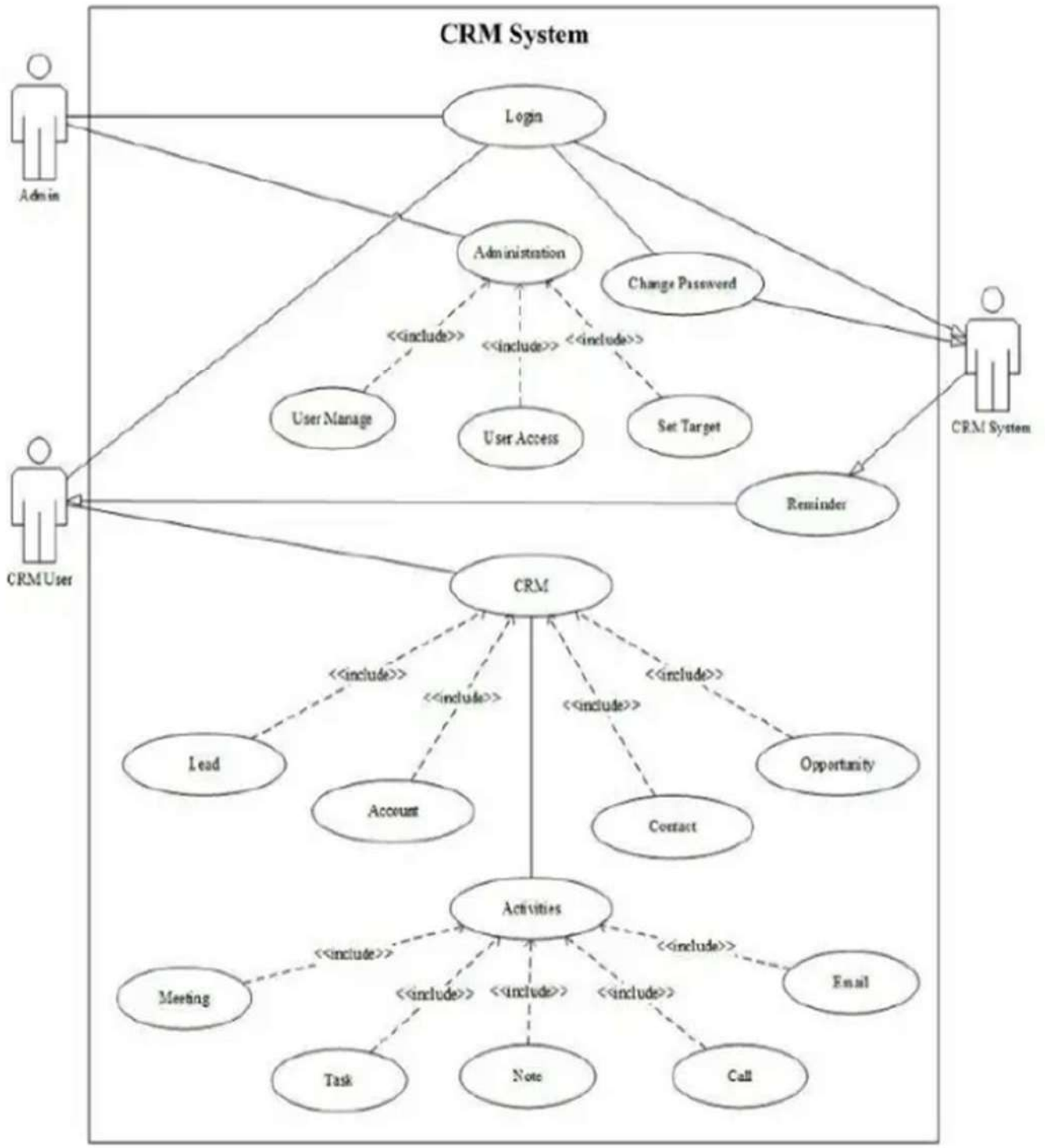
Waterfall Deliverables – Part -2/2

Waterfall Model Documents

Document 6- Please prepare a use case diagram, activity diagram and a use case specification document.



Use Case Specification -

Table 3.4.1 Describes about "login" process of our project and it gives us an Understanding how the process works in project. Login process has three primary Paths. In this three primary path have two exceptional paths.

Table 3.4.1: Use case description of Login

Use case name:	Login
Actor:	Admin, CRM User
Pre-condition:	None
Primary Path:	1. Enter user Email 2. Enter Password 3. Click "Login" Button
Exceptional Path:	3.1 Please Enter Registered Email 3.2 Email or Password is not valid

Table 3.4.2 Describes about "Change Password" process of our project. Change Password process has four primary paths. In this four primary path have two Exceptional paths.

Table 3.4.2: Use case description of Change Password

Use case name:	Change Password
Actor:	Admin, CRM User
Pre-condition:	Login
Primary Path:	1. Enter Old Password 2. Enter New Password 3. Confirm New Password 4. Click "Change Password" Button
Exceptional Path:	3.1 Please enter the same value 4.1 Your old password is incorrect

Table 3.4.3 Describes about "User Manage" process of our project and it gives us an understanding how this process works in project. User Manage process has eight primary paths. In this eight primary path have two exceptional paths.

Table 3.4.3: Use case description of User Manage.

Use case name:	User Manage
Actor:	Admin
Pre-condition:	Login
Primary Path:	1. Enter Employee Information 2. Select Employee Category 3. Click "Go" Button to search 4. Select Number of List 5. Click "Edit" Button to Update Employee Information 6. Click "Delete" Button to Delete Employee Information 7. Click "Access" Button to Access Employee Information 8. Click "Add New" Button to Create Employee
Exceptional Path:	1.1 Employee Information is not correct 3.1 List of Employee is empty

Table 3.4.4 Describes about "User Access" process of our project and it is gives us an understanding how this process works in project. User Access process has three primary paths. In this three primary path have two exceptional paths.

Table 3.4.4: Use case description of User Access.

Use case name:	User Access
Actor:	Admin
Pre-condition:	Login
Primary Path:	1. Enter Employee Information 2. Click "Go" Button to search 3. Select Number of List
Exceptional Path:	1.1 Employee Information is not correct 2.1 No search result found

Table 3.4.5 Describes about "Set Target" process of our project and it gives us an understanding how this process works in project. Set Target process has five primary paths. In this five primary paths have two exceptional paths.

Table 3.4.5: Use case description of Set Target.

Use case name:	Set Target
Actor:	Admin
Pre-condition:	Login
Primary Path:	1. Enter Employee Name 2. Or click "Search" Button to add Employee 3. Select Target Year 4. Enter Value (Amount in Taka) 5. Click "Create Sales Target" Button
Exceptional Path:	1.1 No matches found 3.1 No matches found

Table 3.4.6 Describes about "Lead" process of our project and it gives us an understanding how this process works in project. Lead process has seven primary paths. In this seven primary path have two exceptional paths.

Table 3.4.6: Use case description of Lead.

Use case name:	Lead
Actor:	CRM User
Pre-condition:	Login
Primary Path:	1. Enter Leads Information 2. Select Leads Category 3. Click "Go" Button to search 4. Select Number of List 5. Click "Edit" Icon to Update Lead 6. Click "Delete" Icon to Delete Lead 7. Click "Add New" Button to Create Lead
Exceptional Path:	1.1 Lead Information is not correct 3.1 List of Leads is empty

Table 3.4.7 Describes about "Account" process of our project and it gives us an understanding how this process works in project. Account process has seven primary paths. In this seven primary path have two exceptional paths.

Table 3.4.7: Use case description of Account.

Use case name:	Account
Actor:	CRM User
Pre-condition:	Login
Primary Path:	1. Enter Accounts Information 2. Select Accounts Category 3. Click "Go" Button to search 4. Select Number of List 5. Click "Edit" Icon to Update Accounts 6. Click "Delete" Icon to Delete Account 7. Click "Add New" Button to Create Account

Table 3.4.8 Describes about "Contact" process of our project and it gives us an understanding how this process works in project. Contact process has eight primary Paths. In this eight primary path have two exceptional paths.

Table 3.4.8: Use case description of Contact.

Use case name:	Contact
Actor:	CRM User
Pre-condition:	Login
Primary Path:	1. Enter Contacts Information 2. Select Contacts Category 3. Select Industry Category 4. Click "Go" Button to search 5. Select Number of List 6. Click "Edit" Icon to Update Contacts 7. Click "Delete" Icon to Delete Contact 8. Click "Add New" Button to Create Contacts
Exceptional Path:	1.1 Contact Information is not correct 4.1 List of Contacts is empty

Table 3.4.9 Describes about "Opportunity" process of our project and it gives us an understanding how this process works in project. Opportunity process has six primary paths. In this six primary path have two exceptional paths.

Table 3.4.9: Use case description of Opportunity.

Use case name:	Opportunity
Actor:	CRM User
Pre-condition:	Login
Primary Path:	1. Enter Opportunities Information 2. Click "Go" Button to search 3. Select Number of List 4. Click "Edit" Icon to Update Opportunities 5. Click "Delete" Icon to Delete Opportunity 6. Click "Add New" Button to Create Opportunities
Exceptional Path:	1.1 Opportunity Information is not correct 2.1 List of Opportunities is empty

Table 3.4.10 Deseribes about "Meeting" process of our project and it gives us an understanding how this process works in project. Meeting process has seven primary paths. In this seven primary path have two exceptional paths.

Table 3.4.10: Use case description of Meeting.

Use case name:	Meeting
Actor:	CRM User
Pre-condition:	Login
Primary Path:	1. Enter Meeting Information 2. Select Meeting Category 3. Click "Go" Button to search 4. Select Number of List 5. Click "Edit" Icon to Update Meeting 6. Click "Delete" Icon to Delete Meeting 7. Click "Add New" Button to Create

Table 3.4.11 Describes about "Task" process of our project and it gives us an Understanding how this process works in project. Task process has seven primary paths. In this seven primary path have two exceptional paths.

Table 3.4.11: Use case description of Task.

Use case name:	Task
Actor:	CRM User
Pre-condition:	Login
Primary Path:	1. Enter Task Information 2. Select Task Category 3. Click "Go" Button to search 4. Select Number of List 5. Click "Edit" Icon to Update Tasks 6. Click "Delete" Icon to Delete Task 7. Click "Add New" Button to Create Task
Exceptional Path:	1.1 Task Information is not correct 3.1 List of Task is empty

Table 3.4.12 Describes about "Note" process of our project and it gives us an understanding how this process works in project. Note process has six primary paths. In this six primary path have two exceptional paths.

Table 3.4.12: Use case description of Note.

Use case name:	Note
Actor:	CRM User
Pre-condition:	Login
Primary Path:	1. Enter Note Information 2. Click "Go" Button to search 3. Select Number of List 4. Click "Edit" Icon to Update Notes 5. Click "Delete" Icon to Delete Note 6. Click "Add New" Button to Create Note
Exceptional Path:	1.1 Note Information is not correct 2.1 List of Note is empty

Table 3.4.13 Describes about "Call" process of our project and it gives us an understanding how this process works in project. Call process has seven primary paths. In this seven primary path have two exceptional paths.

Table 3.4.13: Use case description of Call.

Use case name:	Call
Actor:	CRM User
Pre-condition:	Login
Primary Path:	1. Enter Call Information 2. Select Call Category 3. Click "Go" Button to search 4. Select Number of List 5. Click "Edit" Icon to Update Calls 6. Click "Delete" Icon to Delete Call 7. Click "Add New" Button to Create Call

Table 3.4.14 Describes about "Email" process of our project and it gives us an understanding how this process works in project. Email process has five primary paths. In this five primary path have two exceptional paths.

Table 3.4.14: Use case description of Email.

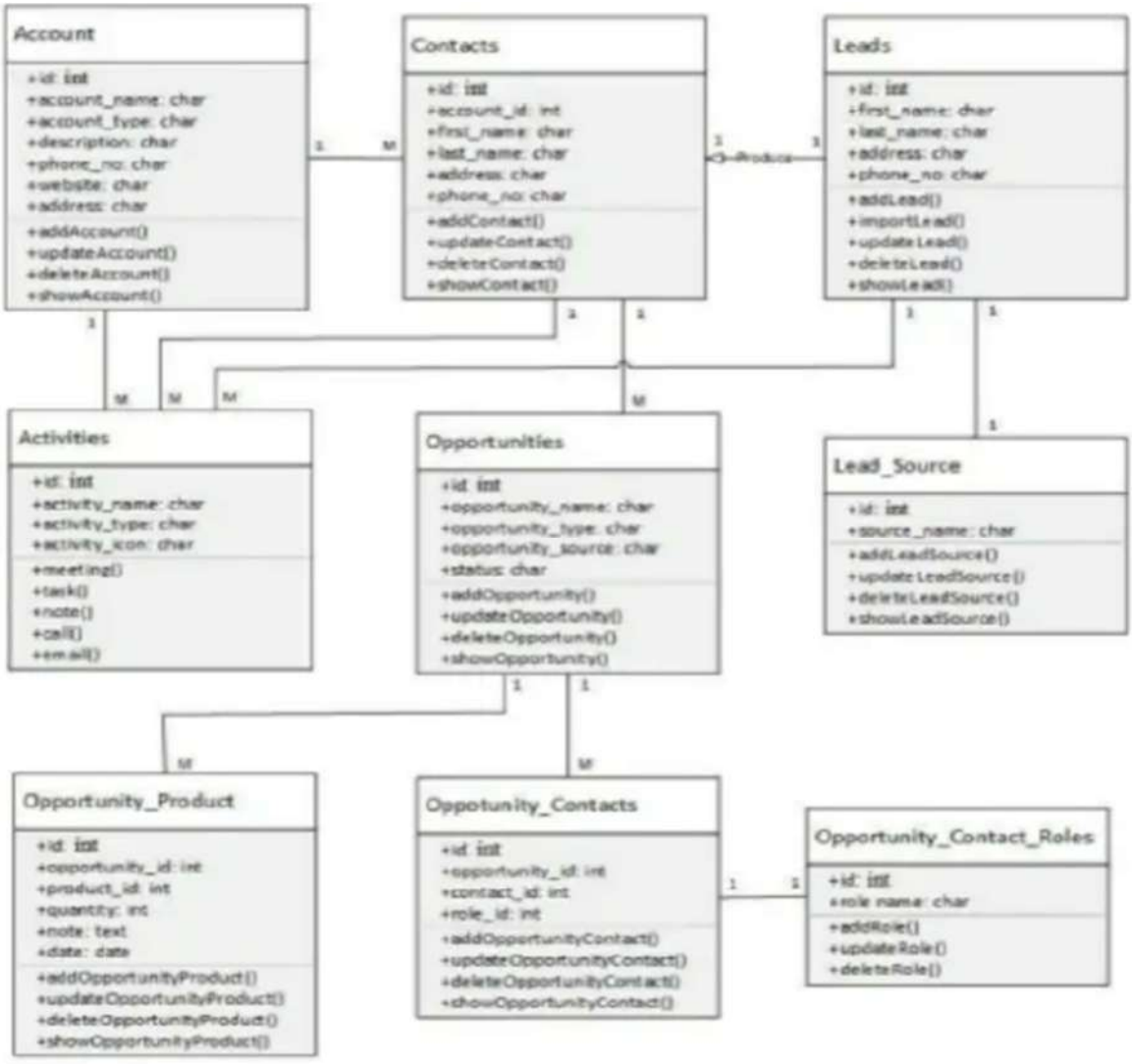
Use case name:	Email
Actor:	CRM User
Pre-condition:	Login
Primary Path:	1. Enter Email Information 2. Click "Go" Button to search 3. Select Number of List 4. Click "Subject Title" to see Email details 5. Click "Compose" Button to Create Email
Exceptional Path:	1.1 Email Information is not correct 2.1 List of Email is empty

4.2 UML Class Diagram:

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

Class diagram shows a collection of classes, interfaces, associations, collaborations,

and constraints. It is also known as a structural diagram.



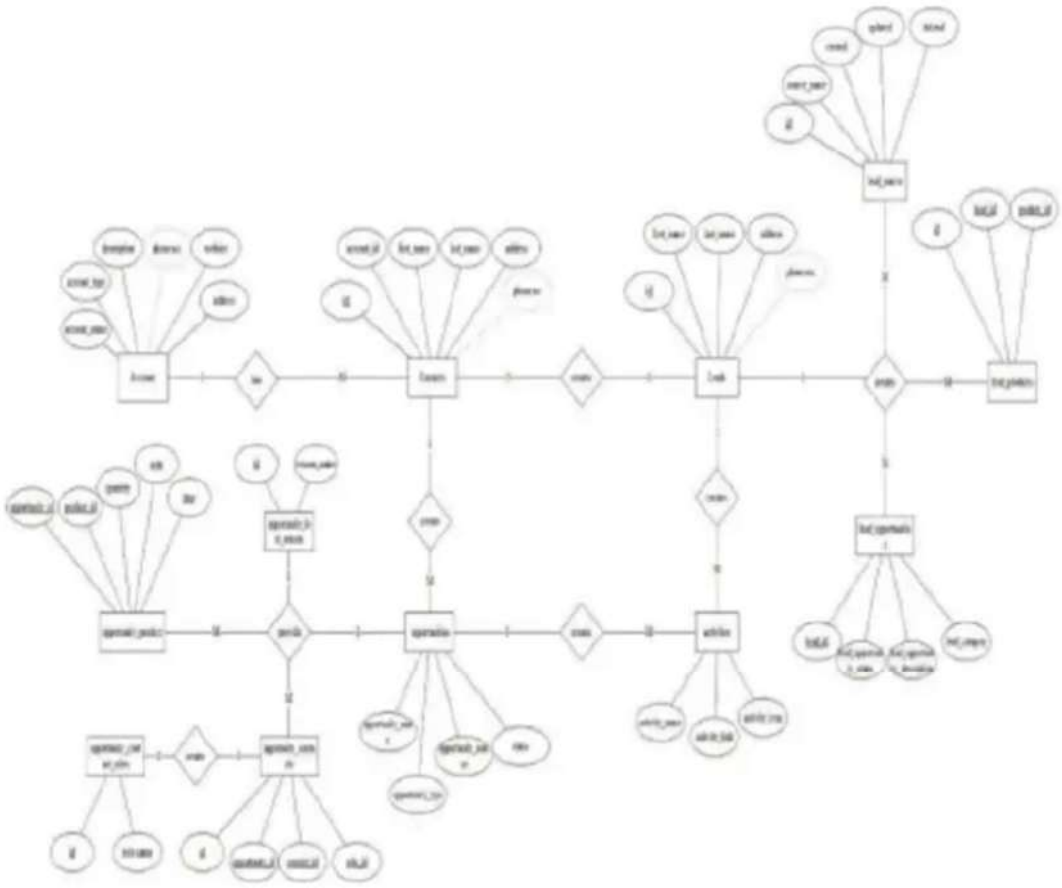
Database Design

A database design is a collection of stored data organized in such a way that the data requirements are satisfied by the database. The general objective is to make information access easy, quick, inexpensive and flexible for the user. There are also some specific objectives like controlled redundancy from failure, privacy, security and performance. A collection of relative records makes up a table. To design and store data to the needed forms Primary keyti - A primary key is a special relational database table column (or combination of columns) designated to uniquely identify

all table records. or group of columns in a relational database table that provides a link between data in two tables.

E-R diagram

Entity Relationship Diagram, also known as ERD, ER Diagram or ER model, is a type of structural diagram for use in database design. An ERD contains different symbols and connectors that visualize two important information; the major entities within the system scope, and the inter-relationships among these entities.



debug relational databases in the fields of software engineering, business information systems, education and research. They use a defined set of symbols such as rectangles, diamonds, ovals and connecting lines to depict the interconnectedness of entities, relationships and their attributes.

Document7- Screens and pages

Please follow the following steps to create the mock-ups

1. Kindly use balsamic or Axure.

2. Always start with a home page of an application.

3. Take a feature and follow it to the end

a. Eg: Home page of SCRUM Foods

b. Select Login- Create a login page

c. Let's assume, you want to search a restaurant

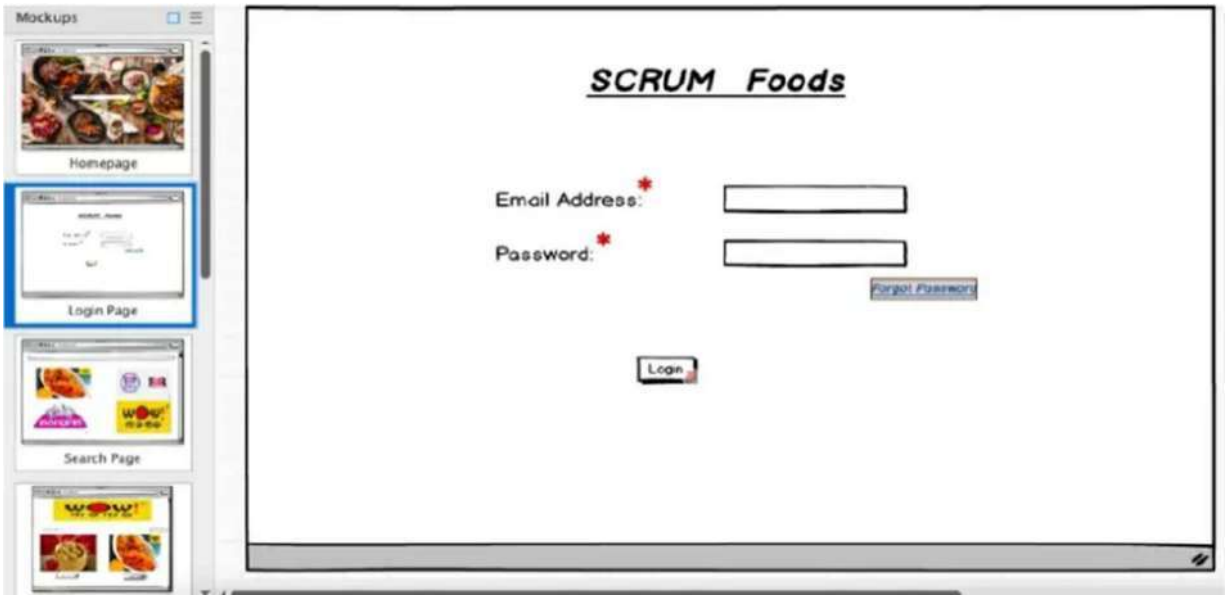
d. Search page- Type the restaurant name and select the dish

e. Add to cart page

f. Payment page

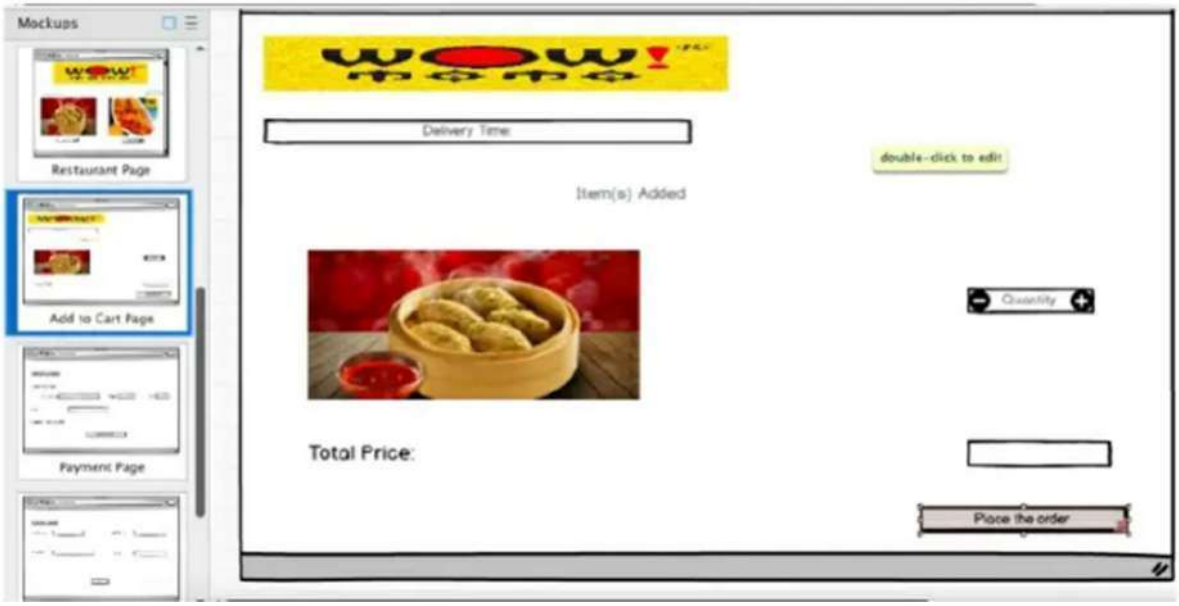
g. Logout page

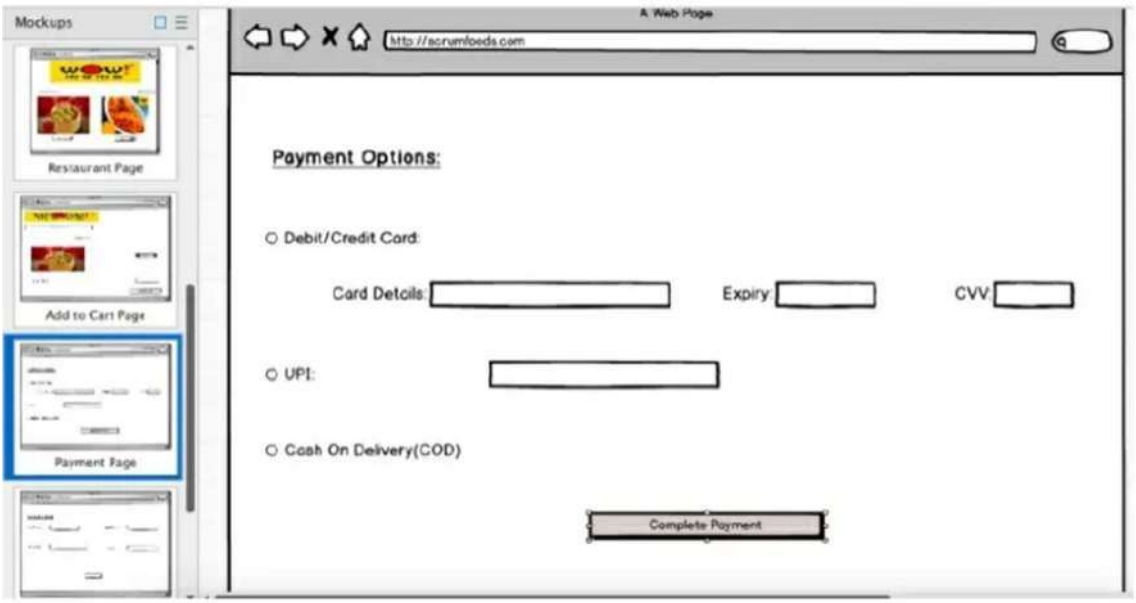
Page 1

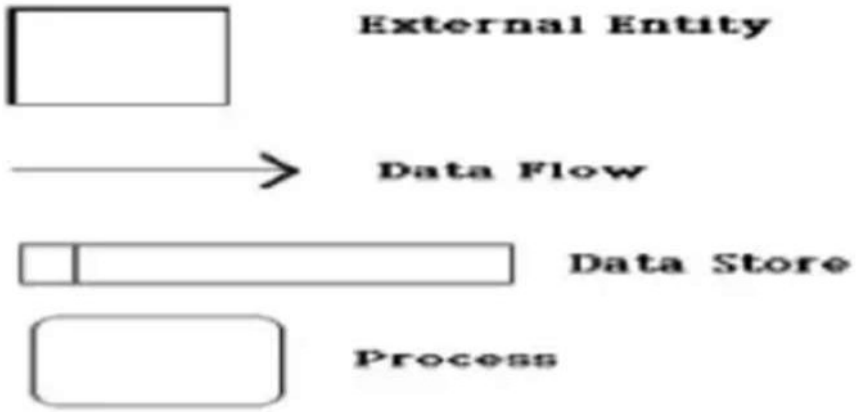



Mockups
Homepage
Login Page
Search Page
Search a Restaurant
monginis
WOW! momo


Mockups
Restaurant Page
Add to Cart Page
Payment Page
WOW! momo
Recommended Dishes
Add to Cart
Add to Cart


Mockups
Restaurant Page
Add to Cart Page
Payment Page
wow! momo
Delivery Time:
double-click to edit
Item(s) Added
Quantity
Total Price:
Place the order

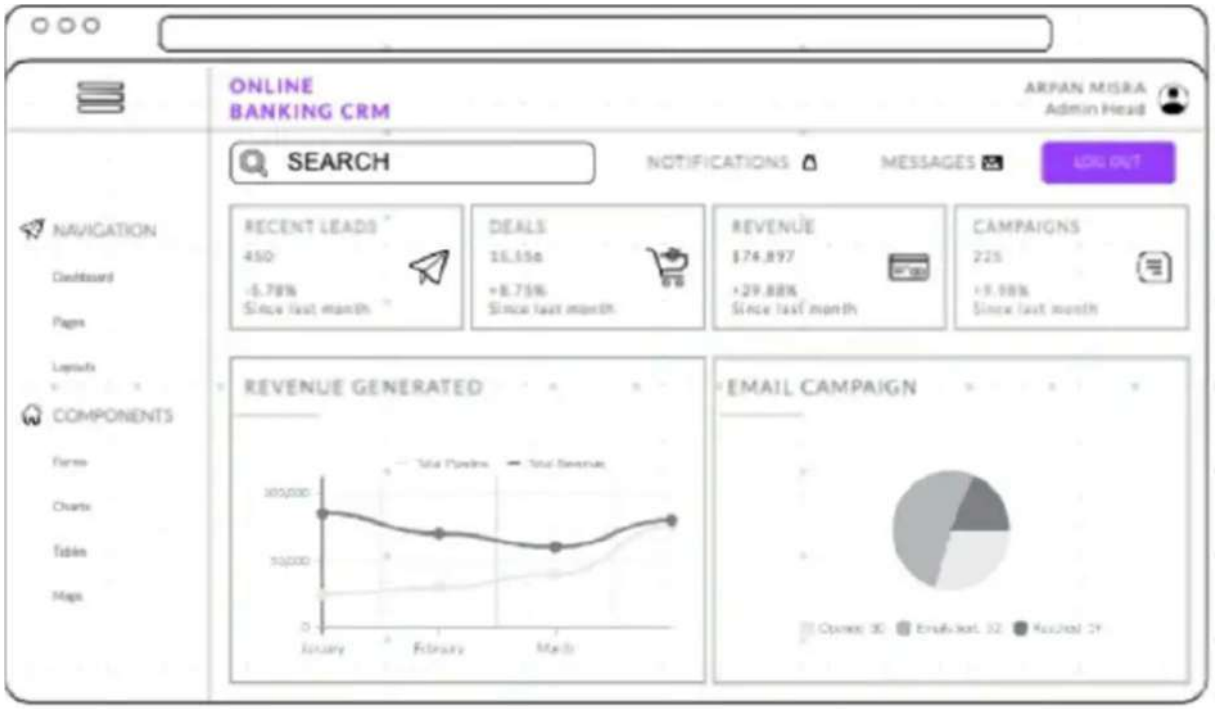

Mockups
Restaurant Page
Add to Cart Page
Payment Page
A Web Page
http://scrumfoods.com
Payment Options:
Debit/Credit Card:
Card Details:
Expiry:
CVV:
UPI:
Cash On Delivery(COD)
Complete Payment

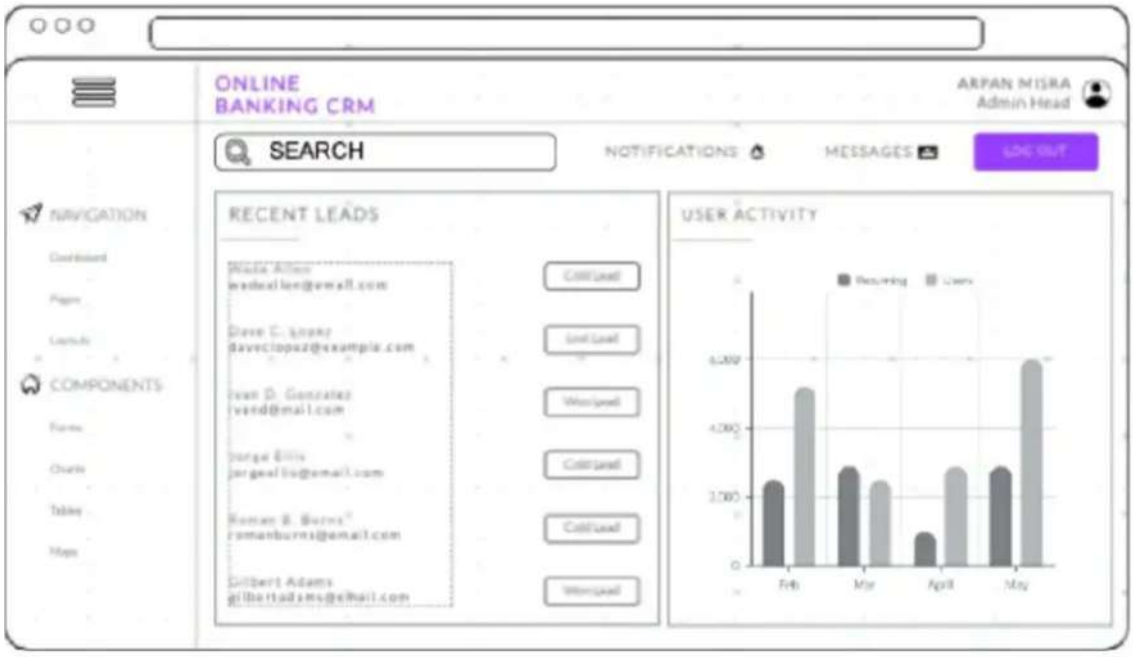


These are symbols that represent data flows, data sources, data transformations and Data storage. The points at which data are transformed are represented by enclosed Figures, usually circles, which are called nodes.

Document 8- Tools-Visio and Axure

Write a paragraph on your experience using Visio and Axure for the project.





Balsamic Wireframes is a user interface design tool for creating wireframes (sometimes called mock-ups or low-fidelity prototypes). You can use it to generate digital sketches of your idea or concept for an application or website, to facilitate discussion and understanding before any code is written.

Balsamiq Mock-ups is an effective tool for presenting the software requirements in the form of wireframes. This helps the software development team to visualize how the software project will look like in the very early stages of development

Document 9- BA experience

My experience as BA in following phases:

1. Requirement gathering:

Currently, leaders in the banking sector aim to save their companies from bankruptcy and retain existing clients as well as simplify the on boarding of new ones. That's why banking can't go without CRM. In addition to that, Employees will have all the necessary tools to gather clients' data that helps them deliver more personalized service and increase customer engagement.

Function	Tests Performed	Results
Inquire user	• Verify all required input validated. • Make sure all the required information appeared and same content as database.	Pass
Add user	• Verify all required input validated. • Make sure all input data stored in database.	Pass
Edit user	• Verify all required input validated. • Make sure all modified data stored in database.	Pass
Delete user	• Verify all required input validated. • Make sure deleted data removed from database.	Pass
Customer Inquiry	• Verify all required input validated. • Make sure all the required information appeared and same content as database. • Verify all data transferring from pervious input is correct. • Make sure all calculations are correct.	Pass
Channel Affinity measuring by transactions	• Verify all input validated. • Verify all data transferring from pervious input is correct. • Make sure all the required information appeared. • Make sure all displayed data is from a selected time interval. • Make sure all calculations are correct. • Check all the displayed data transfer to string correctly.	Pass

Function	Tests Performed	Results
Channel Affinity measuring by customers applying	• Verify all input validated. • Verify all data transferring from pervious input is correct. • Make sure all the required information appeared. • Make sure all displayed data is from a selected range of age or a selected type of gender. • Make sure all calculations are correct. • Check all the displayed data transfer to string correctly.	Pass
Percentile Analysis by customer personal information groups	• Verify all input validated. • Verify all data transferring from pervious input is correct. • Make sure all the required information appeared. • Make sure all displayed data is from a selected range of age, a selected type of gender, or a selected type of account. • Make sure all calculations are correct. • Check all the displayed data transfer to string correctly.	Pass
Percentile Analysis by account groups	• Verify all input validated. • Verify all data transferring from pervious input is correct. • Make sure all the required information appeared. • Make sure all displayed data is from a selected range of account balance, or a selected duration/term. • Make sure all calculations are correct. • Check all the displayed data transfer to string correctly.	Pass

With our extensive experience, we can develop and implement a variety of software solutions for companies in e-commerce and e-learning, logistics and booking, fintech, healthcare and recruiting sectors. With banking CRM, financial companies and organizations can increase productivity, improve employee efficiency and speed up business processes. In addition to that, the CRM system addresses the following-

- enabling bearer storing and using the information on potential and existing customers
- enabling visualizing information;
- generating a variety of reports to gain in-depth insights;
- streamlining document management;
- Minimizing the number of mundane administrative tasks.

At the very start, our Business Analyst had an interview with stakeholders to elicit all the requirements for the future solution. Only by gathering all the essential informati on can the BA specialist prepare the functional specifications for the project. Based on the functional requirements specification, our team could define the users' roles, their journeys, features and functionality, etc. The system included a procurement manager, financial director and administrator. The banking CRM includes the following features.

- Contact Management
- Lead Management
- Customer Engagement
- Marketing Management
- Pipeline and Funnel Monitoring
- Integration Capabilities
- Workflow Automation

With the Opportunities feature, you can simplify your business workflow and accelerate overall service productivity within an opportunity cycle. The opportunity cycle includes the following phases - Assessment Needed, Proposal, Negotiation, Closed Won. Not only does it help you visualize the steps within your sales process, but you can also identify the chances of winning the deal.

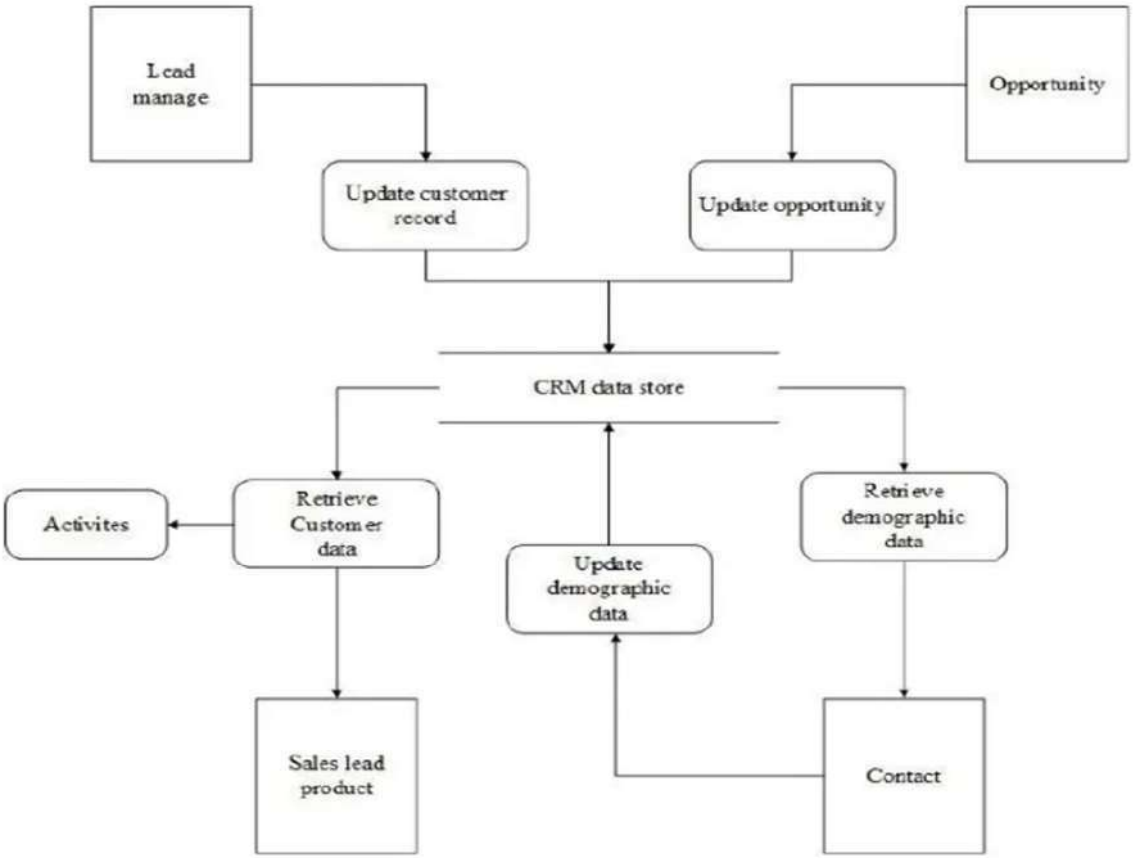
- **M** is a must-have requirement. Something that's essential to the project and that's not negotiable.
- **S** is a should-have requirement. Something we need in the project if at all possible
- **C** stands for could-have. Something that's nice to have in case we have extra time and budget.
- **W** is a will not have requirement. Something that's out of scope, at least this time around.

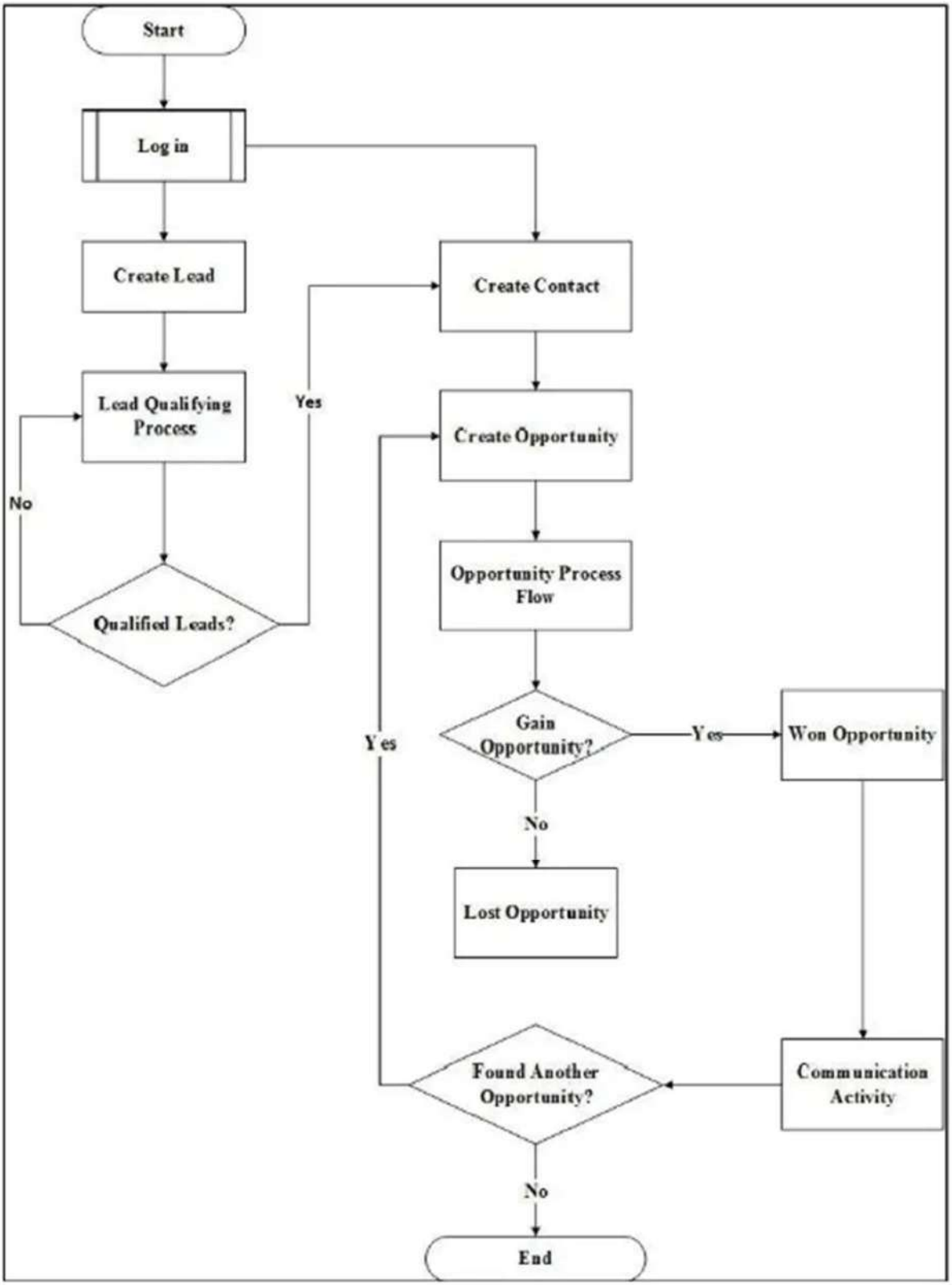
2. Requirement Analysis

Data Flow Diagrams

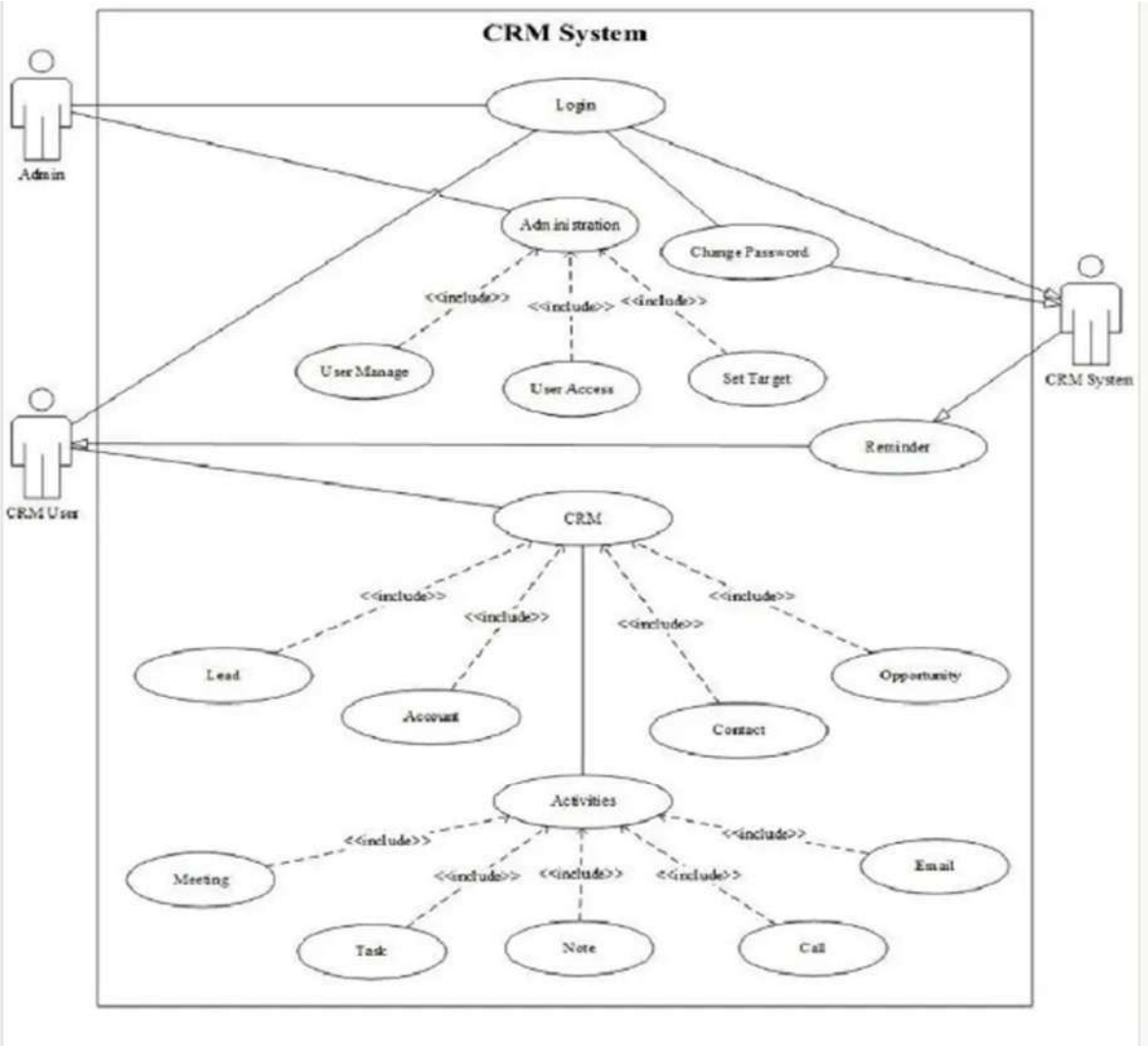
A data flow diagram (DFD) maps out the flow of information for any process or system. It uses defined symbols like rectangles, circles and arrows, plus short text labels, to show data inputs, outputs, storage points and the routes between each destination.

A DFD describes what data flow (logical) rather than how they are processed, so it does not depend on hardware, software, data structure or file organization. Data flowcharts can range from simple, even hand-drawn process overviews, to in-depth, multi- level DFDs that dig progressively deeper into how the data is handled. They can be used to analyse an existing system or model a new one.




Start
Log in
Create Lead
Lead Qualifying Process
Qualified Leads?
No
Yes
Create Contact
Create Opportunity
Opportunity Process Flow
Gain Opportunity?
Yes
Won Opportunity
No
Lost Opportunity
Yes
Found Another Opportunity?
Communication Activity
No
End

3. Design:



It has all the information of the Use case Model display in the previous picture. We have narrated use case with a table in the following section. Each table shows five types of detail information about a use case. They are Use case name, Actor, Precondition, Primary Path and Exceptional Path. Use case name refers the name of the process. Actor identifies who will be the user. Pre-condition means whether or not another process is required to enter or use this process. Primary Path indicates step by step works of the process. Exceptional Path shows us what the process will do if any exception occurs in a primary path.

4. Development:

Creating a successful and well-designed solution requires a step-by-step implementation plan. Let's take a closer look at how to carefully plan the process and avoid common pillars.

1. Align goals with the business requirements- Before you start the development process, you need to identify your business goals and ways to contribute to them with the new CRM. In addition to that, it's imperative to define the list of the requirements and functions of the final CRM solution.

2. Identify and involve stakeholders-Only by involving both front-line and back-office personnel in the process can you collect their opinions and needs. This will help you identify how your CRM should look and work, what business processes in your organization have to be re-defined or automatized.

3. Find a reliable IT company- You need to choose the right software provider for a successful CRM rollout. Once you select an IT company, you can explain and come up with the best vision of your banking CRM solution.

4. Educate your staff-It's essential to prepare your employees to switch to a CRM system. Not only should you tell them about CRM implementation timelines, but you need to provide relevant training and keep them informed about possible changes in business processes and responsibilities.

5. Support and improvement-Once the CRM solution has been implemented, you need to collect real -time feedback from your staff. This will help you identify areas that should be improved or changed.

1. What goals are you trying to accomplish?

CRM evaluation needs to start with a plan and expectations. If you aren't clear on why you need a CRM, it's too easy to get burdened with a system that no one likes and that doesn't actually help your business grow. Here are some considerations

Are you looking for a full-fledged system, or just enough to replace your spreadsheet or pen-and-paper approach?

Are you trying to serve a B2C customer base, or is your focus on the B2B space? B2C and B2B CRMs differ, so it's good to be aware of the nuances required for each.

Do you need to migrate from a legacy system to a cloud-based solution to reduce the need for IT resources or provide bearer visibility?

What are the outcomes you want from the software? This can include things like streamlined sales and marketing processes, integrated analytics and performance tracking, access to advanced tools like VoIP and collaboration, and integrated customer service and sales processes.

2. How much technical assistance do you have access to?

Answering this will help you determine how much flexibility you have with the CRMs you look at. Some systems are user-friendly and don't require a lot of technical know-how to set up and manage. Others, however, require IT expertise. In addition, the more complex the system is, the more involved it'll be to implement. You'll likely

end up working with the vendor or an implementation partner, which is much easier if you have an in-house IT team. This is especially true for on premise solutions, where the customization options are more extensive and require deeper technical knowledge.

3. Database Management

Mastering data management of your customer database should be a high priority of your CRM platform, so you can ensure data integrity. In addition to storing records in a central location, the database can allow you to link data across different departments (such as sales and marketing) and view the relationships between different records. It also helps you maintain clear, up-to-date records and avoid duplicates.

- Comprehensive Records
- Link Between Databases
- Master Data

4. Marketing and Campaign Management

One of the most essential features of a CRM is marketing automation. They go hand-in- hand, so most CRMs offer marketing automation modules or have the ability to connect seamlessly with the top standalone marketing automation solutions.

Marketing automation allows you to be more efficient with your marketing, especially at scale. It offers capabilities like batch email marketing and event-based marketing, where you create a sequence of messages that each automatically triggers when a contact takes a specific action. When you're dealing with hundreds or thousands of contacts at different stages, this will save you loads of time.

You can also create, deliver and track mul ti- channel marketing campaigns. Marketing automation comes into play by having all website and campaign activities available within your CRM interface and dashboards.

CRMs can track customer data like spending habits, likes, dislikes and other attributes to bearer qualify them. This data can be used to drive targeted marketing campaigns. Campaign analysis tracks campaign delivery and analyzes ROI for individual campaigns to improve future efforts.

- Campaign Design
- Batch Email Marketing
- Autoresponders
- Email Tracking
- Triggered Email
- Customer Targeting
- Campaign Analysis
- Campaign Delivery
- Competitor Tracking

5. Lead Management

Two critical parts of customer relationship management are generating leads and properly managing them. CRMs come with embeddable web forms that capture leads and store the data directly in the system. They simplify lead distribution by assigning leads with pre- defined criteria to route them to the appropriate sales rep

Pipelines are a common visual tool that make it easy for users to move leads through the funnel and gain visibility into which leads are most likely to convert or about to churn so sales and marketing know who to follow up with.

- Lead Generation
- Lead Capture
- Lead Distribution
- Web Forms
- Pipeline Tracking
- Lead Follow-Up

6. Sales Automation-

It's essential to know how well your CRM manages opportunities and how marketing and sales teams can collaborate. Users of CRM systems can manage sales opportunities from the first contact to sales closure, assigning each lead to the most qualified sales rep to nurture them and ensuring every lead gets a Renton.

You should be able to move contacts through specific record stages. For example, Lead, Contact, Customer. These stages should be available right out of the box but also should be deeply customizable to fit your unique selling cycle.

- Opportunity Management
- Sales Collaboration
- Emictory Management
- Win/Loss Analysis
- Quoting

7. Workflow Automation and Employee Management

A good CRM will make your teams more efficient and productive. To that end, many include workflow automation features, such as sending reminders of a scheduled sales call or notifications when a new lead enters the system.

Group Calendar

- Task Scheduling and Tracking
- Performance Tracking
- Employee Records
- Organizational Hierarchy
- Workflow Management
- Social CRM

8. Business Intelligence and Reporting

Check that the solution provides business intelligence (BI) features that can accurately monitor and measure customer service factors. Your CRM needs to easily give you insight into customer satisfaction for bearer customer retention. BI also allows you to monitor new customer acquisitions to gain great client references in the future.

Make sure you can create your own reports and dashboards. Some vendors offer industry- specific modules for your CRM, but the ability to create and customize reports according to your needs is a must for going the most out of BI features.

Furthermore, check that the automation and sharing of these reports are easy to set up. Nothing's worse than trying to pull reports acer monitoring data only to realize it hasn't been set up properly. Find out if the software is frequently updated with upgrades and enhancements, and if that is included in the fee.

- Sales Intelligence
- Sales Reporting
- Sales Forecasting
- Activity Dashboard
- Revenue Cycle Modelling
- Business Intelligence

9. Deployment Environment

Many CRMs are web-based, also called SaaS platforms, which is a common requirement when shopping for a CRM. Salesforce is a popular example of a web-based (or cloud) CRM that many people gravitate towards due to its robust functionality and easy integration.

Cloud CRMs are also easier to manage because offsite teams handle updates and coding. Since web-based software's data is stored in the cloud, they tend to be cheaper than on- premise solutions. They can be implemented with limited space and a less robust IT support system as they don't require servers or hardware. This means that they can be more susceptible to hacking, which is something to keep in mind.

On-premise solutions are installed on your own managed servers and maintained by an internal team. On-premise solutions demand a higher overhead cost along with more space and more technical knowledge to implement, but they come with some unique benefits. These benefits include higher levels of control and customization, as well as direct security oversight.

- On-Premise
- Cloud/Web-Based
- Hybrid

5. Testing:

Requirement Traceability Matrix

ReqID	Req Name	Req descrip:on	Design	D1	T1	D2	T2	UAT
FR0001	login	User must be able to login to access the applica:on	Yes	Yes	Yes	Yes	Yes	YES
FR0002	Change Password	Usershould change password every 3 months	Yes	Pending	No	Yes	Yes	YES
FR0003	Create Lead	CRM user can create lead	Yes	Pending	No	Yes	Yes	YES
FR0004	View Contact	CRM user can view contacts	Yes	Yes	Yes	Yes	Yes	YES
FR0005	Find Opportunity	User can analyse and find oppertuni: es	No	No	No	No	No	No
FR0006	Filter	User can apply filter to perform par : cular job	Yes	No	No	Yes	Yes	YES
FR0007	Track	User can track status of created leads	Yes	No	No	Yes	Yes	YES
FR0008	Perform mee: ngs	CRM user can perform mee:ng using of the applica:on	Yes	No	No	Yes	Yes	YES
FR0009	Assign tasks	User can assign tasks by using of the applica:on	Yes	Yes	Yes	Yes	Yes	YES
FR0010	Notes	User can make Notes	Yes	No	No	Yes	Yes	YES
FR0011	Arrange Calls	CRM user can arrange calls and also can arrange follow up calls	Yes	No	No	Yes	Yes	YES
FR0012	Emails	User can send mails	Yes	No	No	Yes	Yes	YES

FR0013	User access	As a admin it can give access to the par : cular users	Yes	Yes	Yes	Yes	Yes	YES
FR0014	Set Targets	As a admin it can assign targets to the users as instructed by the key stakeholders	Yes	No	No	Yes	Yes	YES
FR0015	Reminders	CRM system can send reminders	Yes	Yes	Yes	Yes	Yes	YES
NFR0001	Page Loadin g :me	Page should get load with in 2 seconds	Yes	Yes	Yes	Yes	Yes	YES
NFR0002	Tec hni cal suppor ted system	Applica:on can be used in android and iOS system.	Yes	No	No	Yes	Yes	YES
NFR0003	OTP : me limit	Max 10 sec limit should be there	Yes	No	No	Yes	Yes	YES
NFR0004	Email & sms alert	Any lead status change user should get alert	Yes	Yes	Yes	Yes	Yes	YES
NFR0005	Log out syste m	If user will not use the applica:on for 15 minutes system will logout automa:cal ly	Yes	No	No	Yes	Yes	YES
NFR0001	Disabl e d policy	If usr will not login the applica:on for 12 days account will get disabled	Yes	No	No	Yes	Yes	YES

Unit test is the basic level of testing. It verifies the functionality and performance of individual software modules and ensures that they work correctly. The unit testing result of CRM BANKING a

Table 11. Unit Test Results

Function	Tests Performed	Results
Login page	• Verify handling valid data input. • Check all the buttons work properly.	Pass
Administrator menu	• Check all the links work as expected.	Pass
Manager menu	• Check all the links work as expected.	Pass
Agent menu	• Check all the links work as expected.	Pass
Clerk menu	• Check all the links work as expected.	Pass
Customer Behavior Analysis	• Verify all input validated. • Verify all data transferring from pervious input is correct. • Make sure all the required information appeared and same as database. • Make sure all calculations are correct. • Make sure output a file clustered by K-Means Algorithm based on the selected file. • Check all the displayed data transfer to string correctly.	Pass

6. Deployment:

- Contact Management: with this feature, you can easily store and retrieve clients' contact information such as names, phone numbers, addresses, transactional data, current account balances, etc.
- Lead Management thanks to this feature, banking employees can automatically qualify, analyse and nurture the leads to be converted into new banking clients.
- Marketing Campaign Management with this feature, you can identify the strategies and create, design and run marketing campaigns that meet your business goals.
- Pipeline and Funnel Monitoring thanks to this feature, banks can monitor funnels and pipelines, estimate effectiveness/ineffectiveness and make appropriate changes.
- Reporting with this feature, you can have a beaer understanding of how your business is going on and make wise decisions.
- Sales Automation, analytics and forecasting with this feature, you can automate a plethora of time-consuming and paper-based processes to direct

future strategies and make more precise forecasts for specific audience segments.

- Integration Capabilities this feature allows you to connect applications, APIs, and devices across your banking organization to organize a more efficient and productive environment.

Benefits of the CRM solution for the banking sector

- Here we have outlined key benefits you can derive from implementing a banking CRM. Keep on reading!
- Increased productivity you can greatly boost the productivity of your teams, streamline the banking workflow by completely automating essential business processes in your financial organization.
- 360-degree view of every customers you can get detailed information about every customer account and gain in-depth insight into their journey and experience with your bank or financial organization.
- Bearer forecasting with customized reports, you can gain a much deeper understanding of your customers and make data-driven decisions to anticipate their needs as well as close more deals.
  Enhanced communication and collaboration teams can quickly share information about the deals and leads. Not only does it help you make the process more efficient, but it also enables teams to communicate and collaborate faster.
- Increased customer retention with a great amount of data available right at your fingertips, you can deliver more personalized services to your customers and foster long-term relationships with them.

BoRom line: Ready to switch to banking CRM?

The digital transformation has significantly changed the ways financial organizations interact with their clients and operate internal processes. Moreover, the growing number of financial organizations have forced banks to run more customer-driven businesses. That's where the CRM system is crucial for your company in the banking sector. Only by creating and

implementing CRM software within your company can you establish strong connections with your clients, increase staff productivity, reduce operational costs and deliver more personalized services. Don't hesitate to drop us a line if you plan to transition to CRM.

Performance Requirements Performance requirements of CRM Performance of CRM deployment is dependent on a number of factors related to the infrastructure and controller services. It is recommended to use high performance Computer or Mobile Device and reliable internet connection

Security Requirements Following steps should take to secure CRM hypervisors 1. Should must use both firewall and Intrusion Prevention System 2. Strong Password

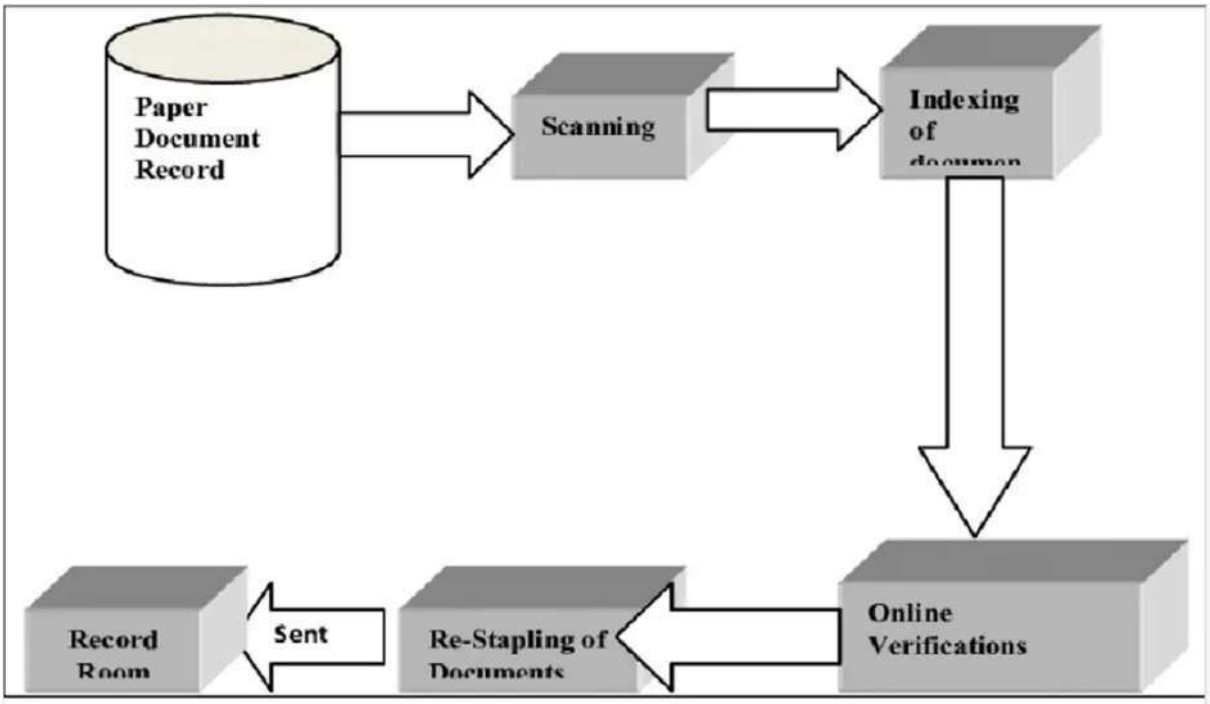
Policy & Password aging policy should enforce mandatorily 3. Implement two steps authentication

Discussion and Conclusion - This is to conclude that the project that we undertook was worked upon with a sincere effort. Most of the requirements have been fulfilled up to the mark and the requirements which have been remaining, can be completed in near future. We tried to implement the best practices and Framework of PHP. We also implement MVC design paper with fronted template system like Smarty. We worked in PHP for the first time in this project. So sometimes we faced some problems at the time of work. We also tried to implement Node JS, Relational Database and Advance Database Feature in our project.

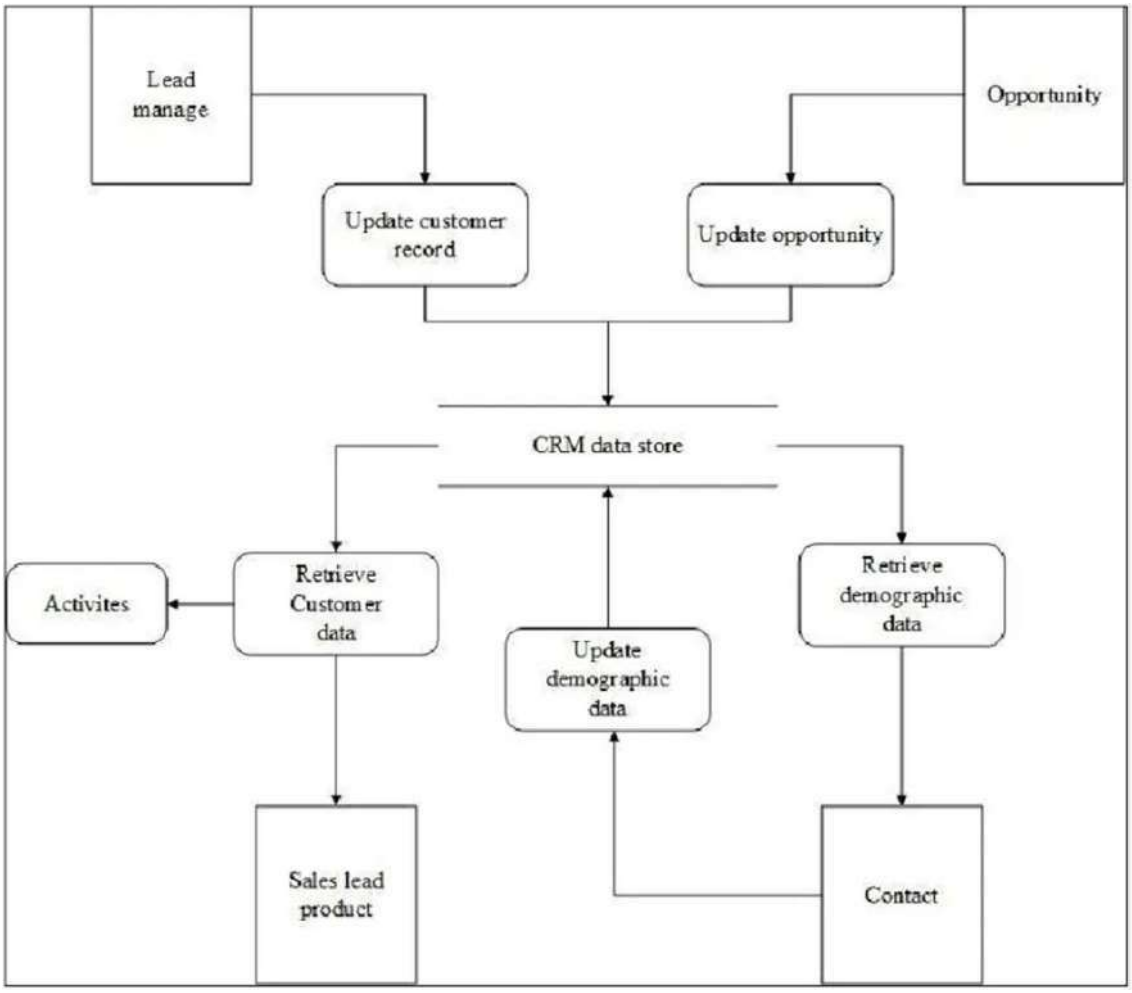
Future Scope - In the near future we will try to implement Artificial Intelligence (AI) based feature in our Project. Such as by collecting user experience and analysing the user data we can build up our relationship with customer more effectively. We can also build up our marketing policy more effectively through communication with user. This is a scope which we will try to update in the near future

AS IS PROCESS BASIC FLOW -

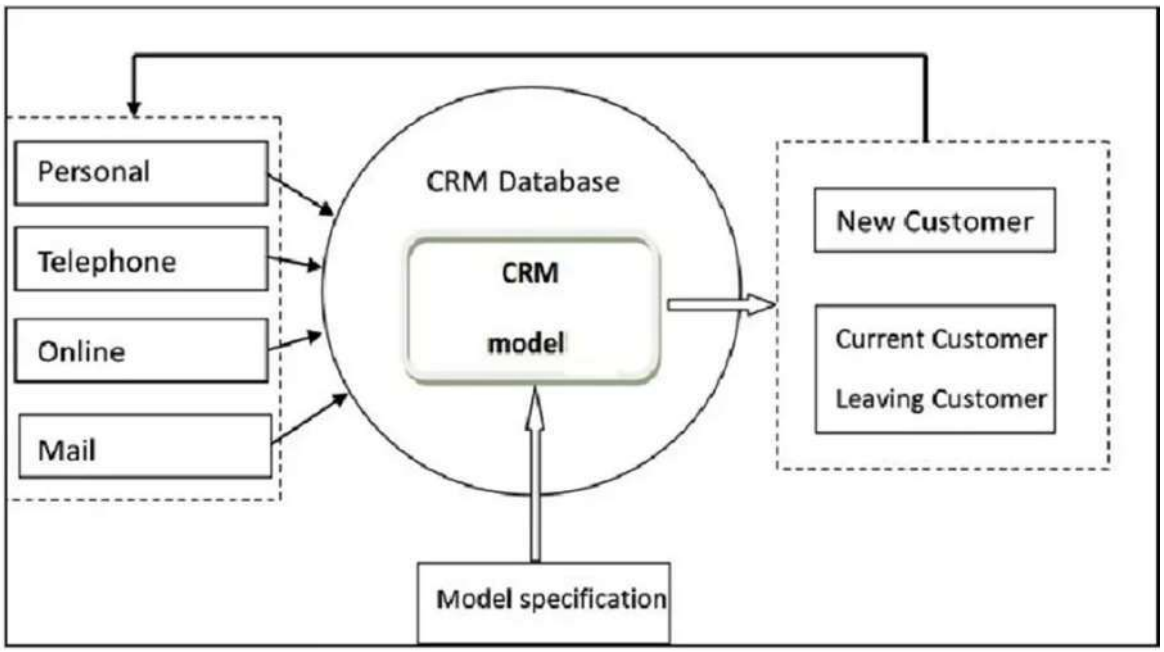
Old Process



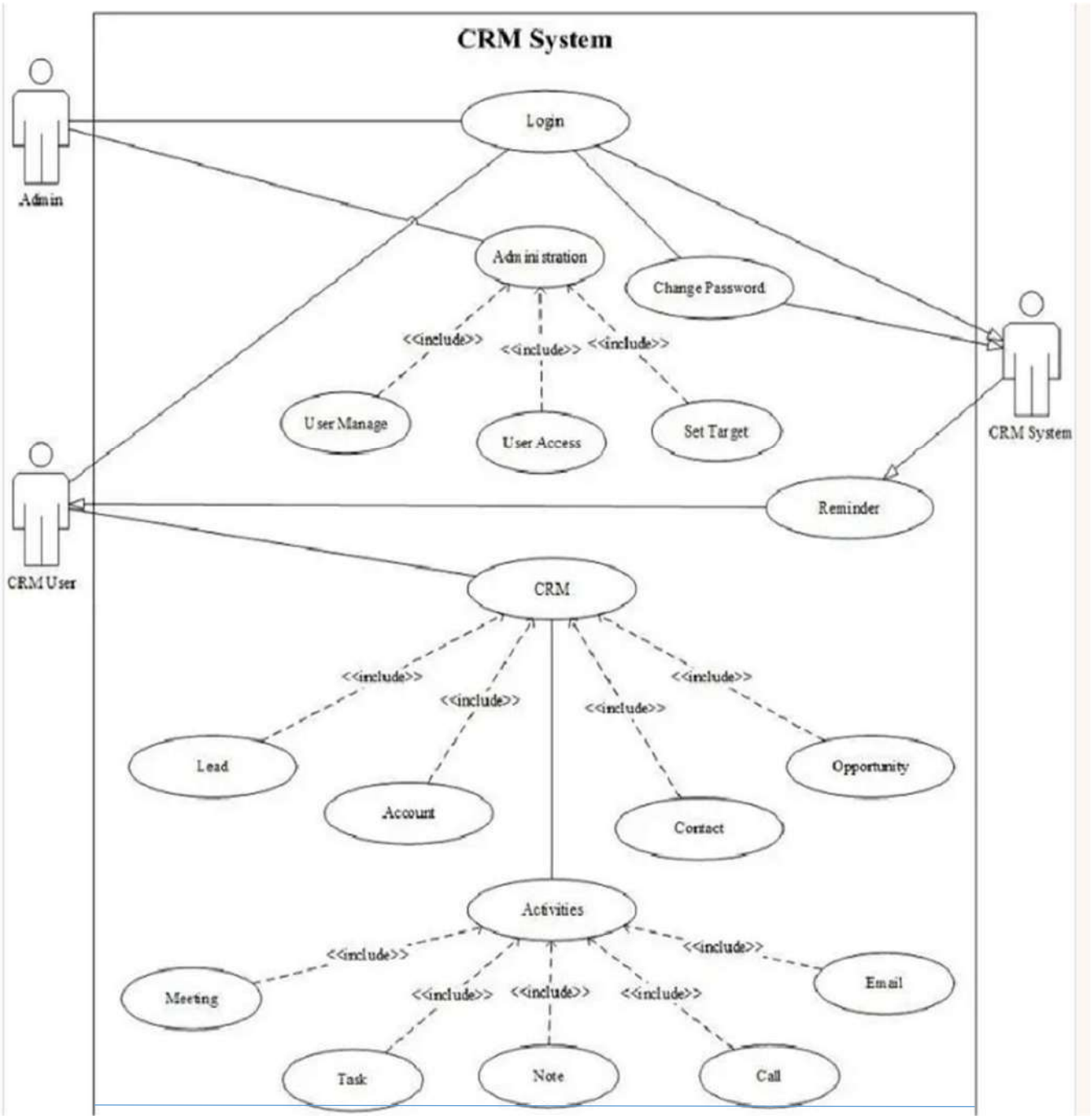
TO BE PROCESS BASIC FLOW –



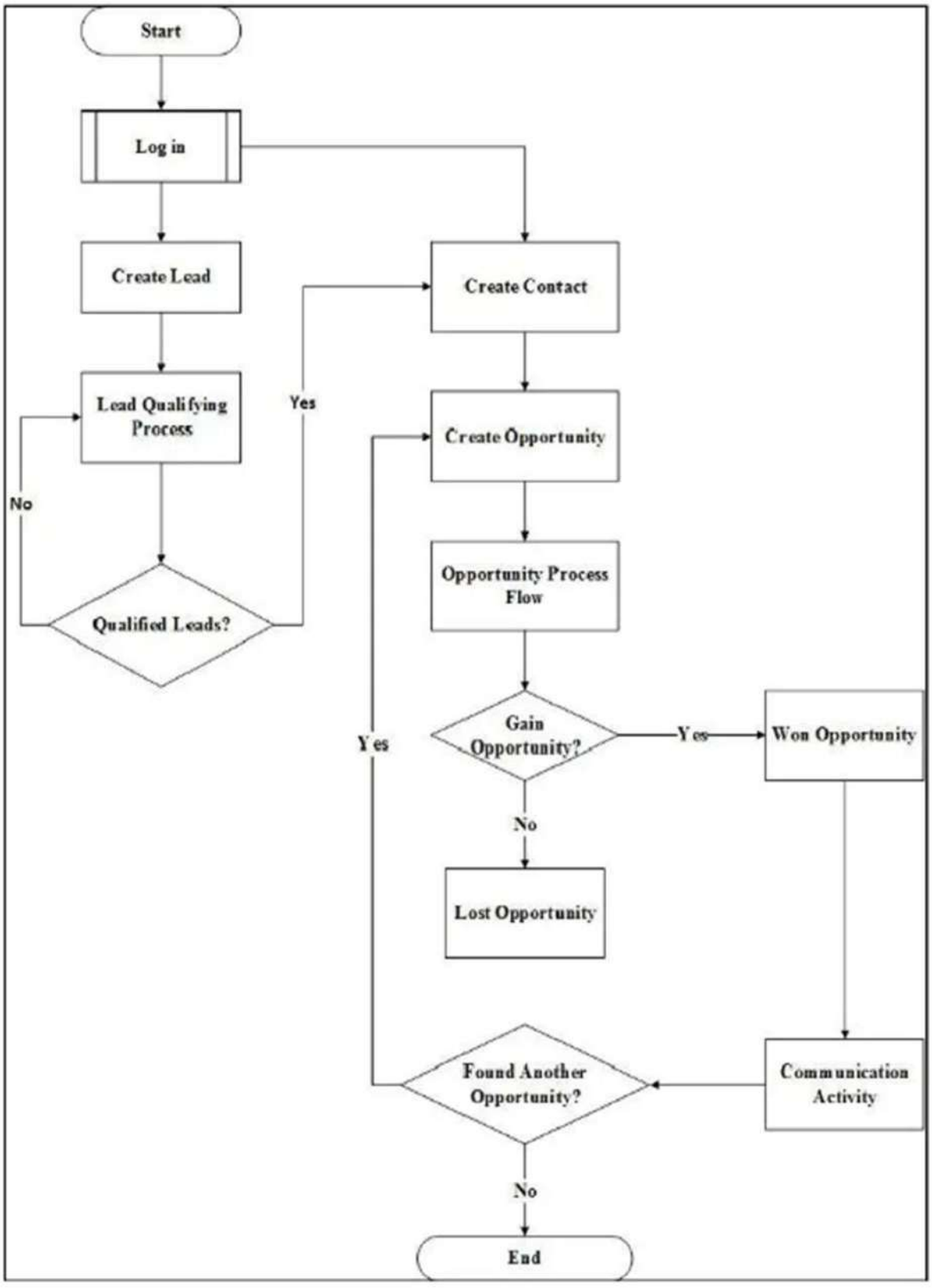
Use case specification



Use Case Model for Online Banking CRM



Data Flow Diagram of online CRM -


Start
Log in
Create Lead
Lead Qualifying Process
Qualified Leads?
No
Yes
Create Contact
Create Opportunity
Opportunity Process Flow
Gain Opportunity?
Yes
Won Opportunity
No
Lost Opportunity
Yes
Found Another Opportunity?
Communication Activity
No
End