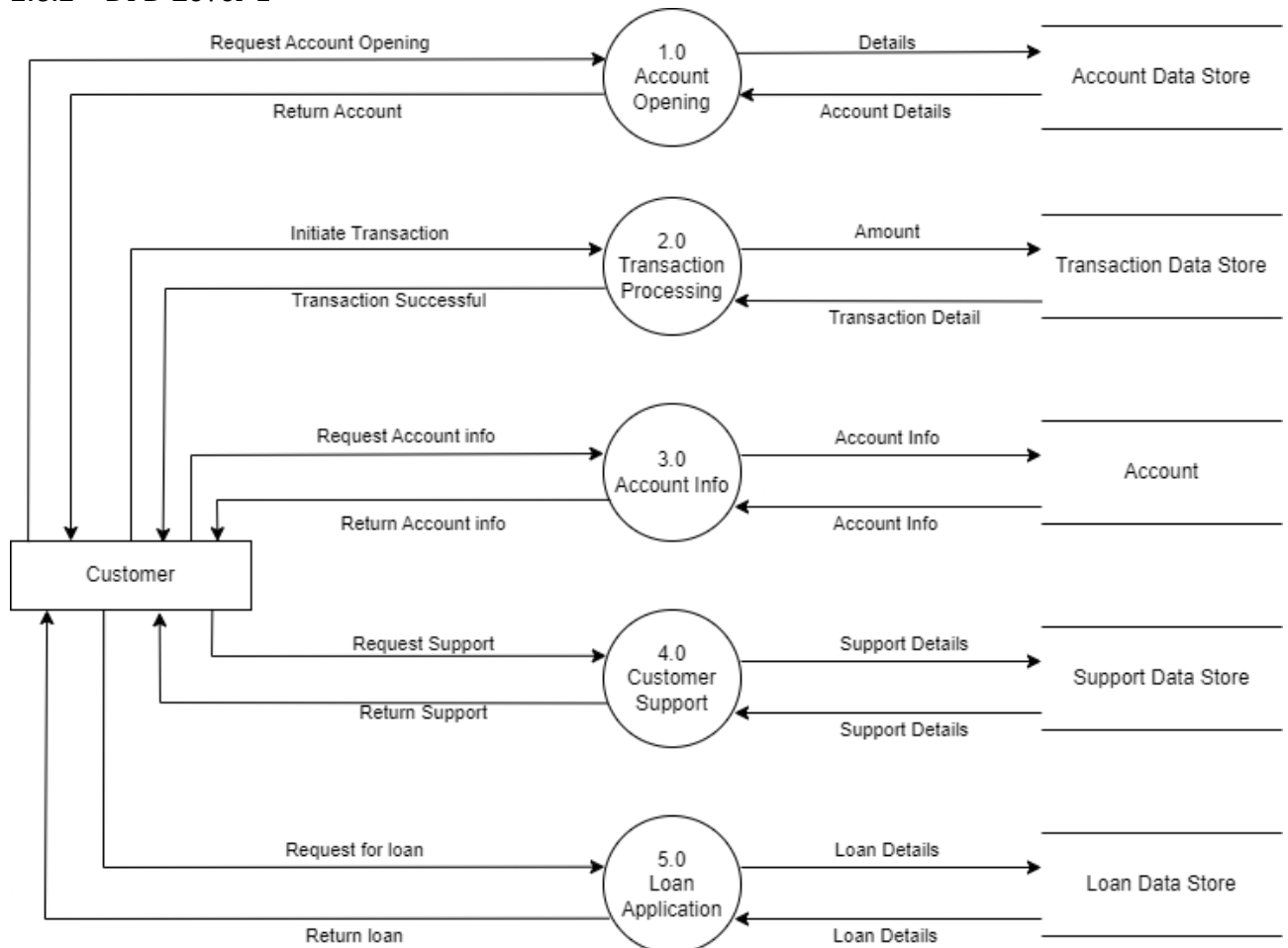


Figure 2.6-2 DFD level-1 for Bank management system

3 External interface requirement (Screens)

3.1 Screen-1: Register Account

Figure 3.1-1 Screen-1: Register Account

Purpose: This form will allow the target end-users to register in the system. To register, the following information will be encoded in the system.

Table 3.1-1 Screen element of Register Account

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Username	Textbox	M	1	Username field should be editable and accept the Username.
2	Email	Textbox	M	1	Email field should be editable and accept the email with proper format.
3	Password	Password	M	1	Password field should be editable and accept the password and display as star or dot.
4	Confirm password	Password	M	1	Confirm Password field should be editable and accept the password and display as star or dot.
6	Register	Button	-----	-----	Register is a button for store the entered data into database.
7	Login Here	Button	-----	-----	Login Here is a button to change the screen from register to login

3.2 Screen-2: Apply for loan

Apply for a Loan

Username:

Address:

Loan Type:

Loan Amount:

Repayment End Date:

Payment Method:
☐ Credit Card ☐ Debit Card

CVV (for card payments):

Submit

Figure 3.2-1 Screen-2: Apply for loan

Purpose: This form will be used by the system's users to access records and features of the system. The users will input the correct combination of their details to apply for loan.

Table 3.2-1 Screen element of Apply for loan


Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Username	Textbox	M	1	Username field should be editable and accept the Username.
2	Address	Textbox	M	1	Address field should be editable and accept the Address.
3	Loan Type	Dropdown	M	1	Loan Type field should be editable and allow the user to select from options.
4	Loan Amount	Number Input	M	1	Loan Amount field should be editable and accept numeric values for the loan amount.
5	Repayment End Date	Checkbox Group	M	1	Repayment End Date field should be editable and allow the user to select a date.
6	Payment Method	Checkbox Group	O	1	A group of checkboxes to select payment methods.
7	CVV	Password	M	1	CVV field should be editable and accept the 3 or 4 digit CVV.
8	Submit	Button	-----	-----	Submit button to send the loan application data to the backend.

3.3 Screen-3: Loan Status

Your Loan Status

Username	JohnDoe123
Address	123 Main Street, City, Country
Loan Type	Home Loan
Loan Amount	\$50,000
Outstanding Amount	\$30,000
Interest Rate	4.5%
Loan Approval Date	2024-05-10
Time to Repay (months)	36 months
Remaining Repayment Period	18 months
Monthly Repayment	\$833.33
Total Paid	\$20,000
Payment Method	Credit Card
Next Payment Due Date	2025-02-01
Last Payment Amount	\$1,500

Loan Progress:



60% of the loan has been paid off.

Important: Your next payment is due on **2025-02-01**. Please ensure the payment is made on time to avoid penalties.

Make a Payment

Download Statement

Back to Dashboard

[Go to Loan History](#)

Figure 3.3-1 Screen-3: Loan Status

Purpose: The purpose of this module is to track and display the current status of a loan application within a banking platform. It provides real-time updates on the progress of the loan, from application submission to approval, disbursement, and repayment.

Table 3.3-1 Screen element of Loan Status

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Username	Textbox	M	1	Displays the username of the user.
2	Address	Textbox	M	1	Displays the address of the user.
3	Loan Type	Text	M	1	Displays the type of loan.
4	Loan Amount	Text	M	1	Displays the total loan amount granted to the user.
5	Outstanding Amount	Text	M	1	Displays the remaining loan balance that is yet to be paid.

6	Interest Rate	Text	M	1	Displays the interest rate applied to the loan.
7	Loan Approval Date	Text	M	1	Displays the date on which the loan was approved.
8	Time to Repay	Text	M	1	Displays the total repayment time in months.
9	Remaining Repayment Period	Text	M	1	Displays the remaining repayment period in months.
10	Monthly Repayment	Text	M	1	Displays the amount that the user needs to repay monthly.
11	Total Paid	Text	M	1	Displays the total amount the user has already paid toward the loan.
12	Payment Method	Text	M	1	Displays the payment method used by the user.
13	Next Payment Due Date	Date	M	1	Displays the next due date for the loan repayment.
14	Last Payment Amount	Text	M	1	Displays the amount of the last payment made by the user.
15	Loan Progress Bar	Progress Bar	M	1	Displays the loan repayment progress visually.
16	Notifications	Text	O	1	Displays important notifications related to the loan status.
17	Make a Payment	Button	-----	-----	Button to redirect the user to a payment gateway.
18	Download Statement	Button	-----	-----	Button to allow the user to download the loan statement.
19	Back to Dashboard	Button	-----	-----	Button to return the user to the dashboard or previous page.
20	Go to Loan History	Link	-----	-----	Link to navigate to the loan history page.

3.4 Screen-4: Credit card application

Swift, Seamless and Secure

Apply today to enjoy fast approvals and tailored rewards that fit your needs

ICICI Bank Sapphire

4005 5332 3456 7899

11/21 10/25

ROHIT KHANNA

Get started with your application

+91 Mobile number

PAN

DD/MM/YYYY

Employment type

Continue

Figure 3.4-1 Screen-4: Credit card application

Purpose: This module is a digital application form for applying for a credit card. The purpose of this module is to collect essential user details

Table 3.4-1 Screen element of Credit card Application

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Mobile number	Textbox	M	1	Mobile number field should be editable and accept only 10-digit number as phone number.
2	PAN	Textbox	M	1	PAN number field should be editable and accept only 10-digit alphanumeric code as PAN number.
3	Birth date	Textbox	M	1	Birth date field should be editable and accept only date in the form of dd/mm/yyyy as Birth date.
4	Employment type	Dropdown	M	1	Employment type of the applicant is chosen. Eg: Salaried, unemployed, etc.
5	Continue	Button	-----	-----	Request Withdrawal button navigates to end of application if valid credentials.

3.5 Screen-5: Loan History

Your Loan History

All Status
Reset Filter

Loan Type	Loan Amount	Status	Date Applied	Actions
Home Loan	\$100,000	Approved	2024-01-15	View Details
Car Loan	\$30,000	Pending	2024-02-10	View Details
Education Loan	\$20,000	Rejected	2024-03-05	View Details
Personal Loan	\$10,000	Approved	2024-04-01	View Details

Load More
Back to Dashboard

[Back to Loan Status](#)

Figure 3.5-1 Screen 5: Loan History

Purpose: This module keeps a record of all past and current loans. It helps users track loan details like amounts, payments, and balances, ensuring transparency and easy monitoring of financial obligations.

Table 3.5-1 Screen element of Loan history

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Loan Type	Text	M	1	Displays the type of loan.
2	Loan Amount	Text	M	1	Displays the loan amount applied for each loan.
3	Status	Text	M	1	Displays the current status of the loan.
4	Date Applied	Date	M	1	Displays the date the loan application was submitted.
5	Actions	Button	-----	-----	Button to view the loan details.
6	Filter Dropdown	Dropdown	-----	1	Allows the user to filter loans by status
7	Reset Filter Button	Button	-----	1	Button to reset the status filter to show all loans.
8	Loan More Button	Button	-----	1	Button to load more loan history entries.
9	Back to Dashboard Button	Button	-----	1	Button to navigate the user back to the dashboard page.
10	Back to Loan Link	Link	-----	1	Link to go back to the Loan Status page.

3.6 Screen-6: Policy Enforcement

The screenshot displays the 'POLICY ENFORCEMENT' interface. It is divided into three main sections, each with a light blue header and a white content area.

- Compliance Checks:** Features a blue button labeled 'CONDUCT COMPLIANCE CHECK' and a large white text area below it with the placeholder text 'Compliance reports will appear here...'.
- Policy Review:** Includes a dropdown menu currently showing 'Anti-Money Laundering' and a green button labeled 'Review Policy'.
- Regulatory Audits:** Contains a date picker field showing 'dd-mm-yyyy' and a red button labeled 'Schedule Audit'.

Figure 3.6-1 Screen 6: Policy Enforcement

Purpose: This allows the Branch Manager to ensure compliance with regulatory standards, review key policies, and schedule audits. It helps maintain operational integrity and adhere to legal requirements within the bank's operations.

Table 3.6-1 Screen Elements of Policy Enforcement

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Compliance Check	Button	-----	-----	A button to conduct compliance checks in the system.
2	Compliance Report	Textarea	M	1	A read-only text area where compliance check results are displayed.
3	Policy Selection	Dropdown	M	1	A dropdown list to select policies for review.
4	Review Policy	Button	-----	-----	A button to review the selected policy.
6	Audit Date	Date Picker	M	1	A date input field to select the audit date.
7	Schedule Audit	Button	-----	-----	A button to schedule an audit for compliance.

3.7 Screen-7: System Updates and Maintenance

System Updates and Maintenance

Software Updates

CHECK FOR UPDATES INSTALL UPDATES

System Health Monitoring

VIEW SYSTEM HEALTH

System health logs will appear here...

Troubleshooting

Describe the issue

DIAGNOSE ISSUE CONTACT SUPPORT

Figure 3.7-1 Screen 7: System Updates and Maintenance

Purpose: This allows administrators to monitor and install software updates, ensuring the system runs efficiently. It also provides tools for system health checks and troubleshooting to maintain optimal performance.

Table 3.7-1 Screen Elements of System Updates and Maintenance

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Check for Updates	Button	-----	-----	A button to check for available system updates.
2	Install Updates	Button	-----	-----	A button to install available software updates.
3	View System Health	Button	-----	-----	A button to display the system's health status.
4	System Health Log	Textarea	M	1	A read-only text area displaying system health logs.
5	Issue Description	Textbox	M	1	A text field to enter a description of system issues.
6	Diagnose Issue	Button	-----	-----	A button to diagnose system issues automatically.
7	Contact Support	Button	-----	-----	A button to contact technical support for troubleshooting.

3.8 Screen-8: Customer Service Representative Tools

The screenshot displays the 'Communication Tools' interface, which is organized into three distinct sections, each with a title and a set of input fields followed by a submit button.

- Send Notification:** This section includes a 'Customer Email' input field, a larger text area for 'Enter notification message', and a teal 'SEND NOTIFICATION' button.
- Schedule Appointment:** This section includes a 'Customer Name' input field, a date input field with a calendar icon, a larger text area for 'Enter appointment details', and a teal 'SCHEDULE APPOINTMENT' button.
- Record Interaction Notes:** This section includes a 'Customer Name' input field, a larger text area for 'Enter interaction notes', and a teal 'SAVE NOTES' button.

Figure 3.8-1 Screen 8: Customer Service Representative Tools

Purpose: This enables CSR to send notifications, schedule appointments, and record interaction notes. It helps streamline customer communication and enhances service management within the bank.

Table 3.8-1 Screen Elements of Customer Service Representative Tools

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Customer Email	Textbox	M	1	Input field for entering the customer's email address in the Send Notification section.

2	Enter notification message	Textarea	M	1	Text area for typing the notification message.
3	Send Notification	Button	-----	-----	Button to send the notification.
4	Customer Name (Appointment)	Textbox	M	1	Input field for entering the customer's name in the Schedule Appointment section.
5	Date and Time	Datepicker	M	1	Input field for selecting the appointment date and time, with a calendar icon.
6	Enter appointment details	Textarea	M	1	Text area for typing the appointment details.
7	Schedule Appointment	Button	-----	-----	Button to schedule the appointment.
8	Customer Name (Interaction)	Textbox	M	1	Input field for entering the customer's name in the Record Interaction Notes section.
9	Enter interaction notes	Textarea	M	1	Text area for typing the interaction notes.
10	Save Notes	Button	-----	-----	Button to save the notes.

3.9 Screen-9: Account Statement

Account Statement

Select Account: 123456 - Savings dd-mm-yyyy to dd-mm-yyyy

FILTER Search transactions... **SEARCH**

DATE	DESCRIPTION	TYPE	AMOUNT	BALANCE
2025-01-01	Deposit	Credit	\$1,000.00	\$5,000.00
2025-01-05	Withdrawal	Debit	\$500.00	\$4,500.00

DOWNLOAD PDF **DOWNLOAD CSV** **DOWNLOAD EXCEL**

Figure 3.9-1 Screen 9: Account Statement

Purpose: This allows users to view and filter their transaction history for specific accounts over a selected date range. It also provides options to search for transactions and download the statement in various formats like PDF, CSV, or Excel.

Table 3.9-1 Screen Elements of Account Statement

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Select Account	Dropdown	M	1	Dropdown to select the account number for which the statement is required.
2	Date Range (From)	Checkbox Group	M	1	Date picker to select the starting date of the statement period.
3	Date Range (To)	Checkbox Group	M	1	Date picker to select the ending date of the statement period.
4	Filter	Button	-----	-----	Button to apply the selected filters and display the statement.
5	Search Transactions	Textbox	O	1	Input field to search for specific transactions.
6	Search	Button	-----	-----	Button to initiate the search for transactions based on the input.
7	Download PDF	Button	-----	-----	Button to download the statement in PDF format.
8	Download CSV	Button	-----	-----	Button to download the statement in CSV format.
9	Download Excel	Button	-----	-----	Button to download the statement in Excel format.

3.10 Screen-10: Customer Support

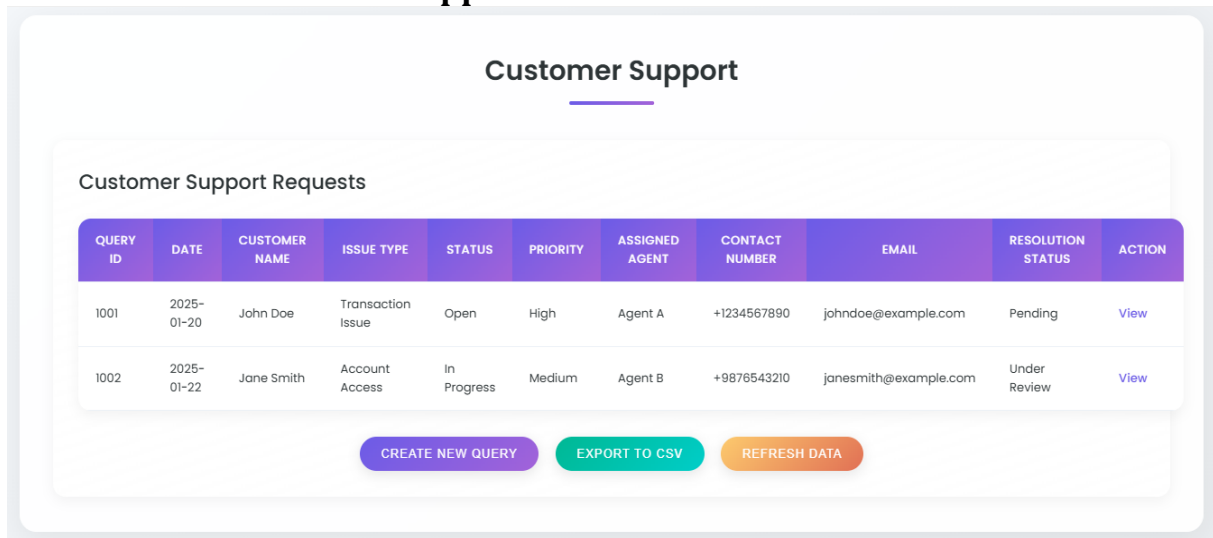


Figure 3.10-1 Screen 10: Customer Support

Purpose: This displays and manages customer support queries, including details like issue type, status, priority, assigned agent, and resolution progress. It also provides options to create new queries, export data, and refresh the list.

Table 3.10-1 Screen Elements of Customer Support

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Query ID	Textbox	M	1	Field to enter or display the unique query ID.
2	Date	Checkbox Group	M	1	Field to select or display the date of the query.
3	Customer Name	Textbox	M	1	Field to enter or display the customer's name.
4	Issue Type	Dropdown	M	1	Field to select or display the type of issue from predefined options.
5	Search Transactions	Textbox	M	1	Field to select or display the current status of the query.
6	Priority	Dropdown	M	1	Field to select or display the priority level of the query.
7	Assigned Agent	Dropdown	M	1	Field to select or display the agent assigned to the query.
8	Contact Number	Textbox	M	1	Field to enter or display the customer's contact number.
9	Email	Textbox	M	1	Field to enter or display the customer's email address.
10	Resolution Status	Dropdown	O	1	Field to select or display the resolution status of the query.
11	Action	Button	-----	-----	Button to perform actions like viewing, editing, or closing the query.
12	Create New Query	Button	-----	-----	Button to create a new customer query.
13	Export to CSV	Button	-----	-----	Button to export the query details to a CSV file.
14	Refresh Data	Button	-----	-----	Button to refresh the displayed data in the dashboard.

4 Database design

4.1 List of Tables

- Account
- Loan
- Transaction
- Beneficiary
- Customer
- Employee

Table 4.1-1 Table: Account

Column	Data Type	Null	Keys & Constrains	Default Value & Description
AccountID	int	NN	PK (Auto Increment)	
AccountName	varchar(100)	NN		
AccountType	varchar(100)	AN		
Balance	int	NN		
CustomerID	int	NN	FK	Reference of Customer Table

Table 4.1-2 Table: Loan

Column	Data Type	Null	Keys & Constrains	Default Value & Description
LoanID	int	NN	PK (Auto Increment)	
AccountID	int	NN	FK	Reference of Account Table
Type	varchar(100)	AN		
LoanAmount	int	NN		
InterestRate	decimal(10,2)	NN		
Term	Int	NN		
IssuedBy	varchar	NN	FK	Reference of Customer Table

Table 4.1-3 Table: Transaction

Column	Data Type	Null	Keys & Constrains	Default Value & Description
TransactionID	int	NN	PK (Auto Increment)	
AccountID	int	NN	FK	Reference of Account Table
Type	varchar(100)	AN		
Amount	Int	NN		
Timestamp	DateTime	AN		

Table 4.1-4 Table: Beneficiary

Column	Data Type	Null	Keys & Constrains	Default Value & Description
BeneficiaryID	int	NN	PK (Auto Increment)	
CustomerID	int	NN	FK	Reference of Customer Table
Name	varchar(100)	AN		
AccountNumber	int	NN		
BankDetails	varchar(100)	NN	FK	Reference of Account Table

Table 4.1-5 Table: Customer

Column	Data Type	Null	Keys & Constrains	Default Value & Description
CustomerID	int	NN	PK (Auto Increment)	
CustomerName	varchar(100)	AN		
Gender	varchar(100)	AN		
DOB	DateTime	AN		
Contact	number(10,0)	AN		
Username	varchar(100)	NN		
Password	Vachar(100)	NN		
Bank Details	Vachar(100)	NN	FK	Reference of Account Table

Table 4.1-6 Table: Employee

Column	Data Type	Null	Keys & Constrains	Default Value & Description
EmployeeID	int	NN	PK (Auto Increment)	
EmployeeName	varchar(100)	AN		
Gender	varchar(100)	AN		
DOB	DateTime	AN		
Contact	number(10,0)	AN		
Salary	int	AN		
Bank Details	Vachar(100)	NN	FK	Reference of Account Table

5 Stories and Scenario

5.1 Story-1: New Account opening

Story # S1	: As a Customer Service Representative, I want to open a new account for a customer. So that the customer can access banking services such as deposit, withdrawals and online transactions.
Priority	: High
Estimate	: XL
Reason	: Opening a new account is essential for customer onboarding and facilitates banking operations.

5.1.1 Scenario# S1.1

Scenario# S1.1	: Opening a New Account with Valid Information
Prerequisite	: Customer Service Representative is logged into the Bank Management System.
Acceptance Criteria	: Given: The Customer Service Representative is on the "New Account" page, and the customer provides valid details such as full name, address, date of birth, identification proof, and contact information. When: The Customer Service Representative selects "Open New Account" and enters all the valid customer details. Then the system successfully creates the new account, assigns an account number, and sends a confirmation message to the Customer Service Representative with the account details.

5.1.2 Scenario# S1.2

Scenario# S1.2	: Opening a New Account with Invalid Information.
Prerequisite	: Customer Service Representative is logged into the Bank Management System.
Acceptance Criteria	: Given: The Customer Service Representative is on the "New Account" page. When: The Customer Service Representative enters incomplete or invalid customer details such as missing identification proof or incorrect address. Then the system displays error messages for the incorrect or missing information and the book is not added to the catalogue.

5.2 Story-2: Fund Transfer Between Accounts

Story # S2	: As a Customer, I want to transfer funds between my accounts within the bank So that I can manage my funds conveniently.
Priority	: High
Estimate	: L
Reason	: Fund transfer functionality is a basic service offered by the bank for easy management of customers' finances.

5.2.1 Scenario# S2.1

Scenario# S1.1	: Transferring Funds Successfully
Prerequisite	: Customer is logged into the Bank Management System and has sufficient balance in the sending account.
Acceptance Criteria	: Given: The Customer is on the "Fund Transfer" page and enters valid details such as the source account, destination account, transfer amount, and transaction PIN. When: The Customer selects "Transfer" and confirms the transaction details. Then the system successfully transfers the funds between the accounts and displays a confirmation message with transaction details.

5.2.2 Scenario# S2.2

Scenario# S1.2	: Insufficient Funds for Transfer
Prerequisite	: Customer is logged into the Bank Management System and has an insufficient balance in the sending account.
Acceptance Criteria	: Given: The Customer is on the "Fund Transfer" page and enters valid details such as source account, destination account, and transfer amount. When: The Customer attempts to transfer an amount that exceeds the available balance in the source account. Then the system displays an error message indicating "Insufficient Funds," and the transfer is not processed.

5.3 Story-3: Loan Application Process

Story # S3	: As Customer Service Representative, I want to process a loan application for a customer So that the customer can receive the loan if they meet the eligibility criteria.
Priority	: High
Estimate	: XL
Reason	: The loan application process is crucial for offering credit services to customers and helping them meet their financial needs.

5.3.1 Scenario# S3.1

Scenario# S1.1	: Successful Loan Application Submission
Prerequisite	: Customer Service Representative is logged into the Bank Management System, and the customer has provided all necessary loan application documents.
Acceptance Criteria	<p>Given: The Customer Service Representative is on the "Loan Application" page, and the customer has provided all required details, including income proof, collateral details, and application form.</p> <p>When: The Customer Service Representative enters the application details and submits the loan application.</p> <p>Then the system successfully processes the loan application, notifies the Customer Service Representative about the application status, and assigns a loan application number.</p>

5.3.2 Scenario# S3.2

Scenario# S1.2	: Loan Application with Missing Documents
Prerequisite	: Customer Service Representative is logged into the Bank Management System.
Acceptance Criteria	<p>Given: The Customer Service Representative is on the "Loan Application" page, and the customer has submitted an incomplete set of documents.</p> <p>When: The Customer Service Representative tries to submit the loan application without all required documents, such as income proof or property documents.</p> <p>Then the system displays an error message indicating missing documents, and the loan application is not submitted until all required documents are provided.</p>

6 Test cases

Project Name:	Bank Management System	Test Designed by:	P. U. Jadeja
Module Name:	Apply for loan	Test Designed date:	01-10-2023
Release Version:	1.0	Test Executed by:	R. B. Gondaliya
		Test Execution date:	

Pre-condition: Web application should be accessible

Test Case ID	Test Title	Test Type	Description	Test Case ID
TC_001	Apply for Loan with valid details	Functional	Verify that the user is able to successfully apply for a loan by filling in all valid details.	TC_001
TC_002	Apply for Loan with missing required fields.	Functional	Login to Bank management system web application through missing required fields.	TC_002

Test Case Title	Apply for Loan with valid details
Test Type	Functional
Test Priority	High
Pre-condition	Web application should be accessible

Test Step	Test Case Description	Expected Result	Actual Result	Status	Comment	Data	BUG ID
1	Open the loan application form	The loan application page should load successfully	Page launched successfully	Pass		https://accounts.google.com/ServiceLogin	
2	Enter valid Username in username field	Username field should be editable and accept the Username	Username input accepted	Pass		Username: Rbgondaliya@gmail.com	
3	Enter valid address in address field	Address field should be editable and accept	Address input displayed in dot and accepted	pass		Password: rbgondaliya	
4	Select a valid loan type from the dropdown	Loan type should be selectable	Loan type accepted	Pass		Loan Type: Home Loan	

5	Enter a valid Loan amount	Loan amount should be accepted in numeric format	Amount entered successfully	Pass		Loan Amount: 500000 Rs.	
6	Enter a valid repayment end date	Date field should accept only valid future dates	Date selected successfully	Pass		Repayment Date: 25-12-2026	
7	Select payment method (Credit/Debit Card)	Payment method should be selectable	Payment Method selected	Pass		Payment Method: Credit Card	
8	Enter valid CVV (if applicable)	CVV field should accept valid input	CVV accepted	Pass		CVV: 123	
9	Click on Submit button	Loan application should be successfully submitted	Loan submitted Successfully	Pass			

Test Case Title	Apply for Loan with missing required fields.
Test Type	Functional
Test Priority	Medium
Pre-condition	Web application should be accessible

Test Step	Test Case Description	Expected Result	Actual Result	Status	Comment	Data	Bug ID
1	Leave all fields empty and click Submit	System should display validation error messages	Validation errors displayed	Pass			
2	Enter only the username and click Submit	System should prompt required field errors for	Validation errors displayed	Pass		Username: Rbgondaliya123	

		other fields					
3	Enter all fields but leave loan amount empty	System should prompt required field error for loan amount	Validation error for loan amount displayed	Pass		Loan Amount: (empty)	
4	Enter an invalid repayment date (past date)	System should show an error message for invalid date selection	Error message displayed	Pass		Repayment Date: 01-01-2020	

Project Name:	Bank Management System	Test Designed by:	P. U. Jadeja
Module Name:	Credit card application	Test Designed date:	01-10-2023
Release Version:	1.0	Test Executed by:	R. B. Gondaliya
		Test Execution date:	

Pre-condition: Web application should be accessible					
Test Case ID	Test Title		Test Type	Description	Test Case ID
TC_001	Credit Card Application with Valid Details		Functional	Verify that the user can successfully submit the credit card application form by filling in all valid details.	TC_001
TC_002	Credit Card Application with Missing Mandatory Fields		Functional	Verify that the form does not allow submission when mandatory fields are left empty.	TC_002

Test Case Title	Credit Card Application with Valid Details
Test Type	Functional
Test Priority	High
Pre-condition	Web application should be accessible

Test Step	Test Case Description	Expected Result	Actual Result	Status	Comment	Data	BUG ID
1	Open the credit card application form	The form should load successfully without any UI glitches	Page loaded successfully	Pass		https://buy.icici.bank.com/cap-v2/getting-started	
2	Enter a valid mobile number	Mobile number field should accept valid 10-digit input	Input accepted	Pass		Mobile Number: 9876543210	
3	Enter a valid PAN number	PAN field should accept valid alphanumeric format	Input accepted	pass		PAN: ABCDE1234F	
4	Enter a valid birth date	Date field should accept date in DD/MM/YYYY format	Input accepted	Pass		DOB: 15/08/1990	

5	Select an employment type from the dropdown	Dropdown should allow selection and display the selected value	Selected successfully	Pass		Employment Type: Salaried	
6	Click on the "Continue" button	User should proceed to the next step of the application process	Navigated to next step	Pass			

Test Case Title	Credit Card Application with Missing Mandatory Fields
Test Type	Functional
Test Priority	Medium
Pre-condition	Web application should be accessible

Test Step	Test Case Description	Expected Result	Actual Result	Status	Comment	Data	Bug ID
1	Open the credit card application form	The form should load successfully	Form loaded without issues	Pass		URL:	
2	Leave all fields blank and click "Continue"	The form should display validation error messages for required fields	Validation errors displayed	Pass		No data entered	
3	Enter only the mobile number and click "Continue"	The form should prompt errors for other mandatory fields	Validation errors displayed	Pass		Mobile Number: 9876543210, Other fields: (empty)	
4	Enter an invalid PAN format (e.g., 12345ABCDE)	The form should display an error message indicating an invalid	Error message displayed	Pass		PAN: 12345ABCDE	

		PAN format					
5	Select employment type but leave other fields blank and click "Continue"	The form should still display errors for missing fields	Validation errors displayed	Pass		Employment Type: Self-Employed, Other fields: (empty)	

7 References

- http://www.w3schools.com/html/html_intro.asp
- <https://www.w3schools.com/php/default.asp>
- <https://www.javatpoint.com/uml>

demo

GET get

`https://api.openweathermap.org/data/3.0/onecall?lat=33.44&lon=-94.04&exclude={part}&appid={f9e3bae94119efe596f311b0d8bb1057}`

StartFragment

Get essential weather data, short-term and long-term forecasts and aggregated weather data is easy with our OpenWeather **One Call API 3.0**. This product designed to ensure **easy migration from the Dark Sky API**.

One Call API 3.0 contains 4 endpoints and provides access to various data:

- and government weather alerts
 - minute forecast for 1 hour
 - hourly forecast for 48 hours
 - daily forecast for 8 days
- **Weather data for any timestamp** for 46+ years historical archive and 4 days ahead forecast
- **Daily aggregation** of weather data for 46+ years archive and 1.5 years ahead forecast
- **Weather overview** with a human-readable weather summary for today and tomorrow's forecast, utilizing OpenWeather AI technologies

One Call API 3.0 is based on the proprietary **OpenWeather Model** and is updated every 10 minutes. Thus, in order to receive the most accurate and up-to-date weather data, we recommend you request One Call API 3.0 every 10 minutes.

EndFragment

PARAMS

lat	33.44
	Latitude, decimal (-90; 90). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use our Geocoding API
lon	-94.04
	Longitude, decimal (-180; 180). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use our Geocoding API

exclude

{part}

By using this parameter you can exclude some parts of the weather data from the API response. It should be a comma-delimited list (without spaces).

appid

{f9e3bae94119efe596f311b0d8bb1057}

Your unique API key (you can always find it on your account page under the "API key" tab)

POST post

`https://api.openweathermap.org/data/3.0/onecall?lat=33.44&lon=-94.04&exclude={part}&appid={f9e3bae94119efe596f311b0d8bb1057}`

StartFragment

Get essential weather data, short-term and long-term forecasts and aggregated weather data is easy with our OpenWeather **One Call API 3.0**. This product designed to ensure [easy migration from the Dark Sky API](#).

One Call API 3.0 contains 4 endpoints and provides access to various data:

- and government weather alerts
 - minute forecast for 1 hour
 - hourly forecast for 48 hours
 - daily forecast for 8 days
- **Weather data for any timestamp** for 46+ years historical archive and 4 days ahead forecast
- **Daily aggregation** of weather data for 46+ years archive and 1.5 years ahead forecast
- **Weather overview** with a human-readable weather summary for today and tomorrow's forecast, utilizing OpenWeather AI technologies

One Call API 3.0 is based on the proprietary **OpenWeather Model** and is updated every 10 minutes. Thus, in order to receive the most accurate and up-to-date weather data, we recommend you request One Call API 3.0 every 10 minutes.

EndFragment

PARAMS

lat

33.44

Latitude, decimal (-90; 90). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use our [Geocoding API](#)

lon

-94.04

Longitude, decimal (-180; 180). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please

city names and zip-codes to geo coordinates and the other way around, please use our Geocoding API

exclude {part}

By using this parameter you can exclude some parts of the weather data from the API response. It should be a comma-delimited list (without spaces).

appid {f9e3bae94119efe596f311b0d8bb1057}

Your unique API key (you can always find it on your account page under the "API key" tab)

PUT Put

`https://api.openweathermap.org/data/3.0/onecall?lat=33.44&lon=-94.04&exclude={part}&appid={f9e3bae94119efe596f311b0d8bb1057}`

StartFragment

Get essential weather data, short-term and long-term forecasts and aggregated weather data is easy with our OpenWeather **One Call API 3.0**. This product designed to ensure **easy migration from the Dark Sky API**.

One Call API 3.0 contains 4 endpoints and provides access to various data:

- and government weather alerts
 - minute forecast for 1 hour
 - hourly forecast for 48 hours
 - daily forecast for 8 days
- **Weather data for any timestamp** for 46+ years historical archive and 4 days ahead forecast
- **Daily aggregation** of weather data for 46+ years archive and 1.5 years ahead forecast
- **Weather overview** with a human-readable weather summary for today and tomorrow's forecast, utilizing OpenWeather AI technologies

One Call API 3.0 is based on the proprietary **OpenWeather Model** and is updated every 10 minutes. Thus, in order to receive the most accurate and up-to-date weather data, we recommend you request One Call API 3.0 every 10 minutes.

EndFragment

PARAMS

lat 33.44

Latitude, decimal (-90; 90). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use our Geocoding API

lon -94.04

Longitude, decimal (-180; 180). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please

use our Geocoding API

exclude

{part}

By using this parameter you can exclude some parts of the weather data from the API response. It should be a comma-delimited list (without spaces).

appid

{f9e3bae94119efe596f311b0d8bb1057}

Your unique API key (you can always find it on your account page under the "API key" tab)

PATCH Patch

`https://api.openweathermap.org/data/3.0/onecall?lat=33.44&lon=-94.04&exclude={part}&appid={f9e3bae94119efe596f311b0d8bb1057}`

StartFragment

Get essential weather data, short-term and long-term forecasts and aggregated weather data is easy with our OpenWeather **One Call API 3.0**. This product designed to ensure [easy migration from the Dark Sky API](#).

One Call API 3.0 contains 4 endpoints and provides access to various data:

- and government weather alerts
 - minute forecast for 1 hour
 - hourly forecast for 48 hours
 - daily forecast for 8 days
- **Weather data for any timestamp** for 46+ years historical archive and 4 days ahead forecast
- **Daily aggregation** of weather data for 46+ years archive and 1.5 years ahead forecast
- **Weather overview** with a human-readable weather summary for today and tomorrow's forecast, utilizing OpenWeather AI technologies

One Call API 3.0 is based on the proprietary [OpenWeather Model](#) and is updated every 10 minutes. Thus, in order to receive the most accurate and up-to-date weather data, we recommend you request One Call API 3.0 every 10 minutes.

EndFragment

PARAMS

lat

33.44

Latitude, decimal (-90; 90). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use our Geocoding API

lon	-94.04
	Longitude, decimal (-180; 180). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use our Geocoding API
exclude	{part}
	By using this parameter you can exclude some parts of the weather data from the API response. It should be a comma-delimited list (without spaces).
appid	{f9e3bae94119efe596f311b0d8bb1057}
	Your unique API key (you can always find it on your account page under the "API key" tab)

DELETE Delete

`https://api.openweathermap.org/data/3.0/onecall?lat=33.44&lon=-94.04&exclude={part}&appid={f9e3bae94119efe596f311b0d8bb1057}`

StartFragment

Get essential weather data, short-term and long-term forecasts and aggregated weather data is easy with our OpenWeather **One Call API 3.0**. This product designed to ensure **easy migration from the Dark Sky API**.

One Call API 3.0 contains 4 endpoints and provides access to various data:

- and government weather alerts
 - minute forecast for 1 hour
 - hourly forecast for 48 hours
 - daily forecast for 8 days
- **Weather data for any timestamp** for 46+ years historical archive and 4 days ahead forecast
- **Daily aggregation** of weather data for 46+ years archive and 1.5 years ahead forecast
- **Weather overview** with a human-readable weather summary for today and tomorrow's forecast, utilizing OpenWeather AI technologies

One Call API 3.0 is based on the proprietary **OpenWeather Model** and is updated every 10 minutes. Thus, in order to receive the most accurate and up-to-date weather data, we recommend you request One Call API 3.0 every 10 minutes.

EndFragment

PARAMS

lat	33.44
	Latitude, decimal (-90; 90). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use

names and zip-codes to geo coordinates and the other way around, please use our Geocoding API

lon

-94.04

Longitude, decimal (-180; 180). If you need the geocoder to automatic convert city names and zip-codes to geo coordinates and the other way around, please use our Geocoding API

exclude

{part}

By using this parameter you can exclude some parts of the weather data from the API response. It should be a comma-delimited list (without spaces).

appid

{f9e3bae94119efe596f311b0d8bb1057}

Your unique API key (you can always find it on your account page under the "API key" tab)