Microfinance Banking System - Class Diagram C Users o INT user id (C) InsuranceProducts TIMESTAMP date_created o INT account_no o INT insurance id o TEXT description • VARCHAR(50) username o INT term_length VARCHAR(20) password VARCHAR(50) first name VARCHAR(100) product name VARCHAR(50) last name • DECIMAL(15,2) premium VARCHAR(100) email DECIMAL(15,2) coverage_amount VARCHAR(15) phone_number VARCHAR(50) customer_name administered by ĥas works for 0/4 C CustomerProfiles 0.. (C) Accounts C Employees o INT customer id (C) AdminProfiles o INT customer_id o INT user id TIMESTAMP date_opened o INT employee_id o DATE date of birth o INT admin id INT user_id o INT user_id VARCHAR(20) account_number VARCHAR(255) address DATE joining_date VARCHAR(20) account_type VARCHAR(255) role_description CHAR(1) gender VARCHAR(50) employee_name DECIMAL(15,2) balance VARCHAR(50) occupation VARCHAR(10) status DECIMAL(10,2) annual income associated with records associated with makes 0..* C Loans 0..* 0..* o INT loan id (C) Transactions o INT customer_id (C) Customer o INT account no o INT transaction id o INT account_no INT loan term o INT account_no related to o TIMESTAMP transaction date o TIMESTAMP start date VARCHAR(50) customer name o TIMESTAMP end date DECIMAL(15,2) amount VARCHAR(20) account type VARCHAR(20) transaction_type VARCHAR(50) customer_name VARCHAR(255) description DECIMAL(15,2) loan_amount DECIMAL(5,2) interest_rate VARCHAR(20) status tracks 0..* (C) LoanPayments o INT payment_id o INT loan_id TIMESTAMP payment_date o INT user_id o INT account_no DECIMAL(15,2) payment_amount DECIMAL(15,2) remaining balance

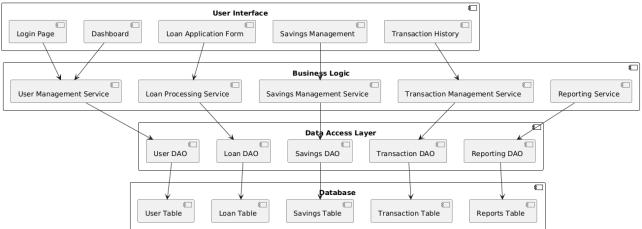
2.Object Diagram

user1 $user_id = 101$ insuranceProduct1 usemame = "john_doe" password = "password123" insurance id = 801 first_name = "John" last_name = "Doe" product_name = "Health Insurance" description = "Covers medical expenses" premium = 150.00 email = "john@example.com" phone_number = "123-456-7890" date_created = "2024-08-31 12:00:00" coverage_amount = 100000.00 term_length = 12 account_no = 1001 customer_name = "John Doe" administered by has works for customerProfile1 account1 customer_id = 501 employee1 customer_id = 501 adminProfile1 $user_id = 101$ account_number = "AC123456789" employee_id = 301 address = "123 Main St, Anytown, USA" $admin_id = 201$ user_id = 103 account_type = "Savings" date of birth = "1990-01-01" user $i\bar{d} = 102$ employee_name = "Jane Smith" joining_date = "2022-05-15" balance = 5000.00 gender = "M" role_description = "System Administrator" date_opened = "2023-01-01 09:00:00" occupation = "Software Engineer" status = "Active" annual_income = 75000.00 records associated with makes loan1 loan_id = 601 customer_id = 501 transaction1 transaction id = 401 account $\overline{no} = 1001$ customer_name = "John Doe" loan_amount = 10000.00 account no = 1001 transaction date = "2024-08-30 10:00:00" related to $amount = \overline{200.00}$ interest_rate = 5.00 loan_term = 36 transaction_type = "Deposit" description = "Monthly Savings Deposit" start date = "2024-09-01" end date = "2027-09-01" status = "Approved" tracks loanPayment1 payment_id = 701 loan_id = 601 payment_date = "2024-09-30 12:00:00" payment_amount = 300.00 remaining_balance = 9700.00 user_id = 101 account_no = 1001

Microfinance Banking System - Object Diagram

3.Component Diagram

Microfinance Banking System - Component Diagram

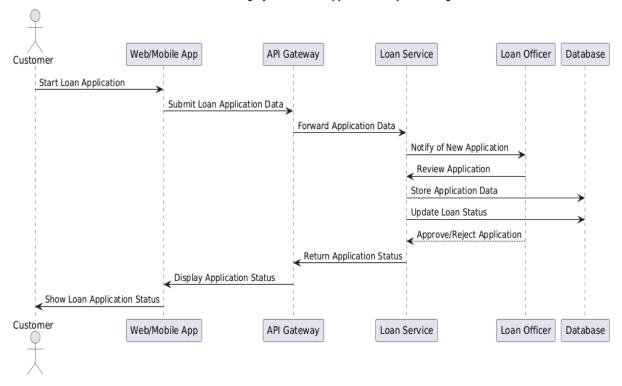


4. Deployment Diagram

Microfinance Banking System - Deployment Diagram Client Device Web Browser НТТР Web Server Mobile App Reporting Service User Management Service Savings Management Service REST API Loan Processing Service Transaction Management Service Application Server API Gateway Security Module Business Logic JDBC API Calls Secure Connection Database Server User Table Loan Table Savings Table Database Backup Server Transaction Table Reports Table Backup Storage

5.Sequence Diagram

Microfinance Banking System - Loan Application Sequence Diagram



Microfinance Banking System - Loan Application State Chart



Microfinance Banking System - Loan Application Activity Diagram

