

Technical Design Document

Project Name: ABC Banking Services

(Online Loan Management System)

Introduction

ABC Bank is created to provide the top-notch services to its customers while applying various loans provided. The architecture implemented is Spring boot Services.

Functional Requirements:

The different functional requirements in the project are as follows:

For User:

❖ Login:

User need to login into the application to use the functionalities provided by the bank. If the user enters valid credentials, he will be redirected to his/her profile page. Else, an alert window pops up showing that entered details are not valid.

❖ Register:

If the user doesn't have an account, must register by providing their Name, PAN Number, mobile number and email ID. Also, the user should set a username and password by using which he/she login.

❖ My Account:

On successful login, User is navigated to this page. In this page, His/her account details are shown.

❖ Deposit:

User can deposit money so that he/she can pay monthly Emi using it. User should enter the amount to be deposited ranges from 1000 to 100000. A confirmation will be asked and if the user clicks "Ok", The deposited amount will be added to his account balance. After a successful deposit, user will be redirected to my account page.

❖ Apply Loan:

On providing required details such as Loan Type, Loan Amount, Asset Value, and Tenure, the entered data is verified and if it meets the requirements, A confirmation will be asked and if the user clicks "Ok", Loan will be sanctioned and the pending loan along with monthly Emi is shown on top his profile. If the user is having a pending loan, He/she can't apply for loan till he clears his debt.

❖ **Calculate EMI:**

Before applying for loan, User can check what would be the monthly Emi, if he takes a loan for certain amount.

❖ **Pay EMI:**

User can pay his monthly Emi from his account balance. In this page, user's monthly Emi and account balance will be displayed. If user clicks proceed, A confirmation will be asked and if the user clicks "Ok", If he has existing loan, and if his account balance is more than the payable amount, Emi will be paid, and amount will be deducted from account balance. If user doesn't have existing loans, then an alert message will pop up stating that "No pending Emi exist". Else, an alert message will pop up stating that "Transaction Failed due to insufficient funds".

❖ **Foreclose Loan:**

User can foreclose his loan before the loan tenure gets completed. A confirmation will be asked and if user clicks "Ok", If user is having an uncleared loan in his account, it will be foreclosed.

❖ **Account Transactions:**

Whenever user deposits or pays certain amount, that transaction will be recorded. He can go through his account transactions and filter them accordingly based on Amount credited or debited.

For Admin:

❖ **View Accounts:**

Admin can view all the existing accounts in the database. He can see how many accounts are created in the bank, Total amount deposited in bank, Total Pending Loans till then. He can search among accounts with their first name.

❖ **Manage / Update Account:**

Admin can update details of the account holder such as his name, mobile number and email address.

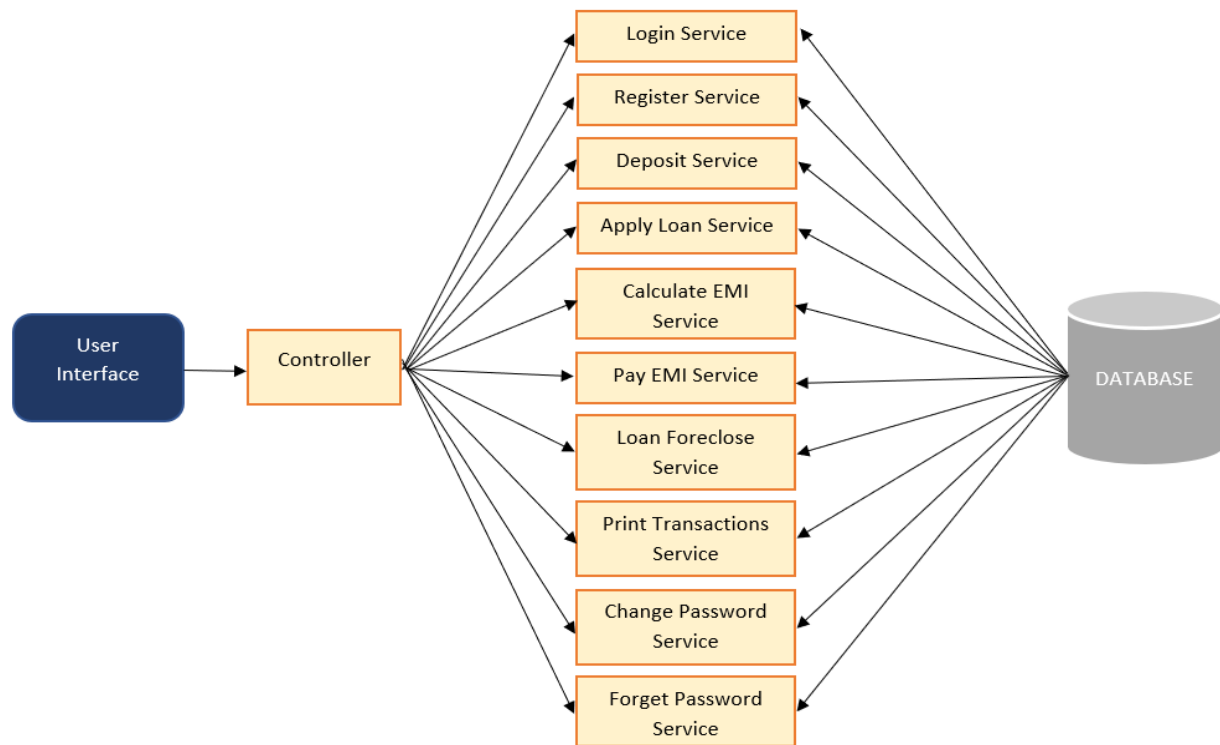
❖ **Delete Account:**

Admin will be able to delete an account if the account has no pending loans.

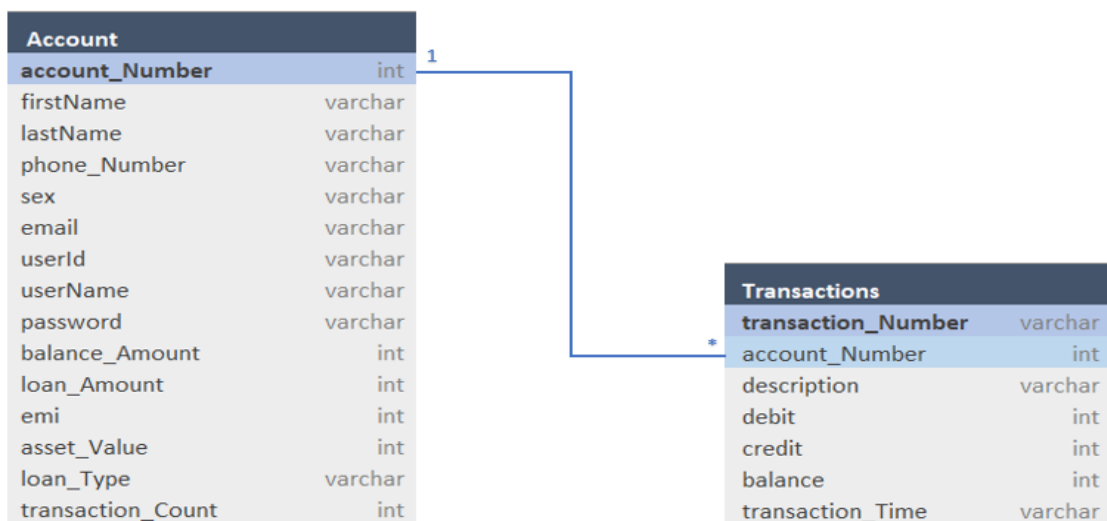
❖ **Search Account:**

Admin can search for an account holder details existing in the bank.

Overall Architecture Diagram: (ABC BANK – ONLINE LOAN MANAGEMENT SYSTEM)



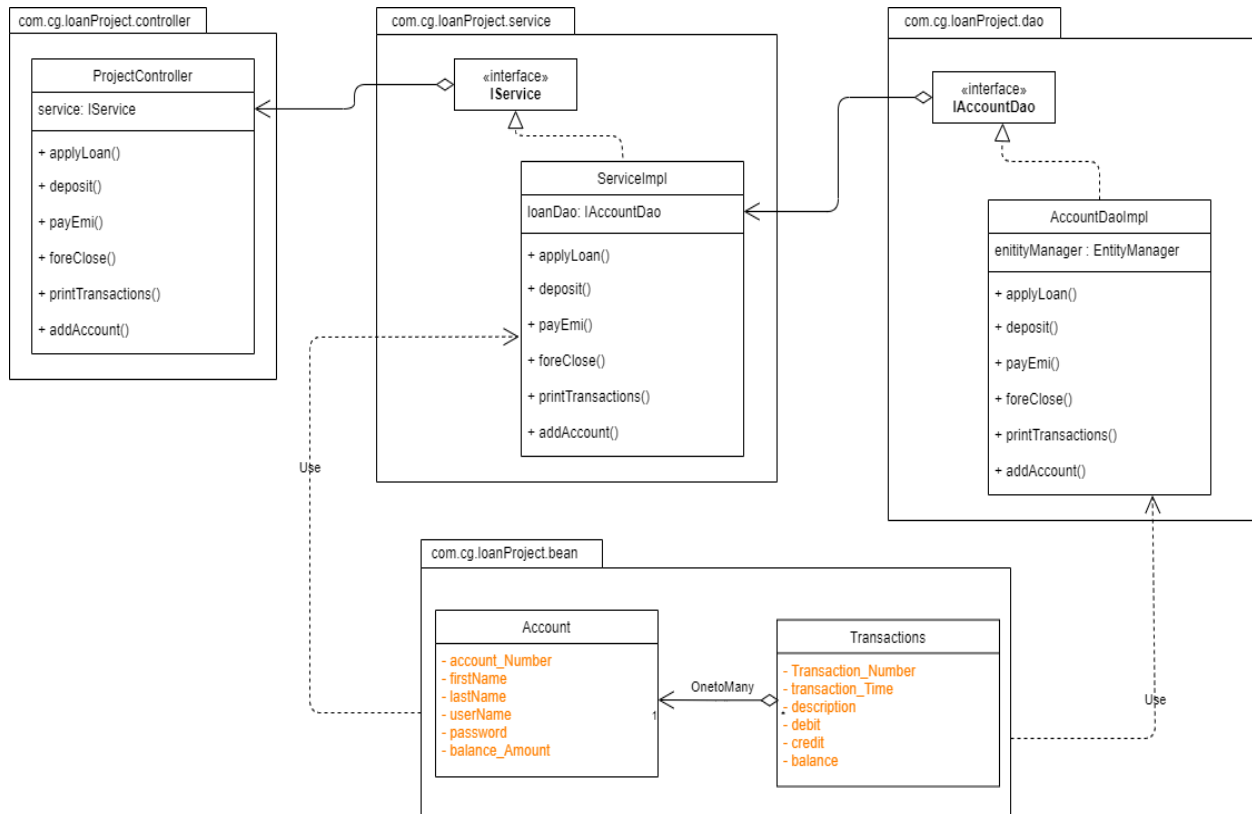
Entity Relationship Diagram:



Epic & Stories

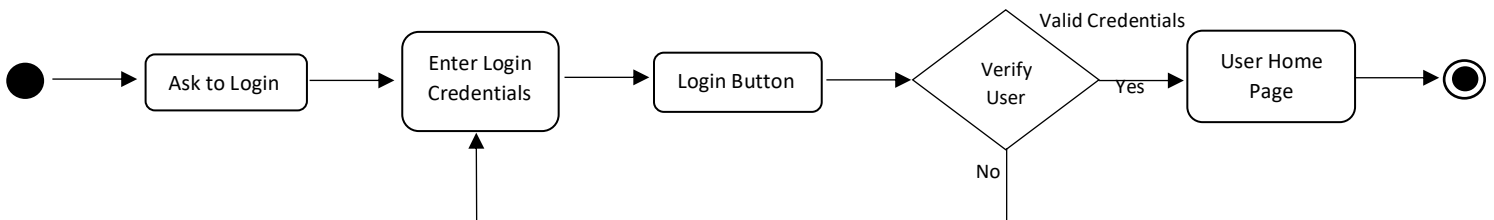
Epic	Stories	As a/an	I want to	So that ..
Online Loan Management System	Login into website	Admin	Access the portal and can make changes	A new Employee joined in the organization
	Update an Account	Admin	Update account holder details	To delete the Employee records from the database
	Delete an Account	Admin	Delete the account from database	Update the details of an Employee in the database
	Search Account	Admin	Search an Account	Details of an Account Holder can be seen with the use of some filters
	Login into Website	User	Use services provided by bank	User can go through various services provided
	Create an Account	User	Create a new Account	User can use the services provided by bank
	Apply Loan	User	Apply loan	Loan will be sanctioned if all requirements met
	Deposit Amount	User	Deposit amount into the account	User can pay EMI using the account balance
	Calculate EMI	User	Calculate the monthly EMI before applying Loan	User can know what the monthly EMI would be, if he applied a loan for a certain amount
	Pay EMI	User	Pay Monthly EMI	User can pay his monthly EMI
	Foreclose Loan	User	Foreclose the pending loan	User can clear his pending loan before the loan tenure end

Class Daigram

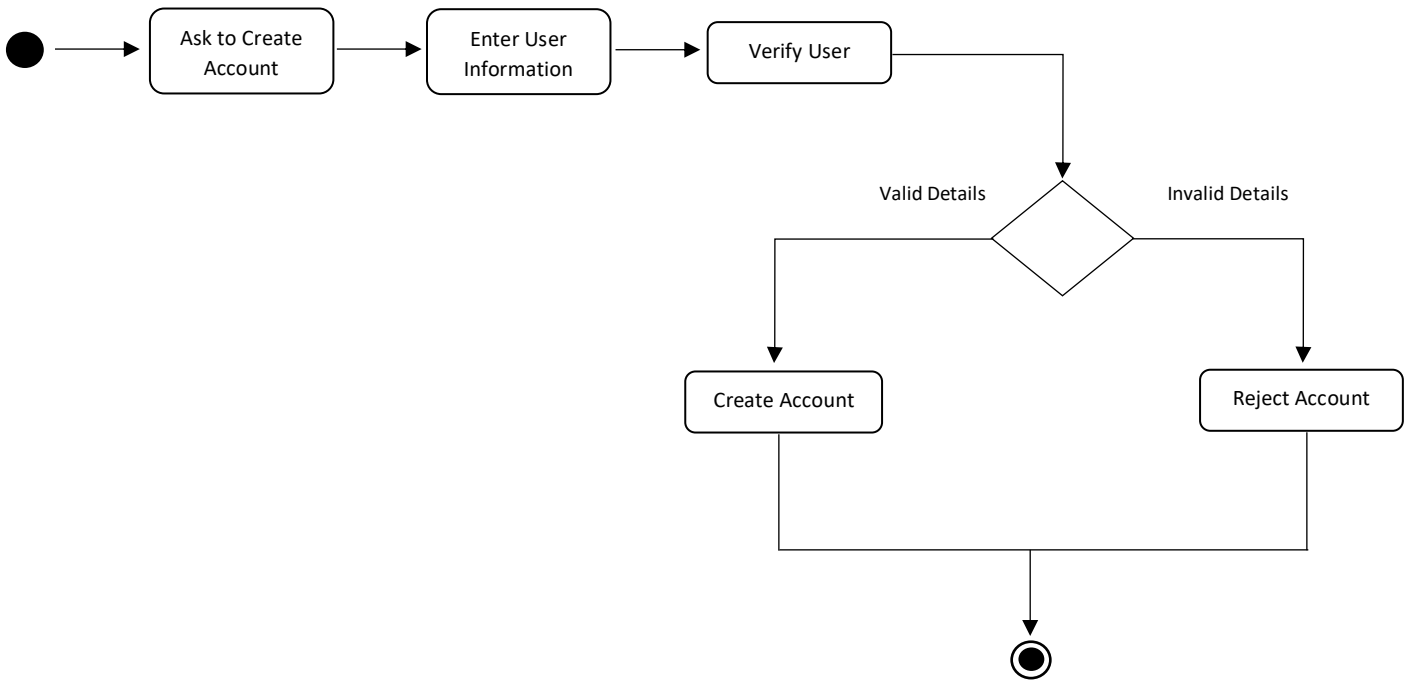


Activity Diagrams

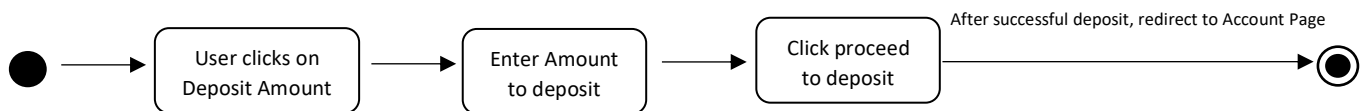
Login Service:



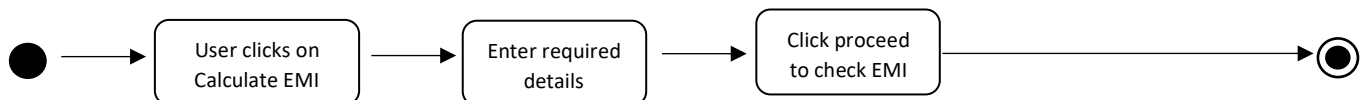
Register Service:



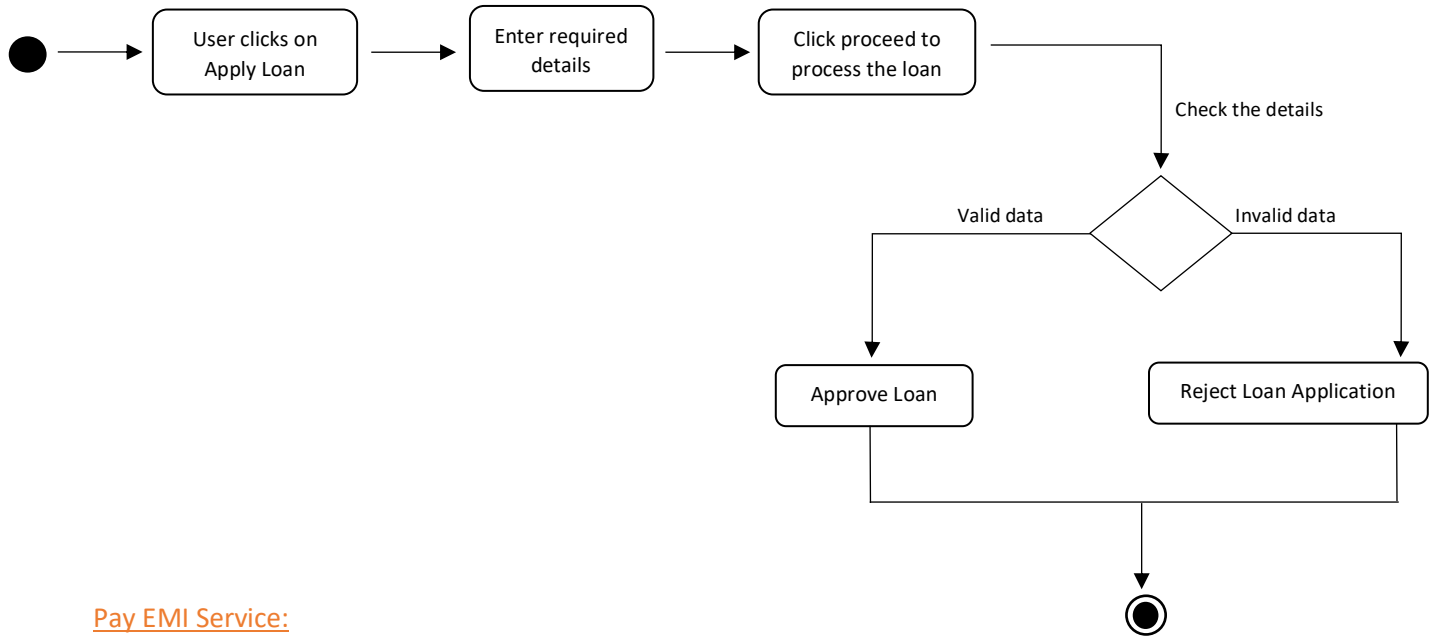
Deposit Service:



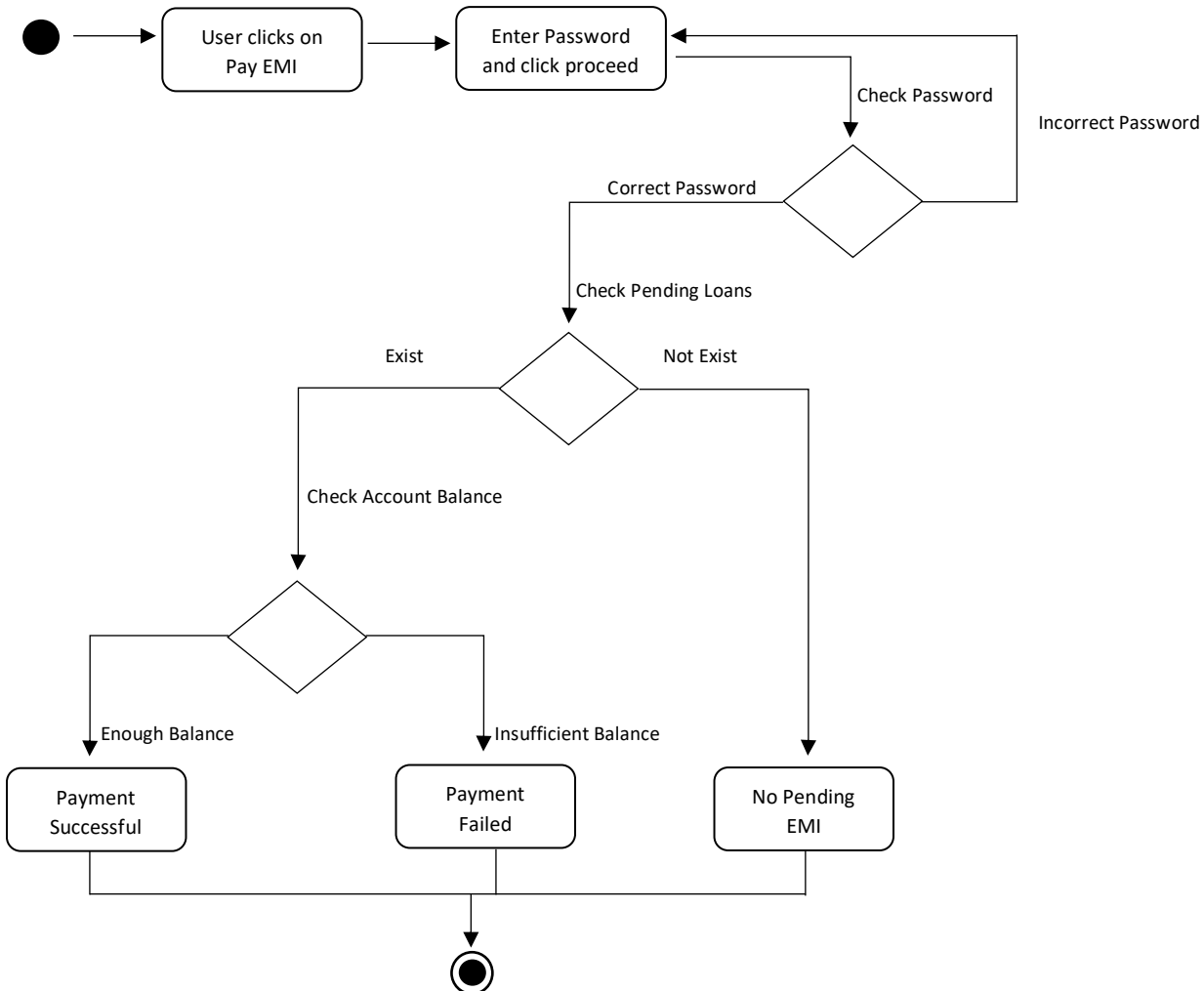
Calculate EMI Service:



Apply Loan Service:



Pay EMI Service:



Loan Foreclose Service:

