



Darshan University

A Project Report on

“Loan Management System”

Under the subject

Software Engineering (2301CS405)

B. Tech, Semester – IV

Computer Science & Engineering Department

Submitted By

Student Name: Mohil Parmar

Enrollment No.: 23010101192

Academic Year (2024-2025)

Internal Guide

Dean-DIET

Prof. R. B. Gondaliya

Dr. Gopi Sanghani

Darshan University

Darshan University



**Computer Science & Engineering
Department
Darshan University**

DECLARATION

We hereby declare that the SRS, submitted along with the **Software Engineering (2301CS405)** for entitled “**Loan Management System**” submitted in partial fulfilment for the Semester-4 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.

Mohil Parmar

Student’s Signature

Date: _____



**Computer Science & Engineering
Department**
Darshan University

CERTIFICATE

This is to certify that the SRS on “**Loan Management System**” has been satisfactorily prepared by **Mohil Parmar (23010101192)** 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

Mohil Parmar

ABSTRACT

Library management system is a system which aims in developing a computerized system to maintain all the daily work of library. This system will act as a tool to transfer traditional library into digital library. This project has many features which are generally not available in general library system like facility of user login, books search on one click etc. It also has a facility of admin login through which the admin can monitor the whole system. This system will be designed with the basic features such as librarian can add/view/update/delete books and students' details in it. It has also a facility where student after logging in their accounts can see list of books issued and its issue date and return date and also they can request the librarian to add new books by filling the book request form. The librarian after logging into his account i.e. admin account can generate various reports such as student report , issue report, teacher report and book report.

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.....	3
1.1 Product perspective.....	3
1.2 Product features	3
1.2.1 There are three different users who will be using this product:	3
1.2.2 The features that are required for the Librarian are:	3
1.2.3 The features that are required for the Member are:	3
1.3 Functional Requirement	3
1.3.1 Admin	3
1.3.2 Loan Manger	4
1.3.3 Loan Agent.....	4
1.3.4 Customer	4
1.4 Non-Functional Requirement	5
1.4.1 Usability:.....	5
1.4.2 Accuracy:	5
1.4.3 Availability:	5
1.4.4 Maintainability:	5
2 Design and Implementation Constraints.....	6
2.1 Use case diagram.....	6
2.2 Activity diagram and Swimlane diagram	7
2.3 Sequence diagram	9
2.4 State diagram.....	9
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
2.6.3 DFD Level-2.....	13
3 External interface requirement (Screens)	14
3.1 Screen-1: Registration Form	14
3.2 Screen-2: Login Form	15
3.3 Screen-3: Add borrower book	16
4 Database design	19
4.1 List of Tables	19

5	Stories and Scenario	21
5.1	Story-1: Add New Book in Library Catalogue.....	Error! Bookmark not defined.
5.1.1	Scenario# S1.1	Error! Bookmark not defined.
5.1.2	Scenario# S1.2	Error! Bookmark not defined.
5.1.3	Scenario# S1.3	Error! Bookmark not defined.
5.2	Story-2: Search Book	Error! Bookmark not defined.
5.3	Story-3: Manage due date for borrowed book.....	Error! Bookmark not defined.
5.4	Story-4: Renew book	Error! Bookmark not defined.
5.5	Story-5: Generate a report on book usage and availability	Error! Bookmark not defined.
6	Test cases.....	Error! Bookmark not defined.
7	References	Error! Bookmark not defined.

List of Figures

Figure 2.1-1 Use case diagram for library management system	4
Figure 2.2-1 Activity diagram for Book Issue	5
Figure 2.2-2 Swimlane diagram for Book Issue	6
Figure 2.3-1 Sequence diagram for Book Issue	7
Figure 2.4-1 State diagram of Book	8
Figure 2.4-2 State diagram for Librarian	9
Figure 2.5-1 Class diagram for Library management system	9
Figure 2.6-1 Context diagram for Library management system	10
Figure 2.6-2 DFD level-1 for Library management system	10
Figure 2.6-3 DFD level-2 for Issue book	11
Figure 3.1-1 Screen-1: Registration Form	12
Figure 3.2-1 Screen-2: Login Form	13
Figure 3.3-1 Screen-3: Add borrower book	14

List of Tables

Table 3.1-1 Screen element of Registration form	12
Table 3.2-1 Screen element of Login form	13
Table 3.3-1 Screen element of Add borrower book	14
Table 4.1-1 Table: Book	15
Table 4.1-2 Table: Borrower	15
Table 4.1-3 Table: Staff	15
Table 4.1-4 Table: Student	15

1 Introduction

1.1 Product perspective

A Loan Management System (LMS) is a multi-user platform that automates the loan processing and management, including loan approval, disbursement, repayment tracking, and account management for different types of users.

1.2 Product features

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

1.2.2 The features that are required for the Librarian are:

- Control the movement of books and other material and avoid losing the same.
- Search if you have a specific book in your collection based on the title, author etc.
- Print the spine labels for the book.
- Find what a specific person has borrowed from you. It offers the following modules Cataloguing, Circulation, and Queries.
- Can issue a book to the student.
- Can view the list of books available in each category.
- Can take the book returned from students.
- Add books and their information of the books to the database.
- Edit the information of the existing books.
- Can check the report of the issued Books.
- Can access all the accounts of the students.

1.2.3 The features that are required for the Member are:

- Can view the different categories of books available in the library.
- Can view the List of books available in each category.
- Can own an account in the library.
- Can view the books issued to him. • Can put a request for a new book.

1.3 Functional Requirement

1.3.1 Admin

- User Management: Add, update, or delete users in the system.
- Role Assignment: Assign roles and permissions to different users.
- System Configuration: Configure system settings and parameters.
- Access Control: Manage access rights and permissions.
- Audit Logs: View and manage system audit logs for security and compliance.
- Data Backup: Schedule and manage system backups.
- Report Generation: Generate various administrative and financial reports.
- Notification Management: Configure and send system notifications and alerts.
- Security Management: Implement and manage security policies and procedures.
- Performance Monitoring: Monitor system performance and resource usage.
- Loan Product Management: Create and manage different loan products and their terms.
- Interest Rate Management: Set and update interest rates for various loan products.
- Policy Management: Define and manage policies related to loan approval and disbursement.
- Compliance Management: Ensure the system complies with relevant laws and regulations.

- System Updates: Manage and deploy software updates and patches.

1.3.2 Loan Manger

- Loan Approval: Review and approve or reject loan applications.
- Loan Application Review: Assess and verify loan application details and documents.
- Loan Disbursement: Authorize the disbursement of approved loan amounts.
- Loan Repayment Schedule: Set and manage loan repayment schedules.
- Risk Assessment: Evaluate and manage the risk associated with loan applications.
- Portfolio Management: Manage the overall loan portfolio and track performance.
- Delinquency Management: Monitor and manage delinquent loans.
- Customer Communication: Communicate with customers regarding their loan status and issues.
- Loan Renewal: Approve or reject requests for loan renewals.
- Loan Restructuring: Manage loan restructuring requests and approvals.
- Credit Scoring: Implement and manage credit scoring models and criteria.
- Document Management: Oversee the management of loan-related documents.
- Compliance Monitoring: Ensure loans are processed in compliance with policies and regulations.
- Performance Analytics: Analyze loan performance data and generate insights.
- Feedback Management: Collect and manage feedback from loan agents and customers.

1.3.3 Loan Agent

- Loan Application Processing: Assist customers with loan application submissions.
- Customer Onboarding: Help new customers register and onboard to the system.
- Document Collection: Collect and verify required documents from customers.
- Initial Assessment: Conduct initial assessment of loan applications.
- Customer Support: Provide support and answer customer queries regarding loans.
- Loan Status Tracking: Track and update the status of loan applications.
- Field Verification: Conduct field verification of customer information if needed.
- Loan Promotion: Promote loan products to potential customers.
- Customer Education: Educate customers about loan products and terms.
- Data Entry: Enter and update customer and loan information in the system.
- Loan Follow-up: Follow up with customers on pending loan applications.
- Issue Resolution: Resolve issues and escalate complex cases to loan managers.
- Market Research: Conduct market research to understand customer needs and preferences.
- Sales Reporting: Generate and submit sales and performance reports.
- Target Achievement: Work towards achieving loan disbursement targets.

1.3.4 Customer

- Loan Application: Submit loan applications online.
- Account Registration: Register and create a customer account.
- Profile Management: View and update personal information and documents.
- Loan Status Tracking: Check the status of submitted loan applications.
- Repayment Schedule: View and manage loan repayment schedules.
- Loan Calculator: Use a loan calculator to estimate loan amounts and repayments.
- Document Upload: Upload required documents for loan processing.
- Notification Alerts: Receive notifications about loan status and repayment reminders.
- Support Request: Request support or raise queries regarding loans.
- Transaction History: View history of all transactions related to loans.
- Online Payments: Make loan repayments online.

- Loan Renewal Request: Submit requests for loan renewals.
- Feedback Submission: Provide feedback on loan services and products.
- Product Information: Access detailed information about different loan products.
- Loan Pre-qualification: Check eligibility for loan products using pre-qualification tools.
- These functionalities provide a comprehensive set of features for a loan management system, addressing the needs of all four actors involved.

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

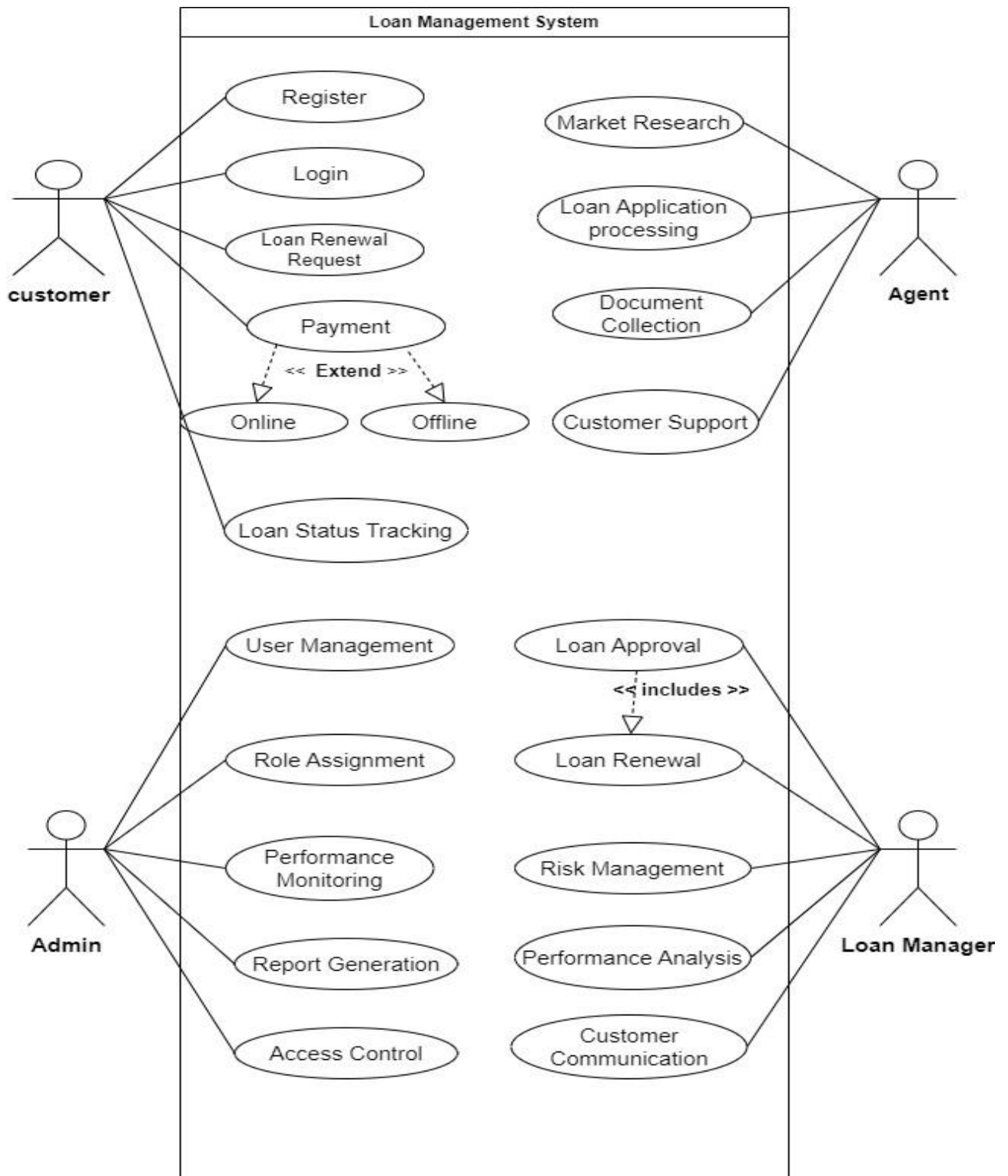


Figure 2.1-1 Use case diagram for loan management system

2.2 Activity diagram and Swimlane diagram

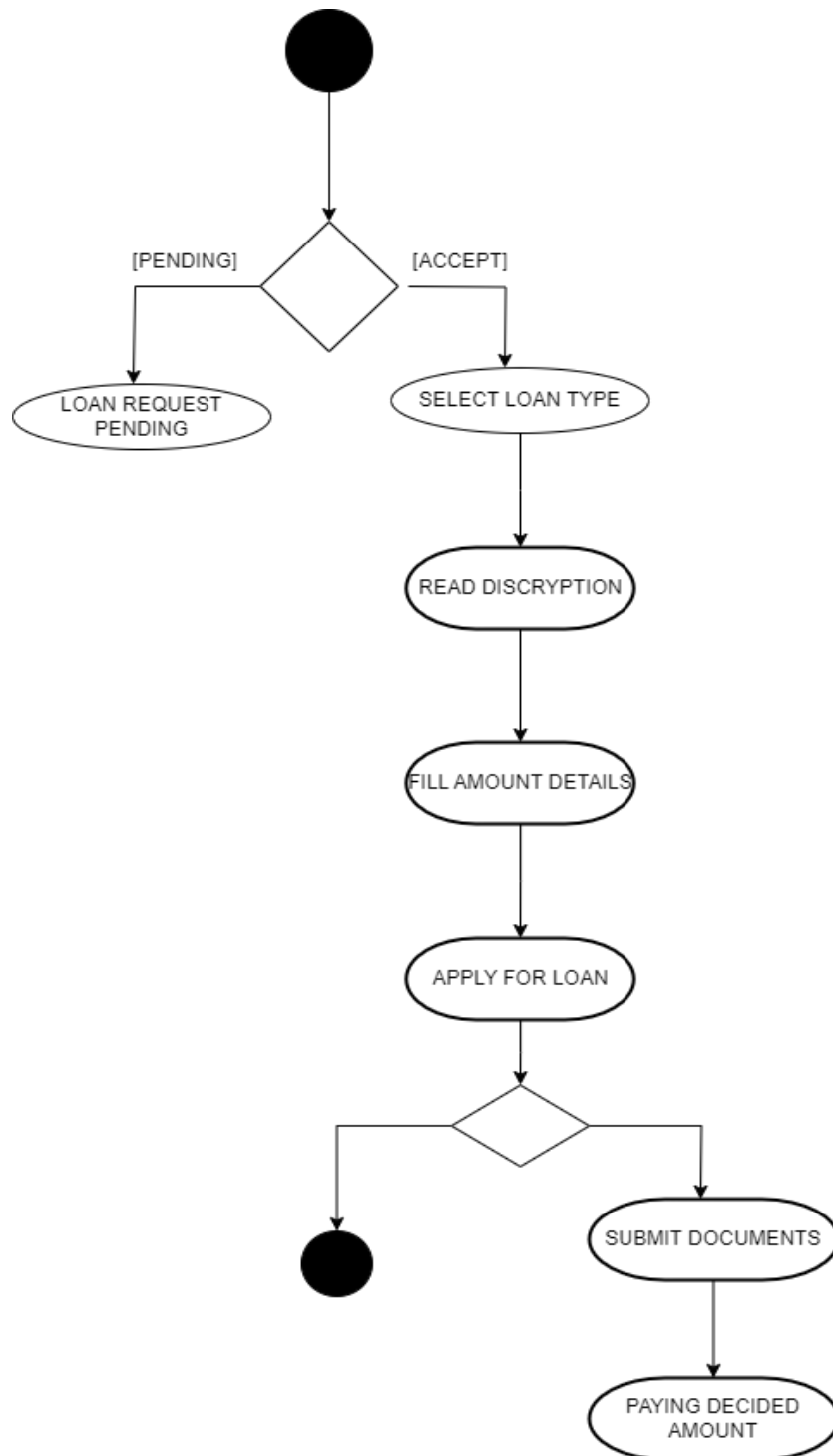


Figure 2.2-1 Activity diagram for Loan Request

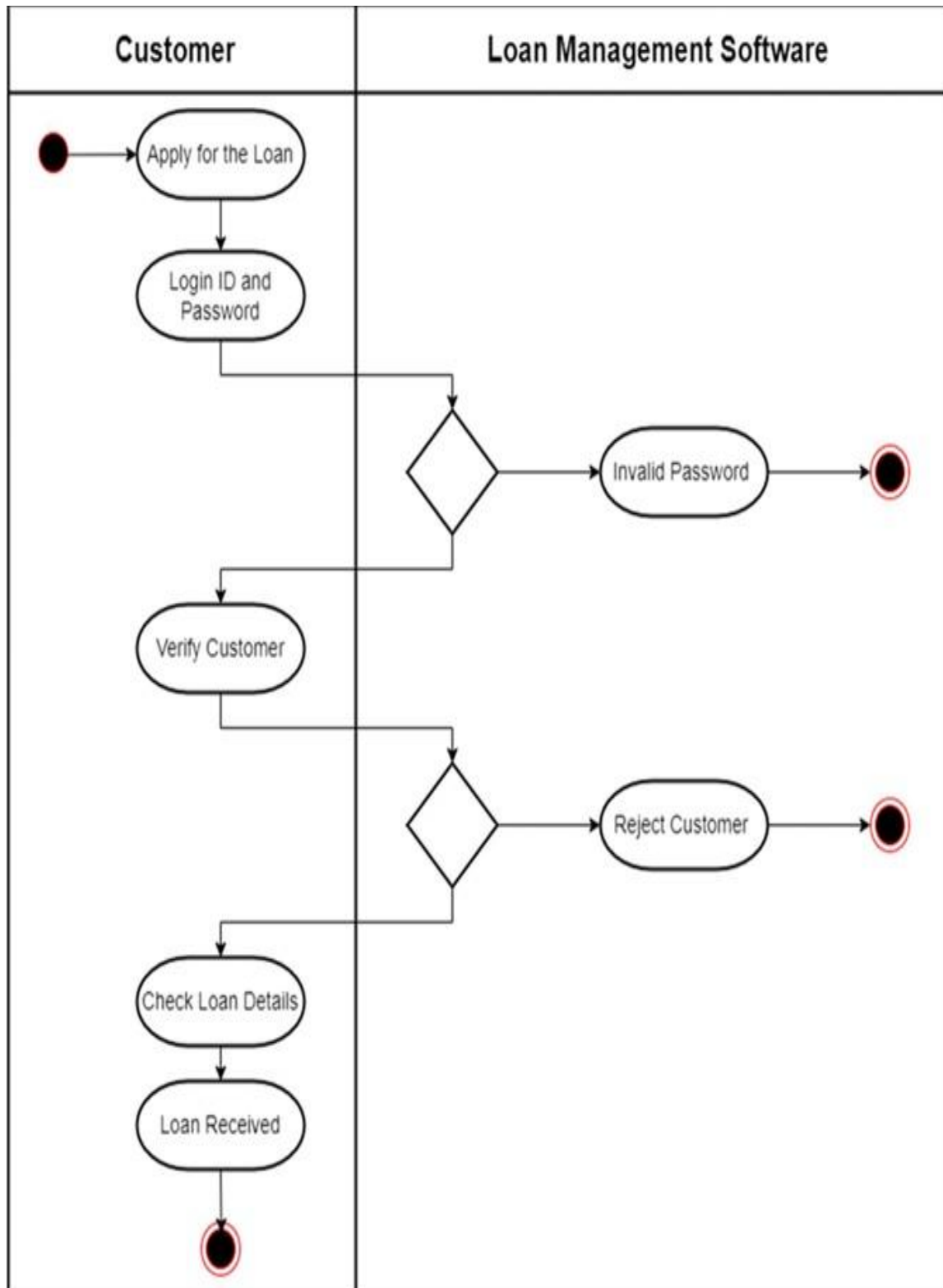


Figure 0-1 Swimlane diagram for Loan Request

2.3 Sequence diagram

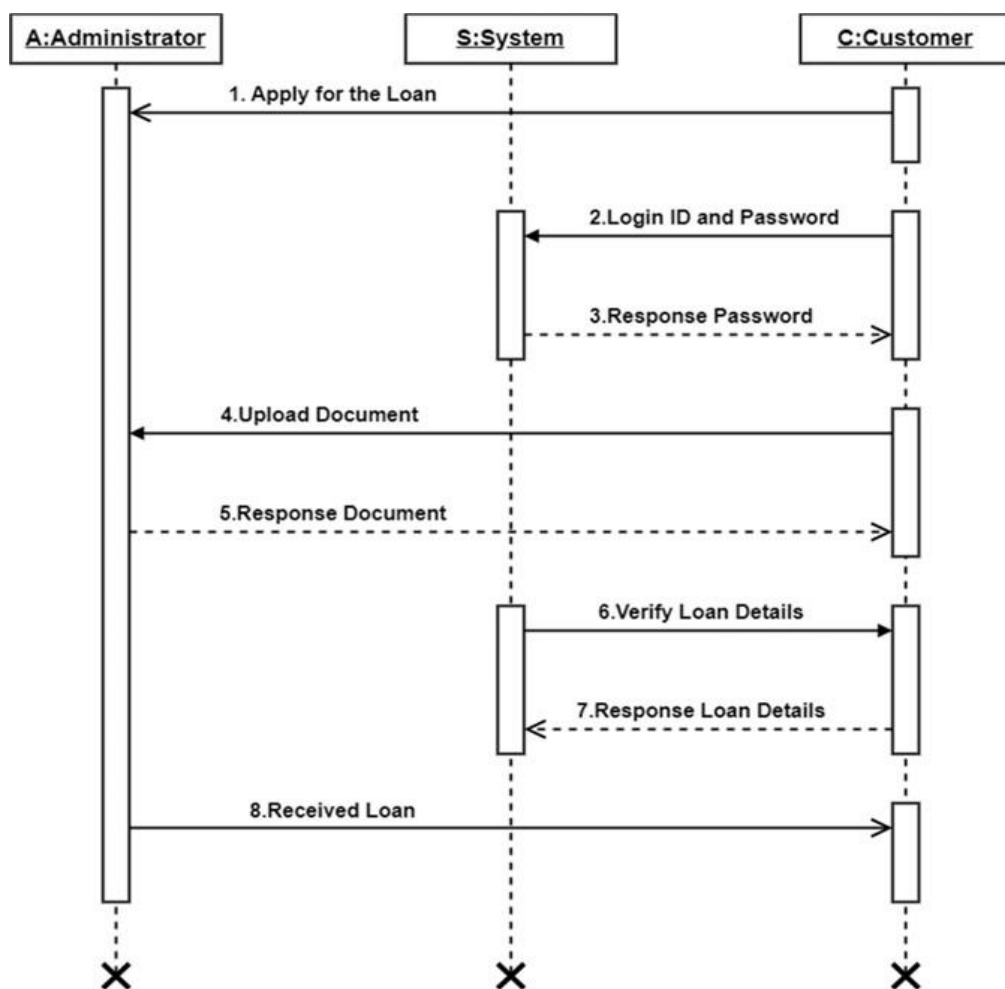
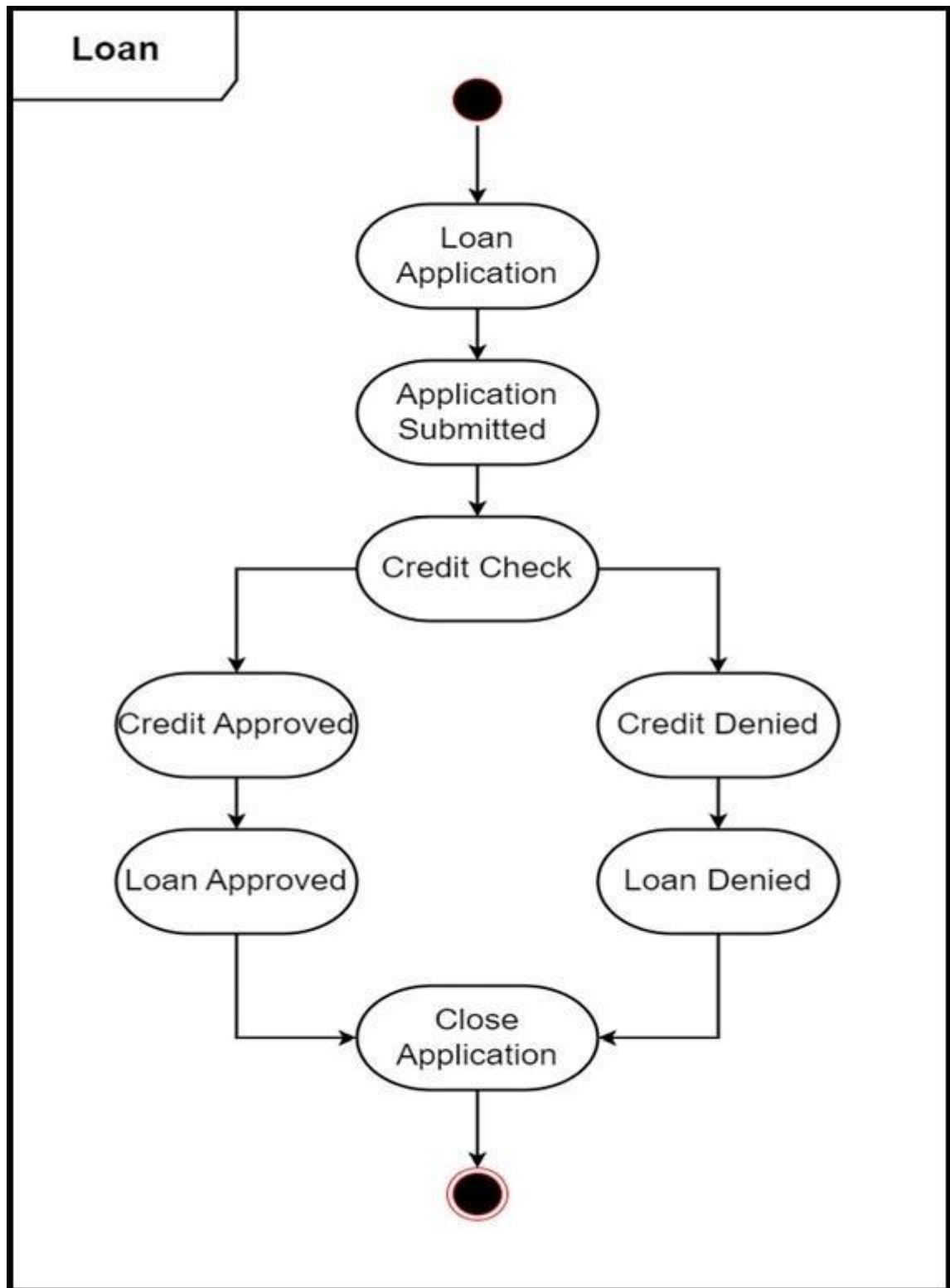


Figure 2.3-1 Sequence diagram for Loan Management System

2.4 State diagram

*Figure 2.4-1 State diagram of Loan**Figure 2.4-2 State diagram for Librarian*

2.5 Class diagram

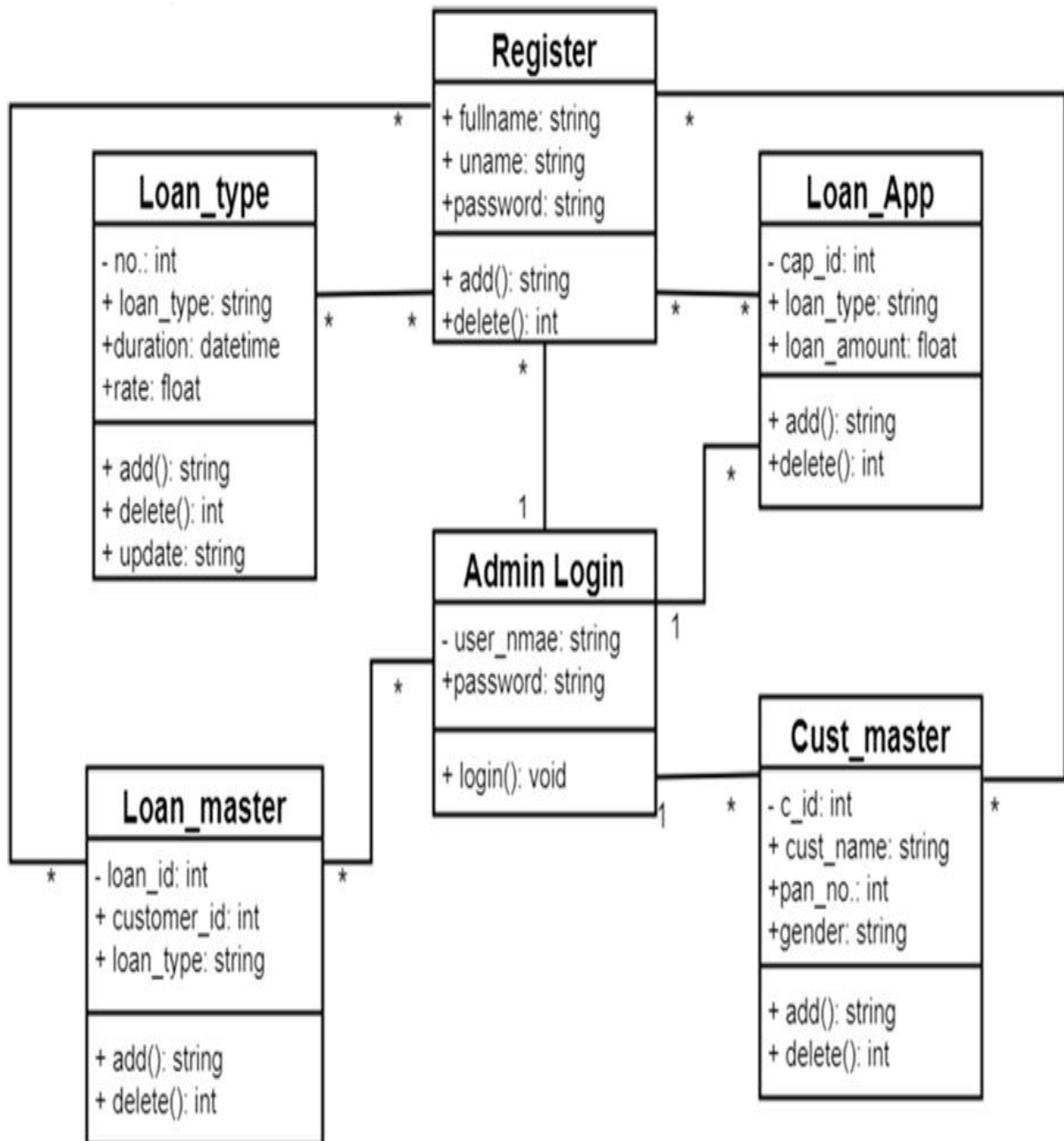


Figure 2.5-1 Class diagram for Library management system

2.6 Data flow diagram

2.6.1 Context diagram (level-0)

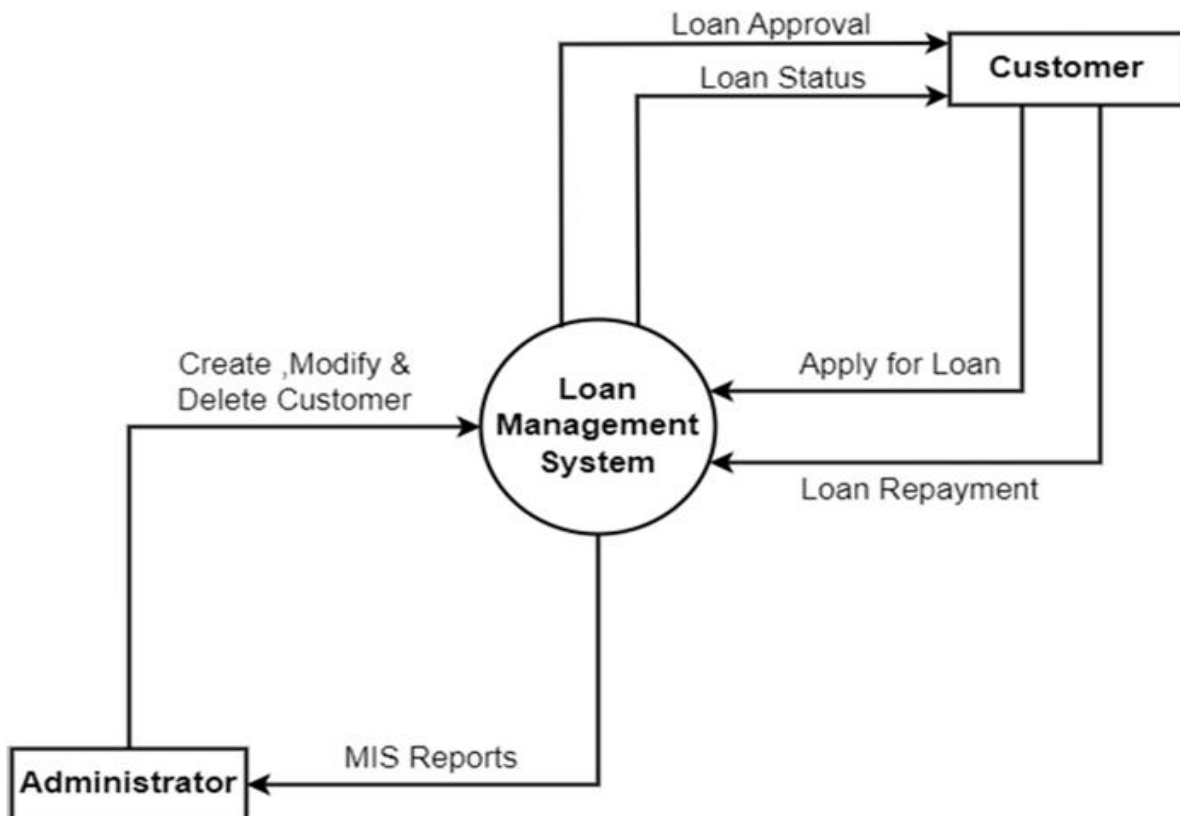


Figure 2.6-1 Context diagram for Library management system

2.6.2 DFD Level-1

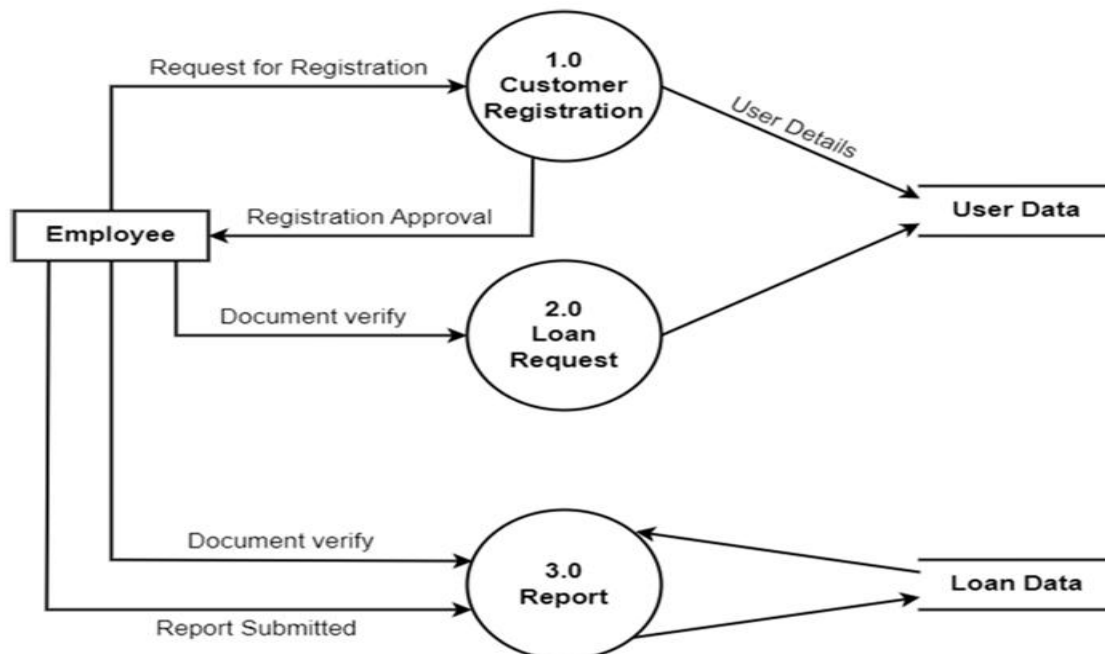


Figure 2.6-2 DFD level-1 for Library management system

2.6.3 DFD Level-2

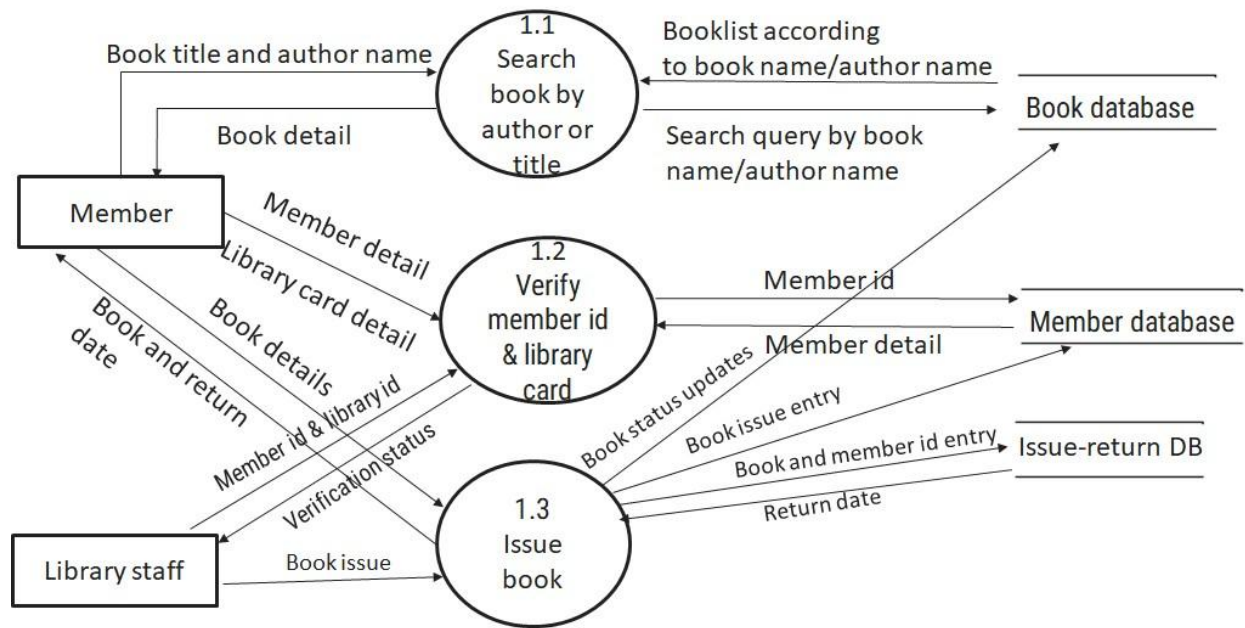


Figure 2.6-3 DFD level-2 for Issue book

3 External interface requirement (Screens)

3.1 Screen-1: Registration Form

Figure 3.1-1 Screen-1: Registration Form

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 Registration form

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	Retype password	Password	M	1	Retype Password field should be editable and accept the password and display as star or dot.
5	I agree to the terms	Checkbox	M	1	Checkbox for accepting terms and condition.
6	I already have a membership	Link	-----	-----	Link for navigate to login page for registered user.
7	Register	Button	-----	-----	Register is a button for store the entered data into database.

3.2 Screen-2: Login Form

The screenshot shows a web form titled "Add Loan". It includes the following elements:

- Select Group:** A dropdown menu.
- Loan Source:** A dropdown menu labeled "Select Loan C Ominar Source".
- Original Amount:** A text input field.
- Loan Interest(%):** A text input field containing the value "10". A red cursor is visible over this field.
- Term of Payment(In Year):** A dropdown menu labeled "Term of Payment".
- Total Paid(With Interest):** A text input field.
- Pay Every Month(Emi Per Month):** A text input field.
- Payment Schedule:** A field with a calendar icon and the placeholder text "dd-mm-yyyy".

Figure 3.2-1 Screen-2: Login Form

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 username and password to be able to login to the system.

Table 3.2-1 Screen element of Login form

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	Password	Password	M	1	Password field should be editable and accept the password and display as star or dot.
3	Remember Me	Checkbox	M	1	Saving login credentials through remember me checkbox
4	I forgot my password	Link	-----	-----	Link for navigate to Forgot password page for allows users to recover password.
5	Register a new membership	Link	-----	-----	Link for navigate to membership registration.
6	Sign in	Button	-----	-----	Login button navigates to another page even if valid login credentials.

3.3 Screen-3: Apply for a Loan

Figure 3.3-1 Screen-3: Add borrower book

Purpose: This module will allow the system administrator to add, edit, update or delete borrowers of book. The admin can add borrower information and manage it.

Table 3.3-1 Screen element of Add borrower book

Sr.	Screen Element	Input Type	O/M	1/N	Description
1	Borrower ID	Textbox	M	1	Borrower ID field should be editable and fill autogenerated Borrower ID.
2	Student ID	Textbox	M	1	Student ID field should be editable and accept Student barcode id.
3	First Name	Textbox	M	1	First Name field should be editable and accept only string as a borrower first name.
4	Middle Name	Textbox	O	1	Middle Name field should be editable and accept only string as a borrower middle name.
5	Last Name	Textbox	M	1	Last Name field should be editable and accept only string as a borrower last name.
6	Contact	Textbox	M	1	Contact field should be editable and accept only 10-digit mobile number.
7	Grade Id	Textbox	O	1	Auto fetch detail from the database if proper student id is entered.
8	Submit	Button	-----	-----	Submit is a button for store the entered data into database.

9	Cancel	Button	-----	-----	Cancel is a button for close add borrower dialog.
---	--------	--------	-------	-------	---

3.4 Screen-4 : Upload Identity Documents

Purpose : The purpose of uploading an identity document is to verify one's identity securely and comply with authentication requirements for various transactions or services.

Sr.	Field Name	Description
1	Passport Photo	Please upload a recent passport-size photo.
2	Aadhar Number	Enter your Aadhar number, a unique 12-digit identification number issued by the Indian government.
3	Aadhar Front	Upload a scanned copy of the front side of your Aadhar card.
4	Aadhar Back	Upload a scanned copy of the back side of your Aadhar card.
5	Pan Number	Provide your PAN (Permanent Account Number) issued by the Income Tax Department of India.
6	Pan Card	Upload a scanned copy of your PAN card.
7	Voter Id Number	Enter your Voter ID number issued by the Election Commission of India.

Sr.	Field Name	Description
8	Voter Id Front	Upload a scanned copy of the front side of your Voter ID card.
9	Voter Id Back	Upload a scanned copy of the back side of your Voter ID card.
10	Bank Account Number	Input your bank account number.
11	IFSC Code	Enter the IFSC (Indian Financial System Code) of your bank branch.
12	Bank Name	Provide the name of your bank.
13	Passbook Photo	Upload a scanned copy of a page from your bank passbook showing your account details.
14	Continue	Click "Continue" to proceed with your loan application after uploading all the required documents.

3.5 Screen-5 : Add New Member

The screenshot shows a web form titled "Add New Member". On the left, there are labels for the form fields: "Member's First Name", "Member's Last Name", "Select Group", and "Gender". On the right, the corresponding input fields are shown. The "Member's First Name" field contains the text "Christine". The "Member's Last Name" field contains the text "Moore". The "Select Group" field is a dropdown menu with the text "Select Group" and a downward arrow. The "Gender" field has two radio buttons, "Male" and "Female", both of which are unselected. At the bottom of the form are two buttons: a green "Add New Member" button and a red "Reset" button.

Purpose : The purpose of adding a new member is to register an individual into a system or organization, enabling them to access relevant services, resources, or participate in group activities in accordance with set rules and privileges.

Sr.	Field Name	Description
1	Member's First Name	Input field for entering the first name of the new member.

Sr.	Field Name	Description
2	Member's Last Name	Input field for entering the last name of the new member.
3	Select Group	Dropdown to select a group to which the member belongs.
4	Gender	Radio buttons to select the gender: Male or Female.
5	Add New Member Button	Green button to submit the form and add the new member.
6	Reset Button	Red button to clear the input fields and reset the form.

4 Database design

4.1 List of Tables

- Book
- Borrower
- Student
- Staff

Table 4.1-1 Customer Table

Column Name	Data Type	Null or NN	Keys	Constraints	Default Value
UserID	INT	NN	PRIMARY KEY, AUTO_INCREMENT		
Username	VARCHAR(50)	NN	UNIQUE		
PasswordHash	VARCHAR(255)	NN			
FirstName	VARCHAR(50)	NN			
LastName	VARCHAR(50)	NN			
Email	VARCHAR(100)	NN			
Role	ENUM('Loan Manager', 'Customer', 'Admin', 'Agent')	NN			

SRS – Loan Management System

Table 4.1-2 Table: Registration Table

Column	Data Type	Null	Keys & Constrains	Default Value & Description
UserID	int	NN	PK (Auto Increment)	
FullName	varchar(100)	NN		
Email	varchar(100)	NN		
Password	varchar(100)	NN		

Table 4.1-3 Table: LOAN TABLE

Column Name	Data Type	Null or NN	Keys	Constraints	Default Value
LoanID	INT	NN	PRIMARY KEY, AUTO_INCREMENT		
UserID	INT	NN	FOREIGN KEY	REFERENCES Users(UserID)	
LoanAmount	DECIMAL(15,2)	NN			
InterestRate	DECIMAL(5,2)	NN			
StartDate	DATE	NN			
EndDate	DATE	NN			
Status	ENUM('Pending', 'Approved', 'Rejected', 'Closed')	NN			

Table 4.1-4 Table: ADMIN TABLE

Column	Data Type	Null	Keys & Constrains	Default Value & Description
AdminID	int	NN	PK (Auto Increment)	
AdminName	varchar(100)	NN		
AdminEmail	varchar(100)	NN		
Contact	Number(10,0)	NN		
DOB	DateTime	NN		
Gender	varchar(50)	AN		

5 Stories and Scenario

5.1 Story-1: Add New Loan Record in Loan Management System

Story # S1	:	As a Loan Officer , I want to add a new loan application into the system So that I can track and process loan requests efficiently..
Priority	:	High
Estimate	:	L
Reason	:	Capturing loan applications promptly ensures the loan processing workflow is smooth and no request is overlooked

5.1.1 Scenario# S1.1

Scenario# S1.1	:	Adding a New Loan Application with Valid Information
Prerequisite	:	Loan Officer is logged in to the Loan Management System.
Acceptance Criteria	:	<ul style="list-style-type: none"> • GIVEN : • The Loan Officer is navigated to the loan application entry page. Valid applicant information, including name, address, loan amount, and other required details, is ready to be entered. • When: • The Loan Officer selects the "Add New Loan Application" option. • The Loan Officer enters valid applicant details. • The Loan Officer clicks the "Submit" button to save the loan application.

5.1.2 Scenario# S1.2

Scenario# S1.2	:	Attempting to Add a New Loan Application with Missing Information
Prerequisite	:	Loan Officer is logged in to the Loan Management System.
Acceptance Criteria	:	<p>Given: The Loan Officer is navigated to the loan application entry page, and some required fields are left blank (e.g., loan amount or applicant's name).</p> <p>When:</p> <ul style="list-style-type: none"> • The Loan Officer selects the "Add New Loan Application" option. • The Loan Officer attempts to submit the application without filling in all required fields. <p>Then:</p> <ul style="list-style-type: none"> • The system displays an error message indicating the missing information. • The Loan Officer is prompted to complete the required fields before the loan application can be successfully submitted.

5.1.3 Scenario# S1.3

Scenario# S1.3	: Attempting to Add a Duplicate Loan Record
Prerequisite	: The loan officer is logged into the loan management system, and the loan officer is on the loan catalogue management page.
Acceptance Criteria	: Given: The loan information, including borrower details, loan type, and loan number, is available, and a loan with the same loan number is already in the catalogue. When: The user clicks on the "Add Loan" button and attempts to add the same loan information (with the same loan number) in the fields. Then: Generate a unique loan ID and generate a loan tracking number for every duplicate entry for the same borrower to differentiate between multiple loans under the same loan type.

5.2 Story-2: Manage Due Dates for Loans

Story # S2	: As loan officer, I want to manage due dates for loan payments, So that I can ensure loans are repaid on time and avoid overdue penalties.
Priority	: High
Estimate	: M
Reason	: Proper due date management is crucial for maintaining the financial health of the institution and ensuring borrowers remain in good standing

5.2.1 Scenario# S2.1

Scenario# S2.1	: Setting a Due Date for a New Loan
Prerequisite	: The loan officer is logged into the loan management system and is on the loan creation page.
Acceptance Criteria	: Given: The borrower details, loan amount, and loan terms (including the due date for the first payment) are available. When: The loan officer sets a due date during the loan creation process and submits the new loan record. Then: The system should save the loan details with the specified due date and generate a reminder notification for the borrower before the due date.

5.2.2 Scenario# S2.2

Scenario# S2.2	: Updating the Due Date for an Existing Loan
Prerequisite	: The loan officer is logged into the loan management system and is on the loan details page of an existing loan.
Acceptance Criteria	: Given: The loan details are already in the system, and the borrower requests a change in the due date due to valid reasons. When: The loan officer updates the due date in the system. Then: The system should save the new due date, adjust the payment schedule accordingly, and notify the borrower of the new due date and potential changes in payment terms.

6 Test cases

Project Name:	EMI Calculator	Test Designed by:	Dhruv Joshi	
Module Name:	Login	Test Designed date:	01-10-2024	
Release Version:	1.0	Test Executed by:	R. B. Gondaliya	
		Test Execution date:	15-01-2024	
Pre-condition: Web application should be accessible				
Test Case ID	Test Title	Test Type	Description	Test Case ID
TC_001	Login to web application with valid credential	Functional	Login to Loan management system web application through valid credential	TC_001
TC_002	Login to web application with invalid credential	Functional	Login to Loan management system web application through invalid credential	TC_002
TC_003	Verify login page elements	GUI	verify that all elements are available on login page	TC_003
TC_004	Password reset functionality	Functional	Verify that the password reset functionality works as expected	TC_004

Test Case Title	Login to web application with valid credential
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	Access Web application URL	The site launched properly	Site 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 Password in Password field	Password field should be editable and accept the password and display as star or dot	Password input displayed in dot and accepted	pass		Password: rbgondaliya	
4	Enter valid captcha code in captcha field	Captcha field should be editable and accept captcha	Captcha input accepted	Pass	Step required when human action	get captcha from image which is near by captcha field	

		and captcha is case sensitive			validation		
5	Click on login button	User should login into site and navigated to dashboard	User navigated to dashboard and username should be display in top of the right side.	pass			

Test Case Title	Login to web application with invalid credential
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	Verify that User is not able to Login with invalid Username and invalid Password	Should be display an error message enter wrong username or password	Display an error of wrong username and password	Pass			
2	Verify that User is not able to Login with Valid Username and invalid Password	Should be display an error message enter wrong password	Display an error of wrong password	Pass			
3	Verify that User is not able to Login with	Should be display an error message	Display an error Username not found	Pass			

	invalid Username and Valid Password	User not found					
4	Verify that User is not able to Login with blank Username or Password	Set required field validation message for Username and Password	Display an error of wrong username and password	Fail	Not perform a validation function fix it		Bug_002

Test Case Title	Verify login page elements
Test Type	GUI
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	Launch application with the given url	The site launched properly	Site launched successfully	Pass		https://accounts.google.com/SignIn?test.com	
2	Verify that the login screen contains elements such as Username, Password, Sign in button, Remember password check box, Forgot password link, and Create an account link.	All listed control displayed properly on the page	Login page loaded successfully	Pass			

3	Verify that cursor is focused on "Username" text box on the page load	Cursor is focused in Username textbox	Cursor focus in Username textbox	Pass			
4	Verify that tab functionality is working properly or not	When tab pressed cursor move in next control	Cursor moving in next control	Pass			
5	Verify that all the fields such as Username, Password has a valid placeholder	All text fields have proper placeholder	All text fields have proper placeholder	Pass			
6	Verify that the labels float upward when the text field is in focus or filled (in case of floating label)	When field is focused or filled, label display on top of the field	When field is focus or filled, label display on top of the field	Pass	step required when fields with floating label		
7	verify that forgot password link working properly	when click on forgot password load forgot password page	forgot password link not working	Fail			

Test Case Title	Test Type	Test Priority	Pre-condition
Password reset functionality	Functional	High	Web application should be accessible, and the user should have an account
Verify login page elements	GUI	Medium	Web application should be accessible

Test Step	Test Case Description	Expected Result	Actual Result	Status	Comment	Data	Bug ID
1	Verify that the 'Forgot Password' link is visible on the login page	'Forgot Password' link should be visible	'Forgot Password' link is visible	Pass			
2	Verify that clicking the 'Forgot Password' link redirects to the password reset page	User should be redirected to the password reset page	User is redirected to the password reset page	Pass			
3	Verify that entering a valid registered email sends a password reset email	A password reset email should be sent to the user	Password reset email is received	Pass			
4	Verify that entering an invalid/unregistered email displays an appropriate error message	Should display an error message: "Email not found"	Displays an error: "Email not found"	Pass			
5	Verify that leaving the email field blank triggers a required field validation message	Should display: "Email is required"	Displays: "Email is required"	Pass			
6	Verify that the password reset link in the email allows the user to reset the password successfully	User should be able to reset the password via the link	User successfully resets the password	Pass			
7	Verify that after a password reset, the user can log in with the new password	User should be able to log in with the new password	User is able to log in with the new password	Pass			

7 References

- Loan Policies : www.exampleloansite.com/loanpolicies
 - Loan Due Date Management : www.exampleloansite.com/duedate
 - Loan Officer Guidelines : www.exampleloansite.com/loanguidelines
-