EVCarLoan



Project Team-3 Members:

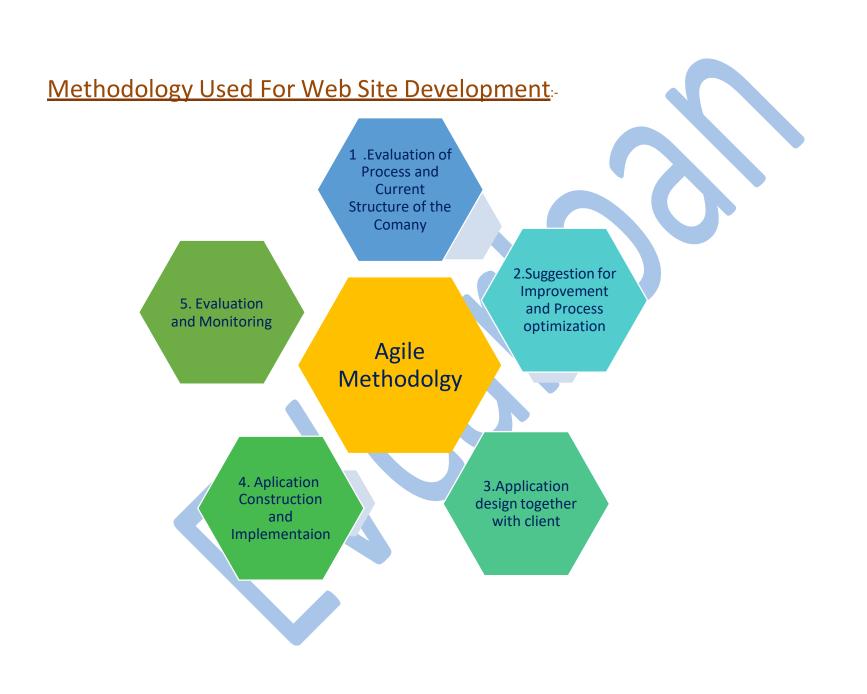
- Poonam Jadhav (Team Leader)
- Rupali Dhamak
- Gajanan
- Mohini
- Shamma
- Vrushali

Chapter-1: Introduction

*Car Loan:-

The main objective of that project is to buy a EVCar in finance Loan Company and to implement all the loan process by developing a code. First here, if we want to buy Car then we will go to Enquiry and he will explain the whole process to us and gives a Car quotation to you. If we do not have that much money in current situation then he will suggest us for take a loan.

As already some banks have tied up with them e.g. ICICI, HDFC, SBI, and some other finance companies. Then they will suggest us those providers and there's one relation executive person will contact you and explain all the process of Loan. Every bank has different process.



Agile Methodology Relationship Executive:

Relationship executives identify and pursue business relationships with corporate and business unit executives. They create new business opportunities through customer relationships, while also providing value to customers through professional services agreements and solution sales. Relationship executives also establish strategic relationships with internal departments, including sales, marketing and business development teams. They use their internal and external relationships to develop sales strategies and service offerings that enable new opportunities for business and revenue growth.

Operational Executive:-

The Operations Executive is responsible for the part of the workplace team that directly manages the operations and maintenance of facilities. The Operations Executive can report to various parts of the company such as the Facilities Executive, Chief Financial Officer or Chief Operations Officer, but usually has direct access to senior management

Credit Manager:-

A Credit Manager is responsible to manage the credit department and make decisions concerning credit limits, document verification, acceptable levels of risk, terms of payment and enforcement actions with their customers. Approving and rejecting loans based on available data. Calculating and setting loan interest rates. Negotiating the terms of the loan with new clients. Ensuring all loans and lending procedures comply with regulations. Maintaining records of all company loans.

CIBIL Module:-

In this Module, the Opreational Executive checks the cibil score of particular applied person by entering the pan id of the applied person or checks any history of that person in the database. This gives the information about the person's cibil score, personal information, contact information, employment information, account information, loan enquiry information, persons existing loans if any. This cibil report also gives the information about check bounce, ecs bounce, ecs bounce on date payment, fourth closed loan, ecs bounce late payment. This helps the manager to check out the persons cibil score which tells the institution how likely the applicant pay back a loan based on past credit usage and loan repayment behavior. High credit score leads to the eligibility for particular loan and Low credit score leads to rejection for particular loan.

OPERATING ENVIRONMENT

HARDWARE AND SOFTWARE Hardware Requirements for Server:

Processor : Intel(R) Core(Tm)i3 2.4 GHz

Memory size : 6GB RAM Storage : 1TB Hard Disk

• Display : EGA/VGA Color Monitor, 600 x 800 Pixels Resolution, High Color

Internet Connection : Required

Key Board : Any with minimum required

keys Mouse : Any

Software Requirements:

• Operating System : Windows 7 and above 10

Front-End Tool : ANGULAR 14.2.0

• BackendTool : Eclipse\jee-2022-06(Java, Spring boot, WebService)

Web Server : Tomcat 8.0

Back-End Tool : MySQL Query Browser 1.1.20

Requirements for Client:

• Processor : Intel(R) Core(Tm) i3 2.4 GHz

Memory size : 4GB RAM

Storage : 500 GB Hard Disk

• Display : EGA/VGA Color Monitor, 600 x 800 Pixels Resolution, High Color

Key Board : Any with minimum required keys

Internet Connection : Required

• Mouse : Any

DETAIL DESCRIPTION OF TECHNOLOGY USED:

<u>JAVA 8</u> is a major feature release of JAVA programming language development. Its initial version was released on 18 March 2014. With the Java 8 release, Java provided supports for functional programming, new JavaScript engine, new APIs for date time manipulation, new streaming API, etc.

FEATURES OF JAVA:

- 1. Lambda expression Adds functional processing capability to Java.
- 2. Method references Referencing functions by their names instead of invoking them directly. Using functions as parameter.
- 3. Default method Interface to have default method implementation.
- 4. New tools New compiler tools and utilities are added like 'jdeps' to figure out dependencies.
- 5. Stream API New stream API to facilitate pipeline processing.
- 6. Date Time API Improved date time API.
- 7. Optional Emphasis on best practices to handle null values properly.
- 8. Random -Random numbers within a specific range of type integer, float, double, long, and boolean can be generated in Java.

HIBERNATE:-

Hibernate is a Java framework that simplifies the development of Java application to interact with 8 | P a g e the database. It is an open source, lightweight, ORM (Object Relational Mapping) tool. Hibernate implements the specifications of JPA (Java Persistence API) for data persistence. Following are the advantages of hibernate

Framework:-

- 1) Open Source and Lightweight Hibernate framework is open source under the LGPL license and lightweight.
- 2) Fast Performance The performance of hibernate framework is fast because cache is internally used in hibernate framework. There are two types of cache in hibernate framework first level cache and second level cache. First level cache is enabled by default.
- 3) Database Independent Query HQL (Hibernate Query Language) is the object-oriented version of SQL. It generates the database independent queries. So you don't need to write database specific queries. Before Hibernate, if database is changed for the project, we need to change the SQL query as well that leads to the maintenance problem.
- 4) Automatic Table Creation Hibernate framework provides the facility to create the tables of the database automatically. So there is no need to create tables in the database manually.
 - 5) Simplifies Complex Join Fetching data from multiple tables is easy in hibernate framework
- 6) Provides Query Statistics and Database Status Hibernate supports Query cache and provide statistics about query and database status.

MySQL:

MySQL is a relational database management system based on SQL – Structured Query Language. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications. The most common use for MySQL however, is for the purpose of a web database. MySQL is not a programming language. Instead, it is a relational database management system (RDBMS). It is used to store data, not to write programs. The SQL programming language can be used to program a MySQL database.

MAVEN:

Maven is an automation and management tool developed by Apache Software Foundation. ... In Yiddish language the meaning of Maven is "accumulator of knowledge". It is written in Java Language and used to build and manage projects written in C#, Ruby, Scala, and other languages. Maven is a powerful project management tool that is based on POM (project object model). It is used for projects build, dependency and documentation. It simplifies the build process like ANT. ... In short terms we can tell maven is a tool that can be used for building and managing any Java.

SPRING BOOT:

Spring Boot is an open source Java-based framework used to create a micro Service. It is developed by Pivotal Team and is used to build stand-alone and production ready spring applications.

Spring Boot is basically an extension of the spring framework which eliminated the boilerplate configurations required for setting up a spring application.

Spring Boot is a lightweight framework that takes most of the work out of configuring Spring-based applications. In this tutorial, you'll learn how to use Spring Boot's starters, opinions, and executable JAR file structure to quickly create Spring-based applications that "just run".

Spring Boot Rest API Example Writing Restful services in Spring Boot is no-different than Spring MVC. If you are a REST Client [Rest Consumer], Spring Boot provides Rest Template Builder that can be used to customize the Rest Template before calling the REST endpoints.

ANGULAR:

Angular is an application design framework and development platform for creating efficient and sophisticated single-page apps.

These Angular docs help you learn and use the Angular framework and development platform, from your first application to optimizing complex single-page apps for enterprises.

FEATURES AND BENEFITS:--

CROSS PLATFORM

- 1. Progressive Web Apps Use modern web platform capabilities to deliver app-like experiences. High performance, offline, and zero-step installation.
- 2. Native Build native mobile apps with strategies from Cordova, Ionic, or Native Script.
- 3. Desktop Create desktop-installed apps across Mac, Windows, and Linux using the same Angular methods you've learned for the web plus the ability to access native OS APIs.

PRODUCTIVITY

- 1. Templates Quickly create UI views with simple and powerful template syntax.
- 2. Angular CLI Command line tools:
 - start building fast, add components and tests, then instantly deploy.
- 3. IDE's Get intelligent code completion, instant errors, and other feedback in popular editors and

SPEED AND PERFORMANCE

- 1. Code Generation Angular turns your templates into code that's highly optimized for today's JavaScript virtual machines, giving you all the benefits of hand-written code with the productivity of a framework.
- 2. Code Splitting Angular apps load quickly with the new Component Router, which delivers automatic codesplitting so users only load code required.

Proposed System

The proposed software will solve all the problems they are facing now. Loan is still perceived as a huge burden for many countries. While loans are known to take off that burden off, it still gives nightmare to people and they avoid availing a loan. However, a loan can be a solution to many of your financial problems. A EvCarLoan helps you purchase a EV Vehicle your choice and pay for it in equated monthly installments (EMIs). Car loans are available for both salaried and selfemployed individuals. Bank provides Car Loan loans on easy terms. You will come to us where our representative will help you complete the formalities and inform you if you are eligible for a loan on the spot. Once your loan application has been approved you can get your loan amount in short period of time.

Purpose of proposed system

- Interest rates and the loan details are also available at the click of a mouse.
- Bank Relation Executive can apply for a loan in behalf of customer and after approved it they can track their details from online.

- This system provides detail about the customers, their loan details, EMI details and its rate details.
- Using with this system admin can find customer easily and it's a paperless system so workload is reduced.
- The decision process becomes faster and more consistent.
- After registration and login Bank employee can use the system easily and also customer can view anyquery about loan details as well as EMI details in their profile. So this system saves time.

- Provides good communication for the Bank employee internally.
- In this system there is EMI (Equated Monthly installment) calculator.
- Provides a facility to generate the reports in Pdf,Excel format.

Advantages of the proposed System

- Entire activities of the Loan Process are recorded in the system.
- Customer Data is maintained.
- Reports generated will be more useful for management to take the quick business decisions.
- Customer database is maintained which will be helpful for intimating the service completion details and new offers.
- It helps with your CIBIL Score as CIBIL or Credit Scores are a summary of customer history in loan credits and repayments over a period of time

Objectives of System

The past several decades personnel function has been transformed from a relatively obscure record keeping staff to central and top level management function. There are many factors that have influenced this transformation like technological advances, professionalism, and general recognition of human beings as most important resources. A computer based management system is designed to

handle all the primary information required to calculate monthly statements of Customer Record which include monthly statement of any month. Separate database is maintained to handle all the details required for the correct statement calculation and generation. This project intends to introduce more user friendliness in the various activities such as record updating, maintenance, and searching. The searching of record has been made quite simple as all the details of the Customer can be obtained by simply keying in the identification of that Customer. Similarly, record maintenance and updating can also be accomplished by using the identification of Employee with all the details being automatically generated. These details are also being promptly automatically updated in the master file thus keeping the record absolutely up-to-date. The entire information has maintained in the database or Files and whoever wants to retrieve can't retrieve, only authorization user can retrieve the necessary information which can be easily be accessible from the file. The main objective of the entire activity is to automate the process of day to day activities of pay.

User Requirements Module:-

- Relational Executive
- Operational Executive
- Credit Manager
- Account Head
- Disbursement officer(Bank manager)
- TeleHead

Relational Executive:

Relational executives identify and pursue business relationships with corporate and business unit executives. They create new business opportunities through customer relationships, while also providing value to customers through professional services agreements and solution sales. Relationship executives also establish strategic relationships with internal departments, including sales, marketing and business development teams. They use their internal and external relationships to develop sales strategies and service offerings that enable new opportunities for business and revenue growth.

Operational Executive:

The Operations Executive is responsible for the part of the workplace team that directly manages the operations and maintenance of facilities. The Operations Executive can report to various parts of the company such as the Facilities Executive, Chief Financial Officer or Chief Operations Officer, but usually has direct access to senior management. On the basis of the submission of the required details & documents, the financial institution will analyze the application. From existing residential address to CIBIL score, complete information is thoroughly checked. Once the bank has validated all the details, loan amount is sanctioned.

Credit Manager:

Credit managers are responsible for overseeing the credit granting process for a company. Their job is to optimize company sales and reduce bad debt losses by maintaining the credit policy. They do this by assessing the creditworthiness of potential customers and conducting periodic reviews of existing customers. CM verify all the document one by one. Is all the document is verified

Account Head:

Then AH insert the sensation letter and send a mail to thecustomer that his loan his sanctioned, It is essentially made up of two parts, the principal amount and the interest on the principalamount divided across each month in the loan tenure. The EMI is always paid up to the bank or lender on a fixed date each month until the total amount due is paid up during the tenure.

Disbrusement Officer(Bank Manager):-

Approves the loan and decides sanction loan amount amount and sanction tenure period.

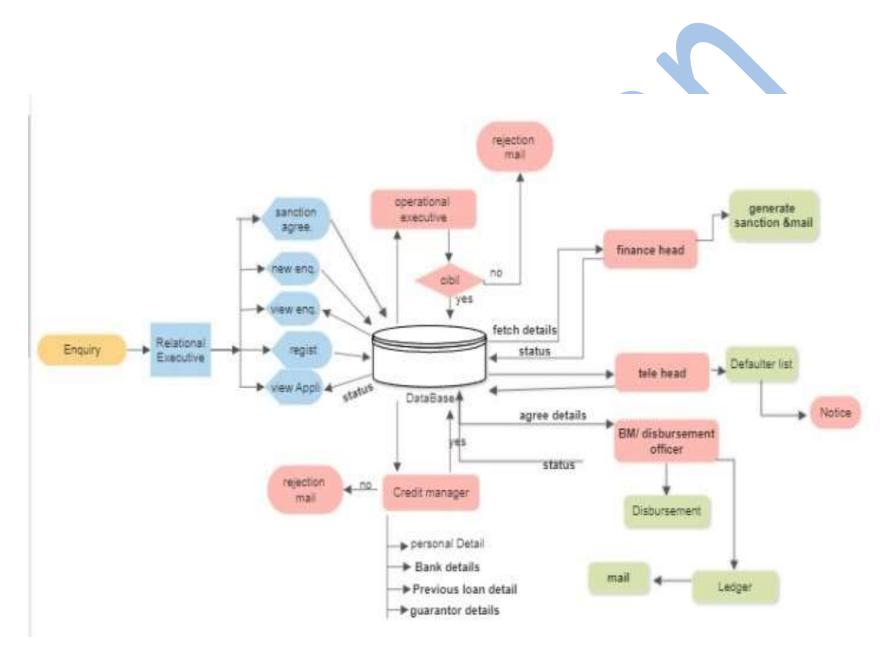
Once every thing ok and verified he can disbursed sanction loan amount to property builder account.

Emi Tracker(Emi View) will show the paid and unpaid months of customer which also called as ledger.

Telehead:-

Checks defaulter and send to Mail to customer and takes action accordingly.

Data Flow Diagram :- Dream Finance Car



Data flow:-

- 1. RE-Enquiry
- 2. OE-Check Cibil Score
- 3. Cibil Score good then go to RE
- 4.RE Take Document form user
- 5. User Give all needed Document to RE
- 6.RE send information CM
- 7. CM check User Document
- 8. CM see PreviousLoan
- 9.if Previous loan ok
- 10. CM pass to Account head.
- 11. Account head genarates Sanction letter send to User
- 12. User accept sanction Letter so BM pass the Disbursed Amount to customer, tracks loan paid unpaid.
- 13. Telehead checks Emi track if it defaulter and sents mail.

Step 1: Fill the application form

- Name of the applicant and co-applicant
- Current residential address
- Contact number
- Income of the applicant and co-applicant
- Education details
- Employment details
- Estimated property value
- Property details

These documents include

- Identity proof
- Address proof
- Income proof
- Age proof
- Bank statements
- IT return / Form-16
- Qualification proof
- Employment proof

Step 2: Processing fee payment

After you submit the application, you will have to pay a one-time non-refundable processing fee. This is the fee charged by banks and housing finance companies (GoldLoanFinanceLtd) for processing your loan application.



Processing fee is usually in the range of 0.5% - 1% of the loan amount. However, you may find certain lenders that offer to waive the processing fee. It's important to check with your lender about the processing fee before applying.

Step 3: Document verification and background check

All the documents that you submit with your loan application will be verified by the bank. This is an important stage and may take a few days for the bank to completely verify your documents. During the verification, the bank may also ask you for a face-to-face interview.

In addition to documents check, the lender will also perform your background check. This may include checking your residential address, your place of employment, your contact number, etc.

Step 4: Car Loan Approval

At this stage, the bank decides whether to approve your home loan or not. To make sure your home loan gets approved, it's important to submit all the required documents with correct information. If the bank finds any discrepancies, it reduces the chances of your loan approval.

Check out some of the key things that banks consider before approving your home loan:

- Your credit score
- Your income
- Your age
- Your current employment status
- Your existing debt obligations
- Your property details (like construction status, age, etc.)

Step 5: Car Loan sanction letter

Once the bank or housing finance company has decided to approve your home loan, they will issue a sanction /offer letter. The letter lists all the details of your home loan offer, including the loan amount, the rate of interest, loan tenure, the mode of loan repayment, and all other terms and conditions.

It's important that you read all the terms and conditions carefully. Once you have read the T&Cs, you will have to submit a signed copy of the offer letter to the bank.

Step 6: Verification of the Property

Before the bank disburses your loan, they will have to verify the property you are buying. You will have to submit all the original property documents, including the title deed, no objection certificate, seller's identity and address proof, etc.

The bank will conduct a legal check to ensure the property is free from any disputes. Following the legal check, it will conduct technical valuation of the property to know its fair value. This may involve analyzing the location, construction status, property age, quality of construction, maintenance, locality, etc.

Step 7: Loan disbursal

Once the bank completes the property verification, it will start drafting your home loan agreement along with all the agreed terms and conditions. You will have to sign the home loan agreement. After you sign the agreement and clear all other formalities, you will get the loan amount in your account.

Car Loan Documents Checklist

- 1. Completed and signed car loan application form
- 2. Latest passport size photographs

3. Identification proof (at least one proof required)

- Aadhar Card
- Driving License
- PAN
- Passport
- Voter ID
- Signature
- Thumb

4. Residence proof (at least one proof required)

- Utility bills (like Telephone bill, electricity bill, water bill)
- Ration card
- Passport
- Bank statement with your address or Passbook
- Employment letter
- Voter ID

5. Age proof (at least one proof required)

- Birth certificate
- Driving License
- PAN
- Aadhar Card
- Passport
- Passbook

6. Income documents

For salaried individuals:

- Copy of Form-16
- Copy of the latest Income Tax returns
- Latest Salary slips
- Salary increment letter (if any)

For self-employed individuals:

- Bank account statement
- Latest Balance Sheet and P&L statement
- Copy of Income Tax returns
- Proof of business address
- Copy of Form-16A (if applicable)
- Certificate of qualification (required for professionals like C.A., Doctor, etc.)
- Details of business license.

7. Property documents

- Sale deed or agreement to sell
- NOC (no objection certificate) from the builder or society
- Construction cost estimate
- · Receipts of property tax paid
- Receipts of tax paid for land/building
- Receipt of any payment made in advance to builder
- Approved building plan

How your credit score is calculated

The five pieces of your credit score

- 1. Your payment history accounts for 35% of your score.
- 2. How much you owe on loans and credit cards makes up 30% of your score.
- 3. The length of your credit history accounts for 15% of your score.
- 4. The types of accounts you have make up 10% of your score. Having a mix of accounts, including instalments loans, home loans, and retail and credit cards may help improve your score.
- 5. Recent credit activity makes up the final 10%. If you've opened a lot of accounts recently or applied to open accounts, it may suggest potential financial trouble and may lower your score.
- 6. Typically, a score of 750 or above is considered ideal to get your loan application approved by a lender such as a bank

How Banks Calculate Home Loan Interest Rate?

Home Loan Fees & Charges Prepayment charge

Conversion charges

If you wish to change your floating rate loan to a fixed rate loan, or vice versa, you will have to pay a one-time conversion charge.

Late payment fee

Legal fees

This is the amount charged by lenders for legal verification of your property documents.

Balance Transfer charge

You have to pay a balance transfer charge if you wish to transfer your loan balance from one lender to another.

Valuation charges

This charge is levied by the bank for the expenses incurred on valuation of the property.

MOD charge

The Memorandum of Deposit (MOD) is also one of the most important charges you have to pay while applying for a home loan.

Tracking Car Loan Application

Tracking car loan application using mobile number and date of birth.

Tracking car loan application using reference number

Tracking car loan application through net banking

Table Specification:

Table Name: Enquiry

Primary Key: enquiryId

Sr no.	Main Table	Pojo class	Fields	DataType	Sub Table	Realtionship
			enquiryId	Integer		
			customerName	String		
			pancardNumber	String	CibilScore	OneToOne
1	Enquiry Table	Enquiry	customerMobileNumber	Long		
			customerAlternateMobileNumb	Long		
			customerEmailId;	String		
			customerDateOfBirth;	String		
			enquiryStatus;	String		
			customerRegisterStatus	String		

Secondary class : Cibil table

Sr no.	Pojo class	Fields	DataType
		cibilld;	Integer
1.1	CibilScore	cibilScore	Integer
		cibilRemark;	String

Table Name: Customer Table

Primary Key: CustomerId

Sr no.	Main Table	Pojo class	Fields	DataType	Sub Table	Realtionship
			customerId;	Integer		
			customerName	String		
			customerDateOfBirth;	String	CustomerBankDetails	OneToOne
2	Customer T	Customer	customerGender;	String	CustomerProfessionalDetails	OneToOne
			maritalStatus;	String	PreviousLoanDetails	OneToOne
			loanAmount	Long	CustomerDocuments	OneToOne
			emailid	String	LoanDetails	OneToOne
			mobileNumber;	Long	PropertyDetails	OneToOne
			pancardNumber;	String	GuarantorDetails	OneToOne
			adhaarNumber;	String		
			address;	String		
			documentStatus	String		

Table Name: Customer Bank Details(Seconadry)

Primary Key: BankDetailsId

Sr no.	Pojo class	Fields	DataType
		bankDetailsId;	Integer
2.1	CustomerBankDetails	bankName;	String
		bankAccountNumber	Long
		ifscCode;	String

Table Name: CustomerProfessionalDetails (Seconadry)

Primary Key: customerProfessionalDetailsId ankDetailsId

Sr no.	Pojo class	Fields	DataType
		customerProfessionalDetailsId	Integer
2.2	CustomerProfessionalDetails	companyName	String
		designation	String
		monthlyIncome	Long

Table Name: Previous Loan Details (Seconadry)

Primary Key: previousLoanDetailsId

Sr.no	Pojo class	Fields	DataType
		previous Loan Details Id	Integer
2.3	PreviousLoanDetails	loanAmount	Long
		loanTenure	Integer
		paidAmount	Long
		remainingAmount	Long
		defaulterCount	Integer
		bankName	String

Table Name: CustomerDocuments (Seconadry)

Primary Key: documentId

Sr.no	Pojo class	Fields	DataType
		documentId	byte
2.4	CustomerDocuments	panCard	byte
		photo	byte
		adharCard	byte
		salarySlips	byte
		bankStatement	Byte
		addressProof	byte

Table Name: LoanDetails (Seconadry)

Primary Key: loanDetailsId

Sr.no	Pojo class	Fields	DataType
		loan Details Id	Integer
		expectedLoanAmount	Long
2.5	LoanDetails	expectedLoanTenure	Integer
		expectedEmiAmount	Long
		loanStatus	String
		loan Disbursed Status	String

Table Name: PropertyDetails (Seconadry)

Primary Key: propertyld

Sr.no	Pojo class	Fields	DataType	Realtionship
		propertyld	Integer	
2.6	PropertyDetails	propertyAddress	String	
		propertyName	String	
		propertyStatus	String	OneToOne
		propertyAgreementAmount	Double	

Table Name: BuilderDetails (Seconadry of Property)

Primary Key: builderDetailsId

Sr.no	Pojo class	Fields	DataType
		builderDetailsId	Integer
2.6.1	BuilderDetails	builderName	String
		builderBankName	String
		builderAccountNumber	Integer
		bankIfscNumber	String or (Long)

Table Name GuarantorDetails (Seconadry of Property)

Primary Key: guarantorDetailsId

Sr.no	Pojo class	Fields	DataType
		guarantorDetailsId	Integer
2.7	GuarantorDetails	gurantorName	String
		relation	String
		mobileNumber	Long
		designation	String

Table Name Emi Table

Primary Key: emiDetailsId

Sr no.	Main Table	Pojo class	Fields	DataType	Sub Table	Realtionship
			emiDetailsId	Integer		
			emiStatus	String		
			emiAmount	Long	SanctionedLoan	OneToOne
3	Emi Table	EmiDetails	emiTenure	Integer		
			emiPaid	String		
			defaultorCount	Integer		



Table Name SanctionedLoan

Primary Key: sanctionedLoanId

Sr.no	Pojo class	Fields	DataType	
		sanctionedLoanId	Integer	
3.1	SanctionedLoan	sanctionedLoanAmount	Long	
		sanctionedTenure	Integer	
		emi	Float	
		disbursedAmount	Long	
		customerName Strir		
		customerId	Integer	
		defaultorCount	Integer	

Email Sending

Sr no.		Pojo class	Fields	DataType
			toEmail	String
4	Email	EmailSender	fromEmail	String
			subject	String
			message	String