Project Title: A CRM APPLICATION TO ENGINEERING WORKS

College Name: **MAILAM ENGINEERING COLLEGE**

Code: **4216**

Department of Computer Science and Business Systems

Team Leader:

Name: BAKTHINATHAN D Reg No: 421622244004

Team Members:

Name: SARAVANAKUMAR S Reg No: 421622244301

Name: SANTHOSH S Reg No: 421622244038

Name: SERELATHAN A Reg No: 421622244042

Registered Email Id: bakthinathanjeeva@gmail.com

TrailheadUrl:https://companycom495-dev-ed.develop.lightning.force.com/lightning/r/User/005dL000009RxjZQAS/view

Project Name: A CRM APPLICATION TO ENGINEERING WORKS

Project overview:

The **CRM Application for Engineering Works** is a comprehensive solution designed to help engineering firms manage client relationships, optimize project management, and streamline internal processes. This application will provide a centralized platform to oversee customer interactions, track project progress, manage sales, and deliver enhanced support and service.

The project aims to address the specific needs of engineering businesses by automating manual tasks, improving communication between teams and clients, and offering real-time insights into key performance metrics. By leveraging a custom-built CRM system, engineering firms can enhance client satisfaction, improve efficiency, and drive business growth.

Key components of the CRM will include client management, project tracking, sales pipeline management, service support, and robust reporting tools. Additionally, the system will facilitate easy communication, document sharing, and mobile access, ensuring that teams can collaborate effectively and access critical information on the go.

This CRM application is tailored to help engineering firms improve productivity, reduce operational costs, and enhance the overall client experience. With seamless integrations to existing enterprise systems, the solution will provide a holistic view of business operations and allow for data-driven decision-making.

Objective:

To develop a Customer Relationship Management (CRM) application tailored specifically for engineering firms, aiming to streamline customer interactions, enhance project management capabilities, and improve overall business operations. This can be achieved by:

Business goal:

The **CRM Application for Engineering Works** aims to streamline operations, boost client relationships, and drive growth. By centralizing data and project management, it improves efficiency and ensures timely project delivery. It enhances sales conversions and fosters long-term client loyalty. Real-time analytics enable data-driven decisions. The CRM will scale with the business, maintaining high service quality.

Specific outcome:

It will enable better tracking of sales leads and opportunities, increasing conversion rates. The system will provide real-time insights for data-driven decision-making. By automating key processes, it will reduce administrative overhead. Ultimately, the CRM will help the business scale while maintaining high service standards.

Streamlining the leave process

Streamlining the leave process will automate request submissions, approvals, and tracking, reducing manual effort and errors. This will ensure timely approvals, improved transparency, and a smoother workflow for both employees and management.

Providing visibility and control

Providing visibility and control allows managers to monitor real-time data, track progress, and make informed decisions. It empowers teams to stay aligned, ensuring better accountability and proactive issue resolution.

Eliminating paperwork

Eliminating paperwork automates manual tasks, reducing errors and saving time. It streamlines processes, improves efficiency, and ensures a more eco-friendly, organized workflow.

Complying with statutory requirements

Complying with statutory requirements ensures that all business processes align with legal regulations, avoiding penalties and risks. The system will automate compliance tracking, making it easier to stay up-to-date with changing laws and regulations.

Salesforce Key Features and Concepts Utilized

Organizing:

Salesforce enables streamlined organization of customer data, tasks, and workflows for enhanced operational efficiency

Sales strategy:

Salesforce supports the creation and execution of targeted sales strategies through customizable pipelines and automated workflows.

Customer relationship management:

Salesforce provides a unified platform to manage and nurture customer interactions, driving long-term loyalty.

Sales analytics:

Salesforce offers advanced analytics tools to track sales performance, identify trends, and optimize decision-making.

Coaching:

Salesforce enables sales leaders to guide teams through performance tracking, training resources, and personalized feedback.

Forecasting:

Salesforce uses AI-driven tools to provide accurate sales forecasts, helping teams set realistic goals and manage resources effectively.

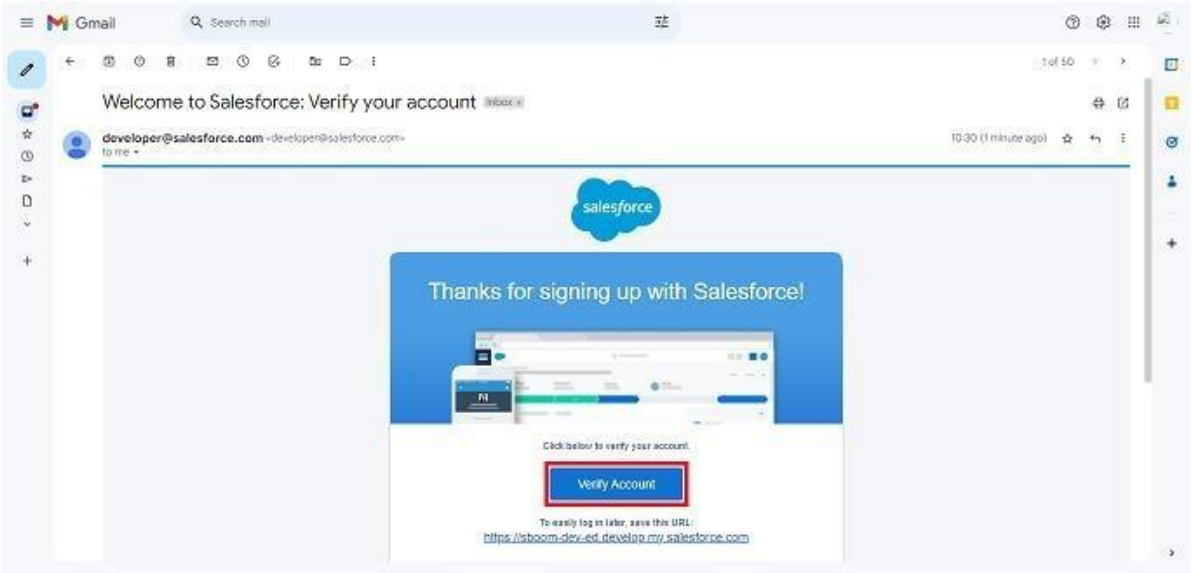
Detailed steps to solution design

Step 1: Creating Developer Account and Activation

Creating a developer org in salesforce.

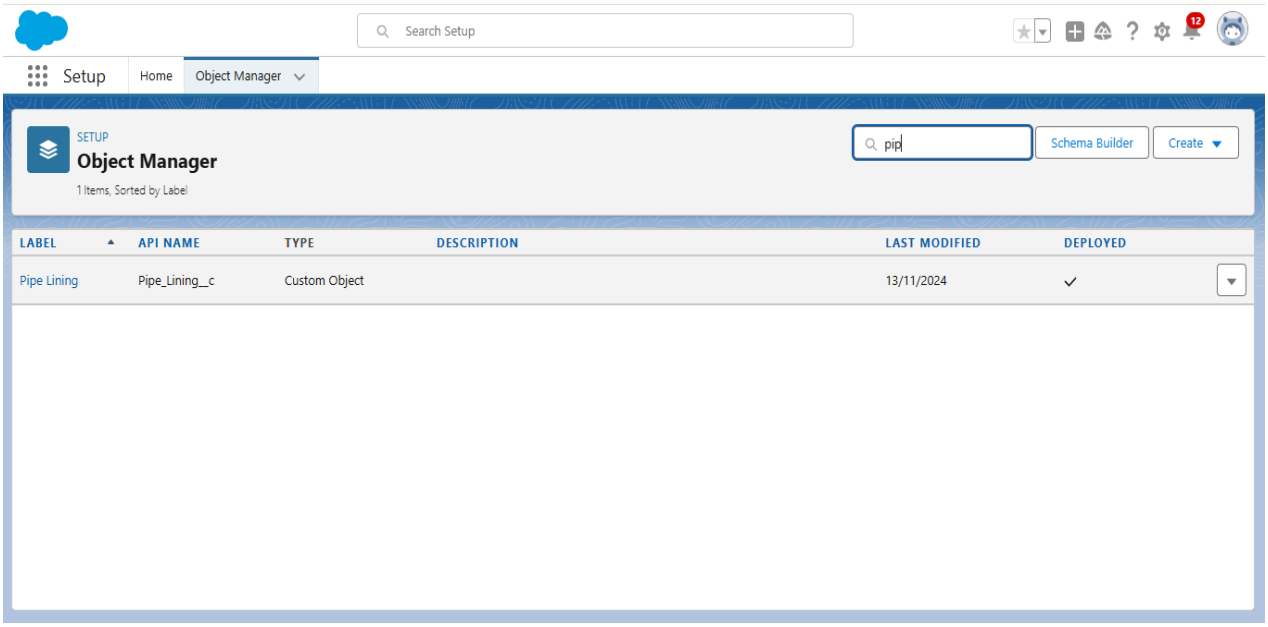
To Activate the account, click on the verify account. Give a password and answer a security question and click on change password.

Give a password and answer a security question and click on change password. Then you will redirect to your salesforce setup page.



Step 2: Create of objects

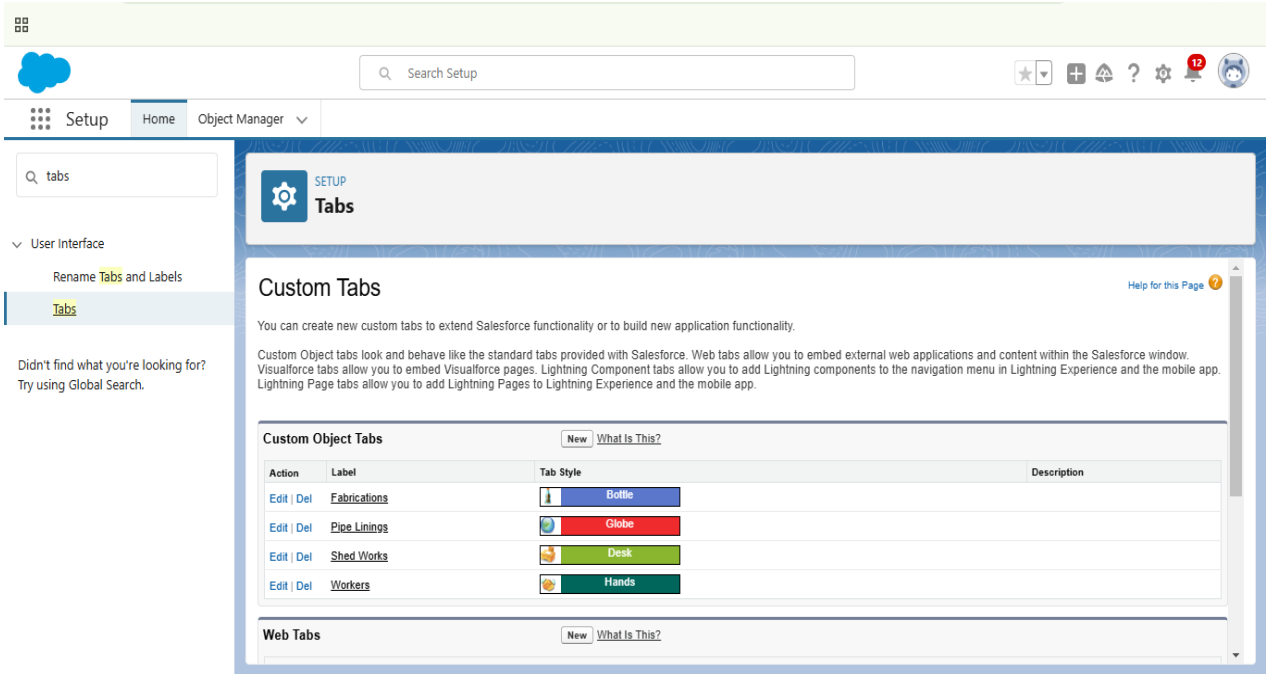
1. Create Fabrication Object: A custom object for tracking and managing fabrication tasks was created.
2. Create Shed-Work Object: Developed an object to handle details related to shed construction work.
3. Create Pipe Lining Object: Set up an object to manage tasks and information regarding pipe lining operations.
4. Create Worker Object: Created an object to store information about the workers involved in various projects.



Step 3: Creating a Custom Tab

Creating A Custom Tab**:** A custom tab was developed to provide easy navigation to specific functionalities within the CRM application.

Creating Remaining Tabs: Additional tabs were created for accessing the newly added objects, enhancing the user interface and navigation

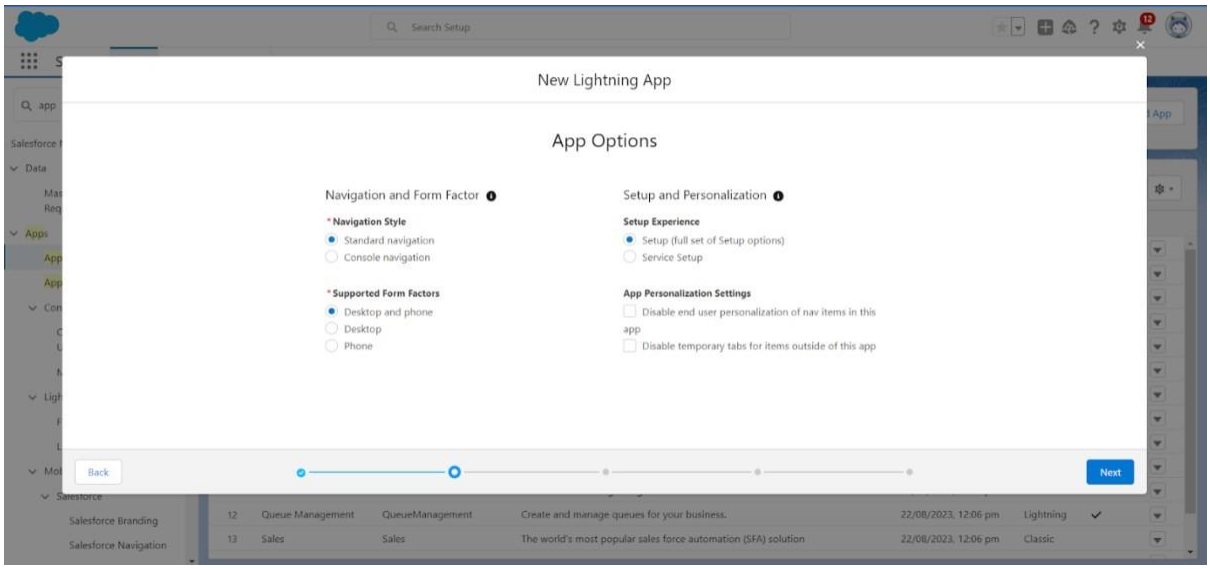


Step 4: Create a Lightning App

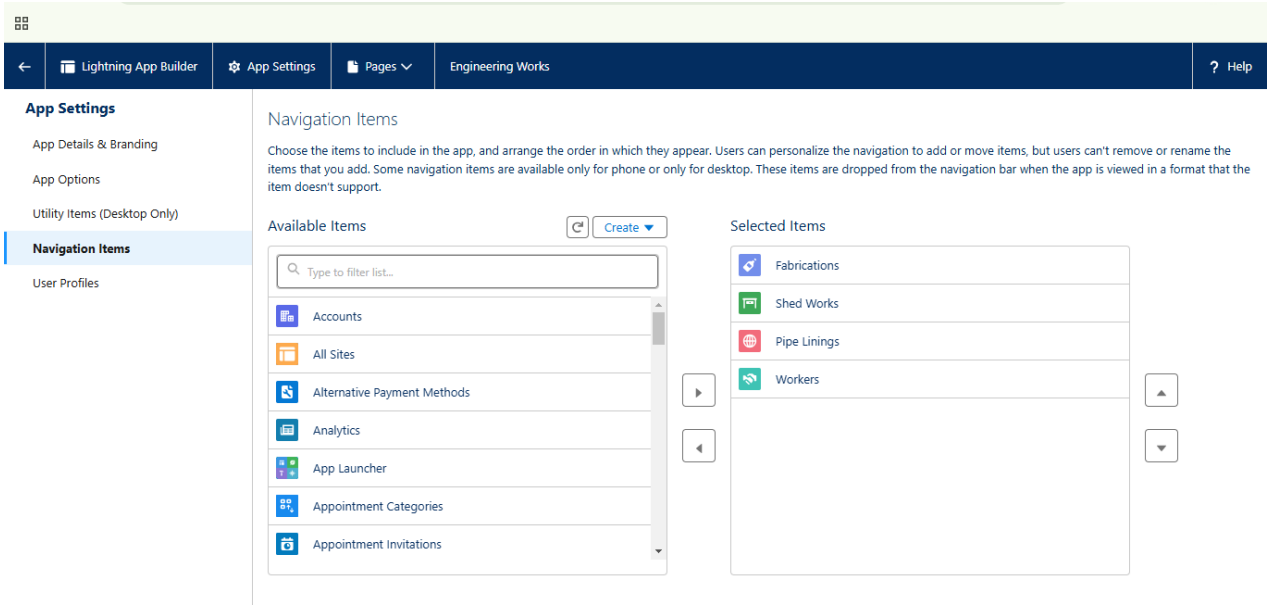
A Lightning App was created to offer a modern, interactive experience for users within the Salesforce environment.

To create a Tab:(Property)

- Go to setup page >> search “app manager” in quick find >> select “app manager” >> click on New lightning App.
- Fill the app name in app details and branding as follow App Name: Engineering Works Developer Name: This will auto populated Image: optional (if you want to give any image you can otherwise not mandatory) Primary color hex value: keep this default.
- Then click Next >>(App option page)Set Navigation Style as Standard Navigation >> Next.
- (Utility Items) keep it as default >> Next. 5. To Add Navigation Items: Search for the item in the (Fabrications, Shed Works, Pipe Linings, Workers) from the search bar and move it using the arrow button >> Next >>Next.



Search profiles (System administrator) in the search bar >>click on the arrow button>>save & finish.



Step 5: Field Creation

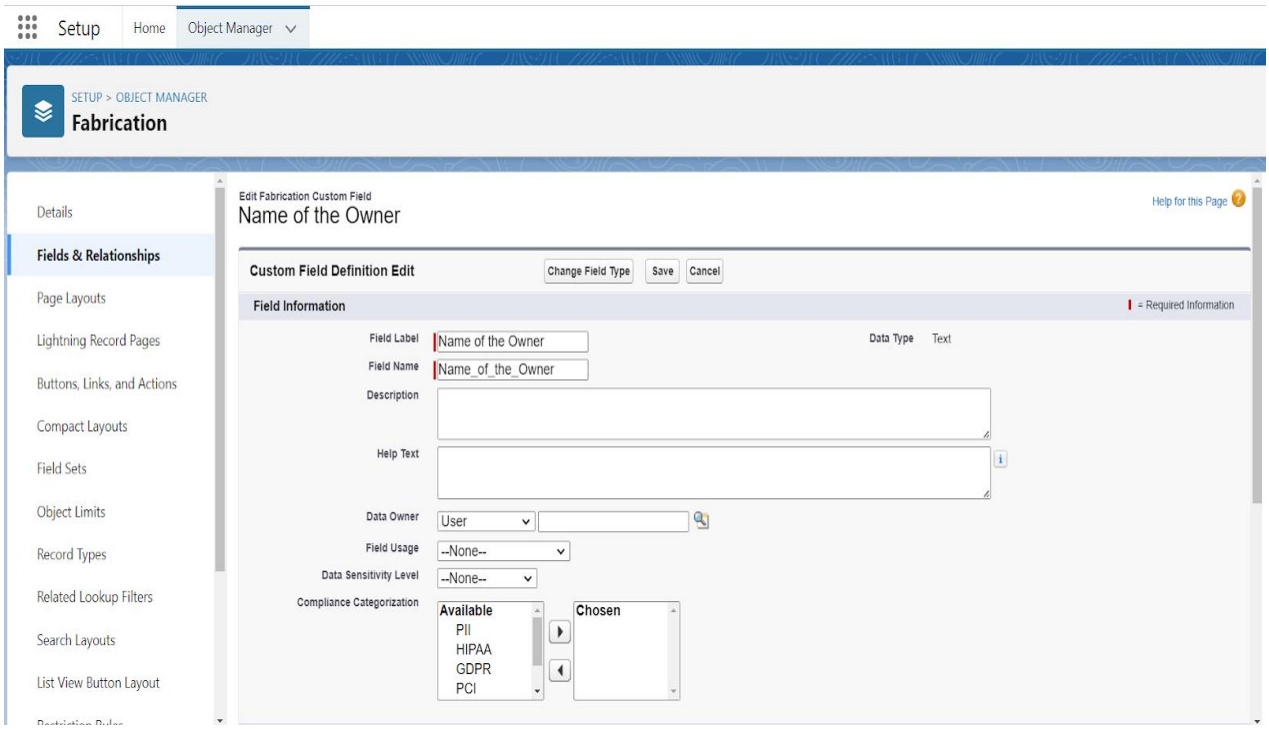
Creation Of Fields For The Fabrication Object: Added specific fields to capture necessary data for fabrication tasks.

Creation Of Fields For The Shed-Work Object: Added custom fields to store information related to shed construction activities

Creation Of Fields For The Pipe Lining Object: Set up fields to document details for pipe lining processes.

Creation Of Fields For The Worker Object: Created fields to store worker information, including contact details and roles.

Creation Of Fields For The Worker Object: Created fields to store worker information, including contact details and roles.

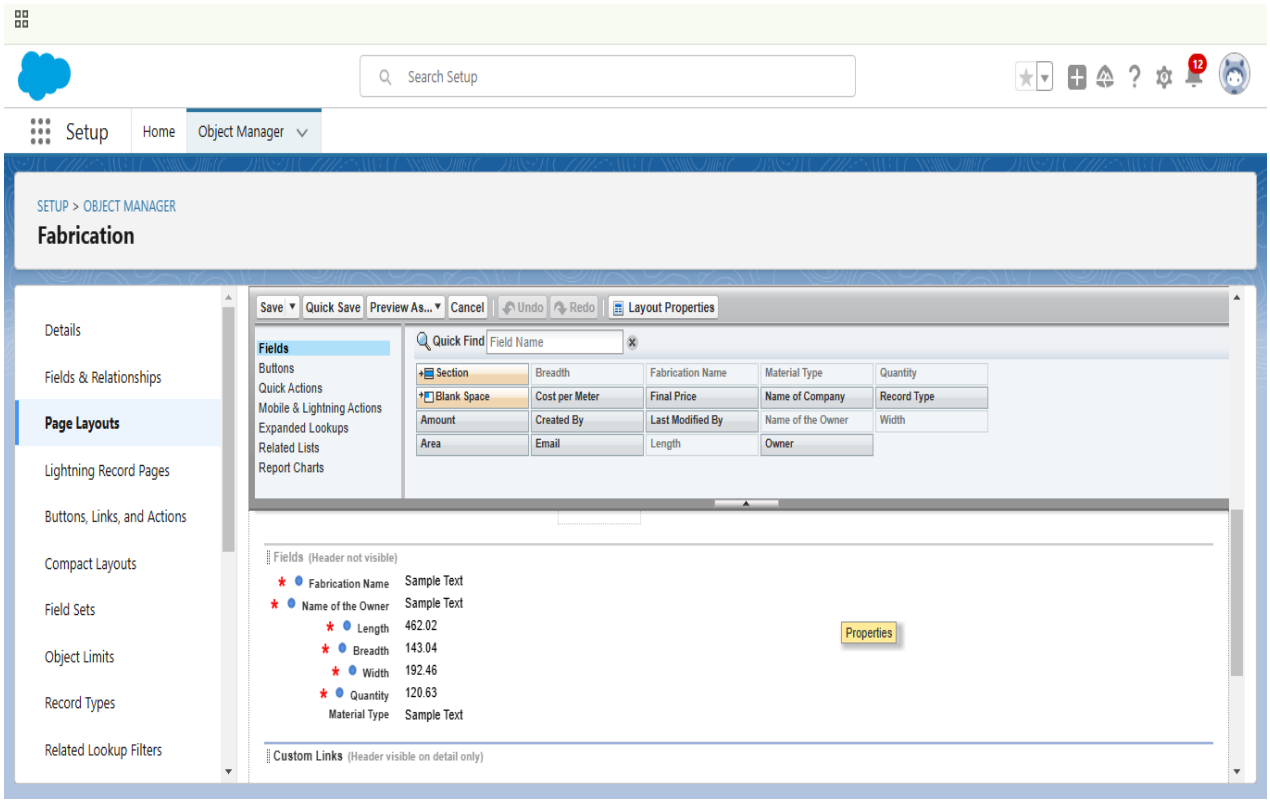


Step 6: Page Layouts

To Create A Validation Rule For Fabrication Object: Implemented a validation rule to ensure data integrity and correct input in the fabrication object.

To Create A Page Layout In Fabrication Object For Cutting: Created a custom layout for handling cutting activities in fabrication.

To Create A Page Layout In Fabrication Object For Folding: Developed a layout for tracking folding processes in the fabrication object.

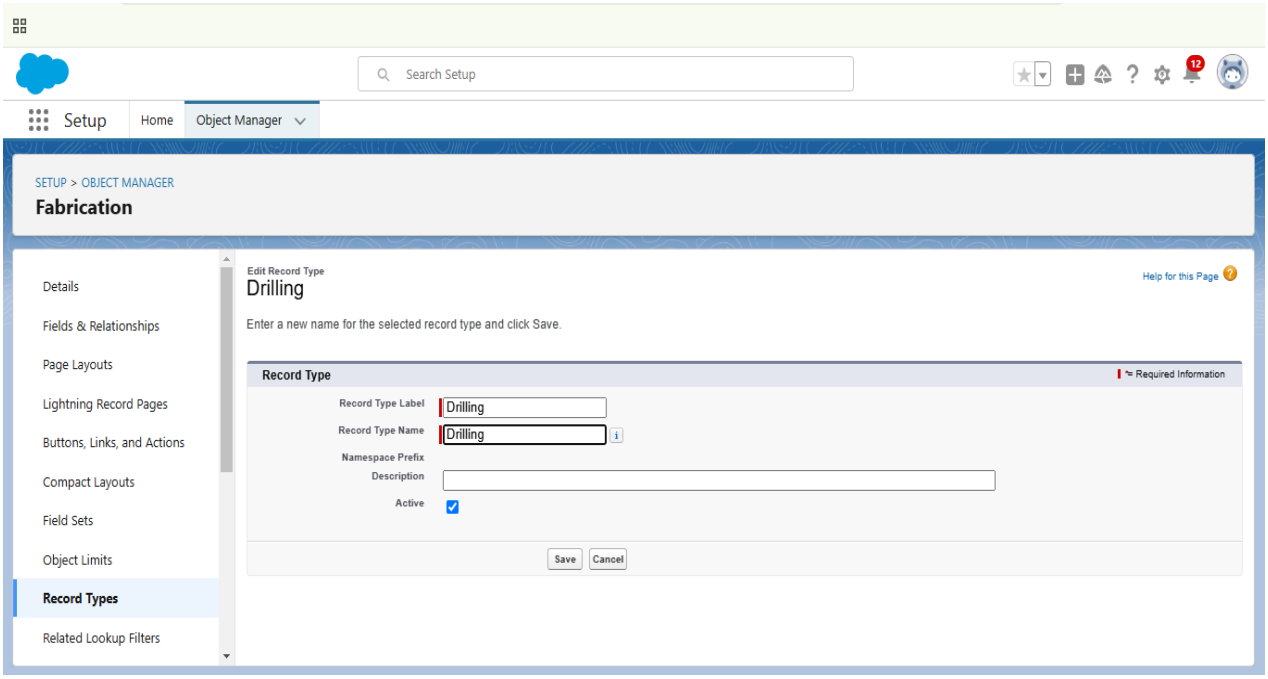


Step 7: Creation Of Record Types

To Create A Record Type In Fabrication Object: Defined record types to differentiate between various tasks and processes within the fabrication object.

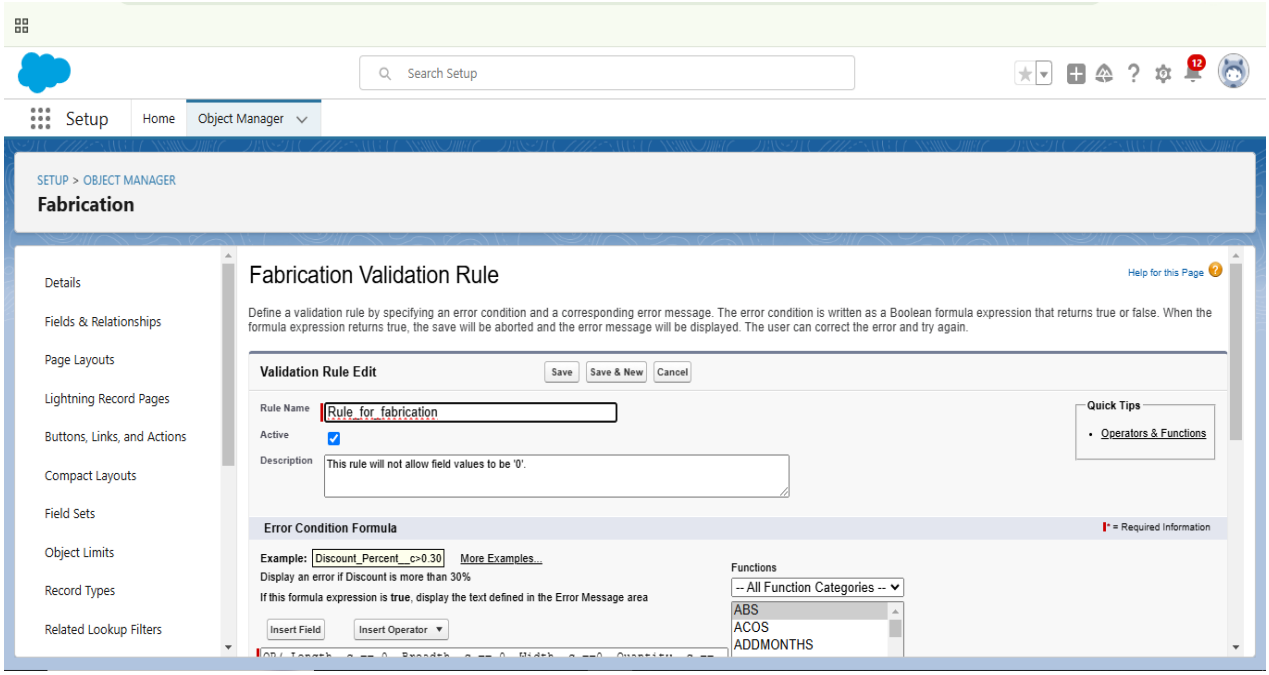
1. Go to the setup page >> click on object manager >> From drop down click edit for Fabrication object.
2. Click on the Record Types >> click New.
3. Enter the details : For Record Types
    - Existing Record Types : Master
    - Record Type Label : Drilling
    - Record Type Name : Drilling
    - Active : Tick checkbox
4. Click on Next
5. In Assign Page Layout
    - Apply one layout to all profiles : Select Drilling Page Layout
    - Click on Save.

Similarly, Create the Record Types on Welding Page Layout, Cutting Page Layout and Folding Page Layout



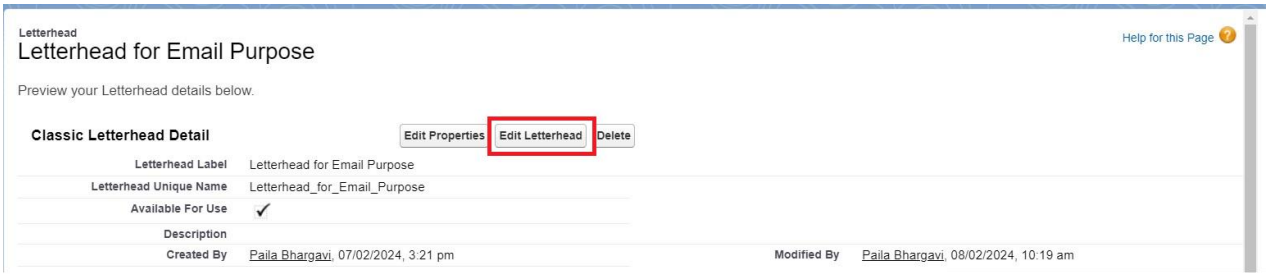
Step 8: Validation Rule

- To Create A Validation Rule For Fabrication Object: Implemented a validation rule to ensure data integrity and correct input in the fabrication object.
- Go to the setup page >> click on object manager >> From drop down click edit for Fabrication object.
- Click on the validation rule >> click New.
- Enter the Rule name as “Rule_for_fabrication”.
- Insert the Error Condition Formula as :
  OR(Length__c == 0, Breadth__c == 0, Width__c ==0, Quantity == 0)
- Enter the Error Message as “Length, Breadth, Width and Quantity Values should not be zero”, select the Error location as Top of Page and click Save.
- Create the Validation Rule for Shed-Work and Pipe Lining Object Similarly by following the Activity 1 Steps.



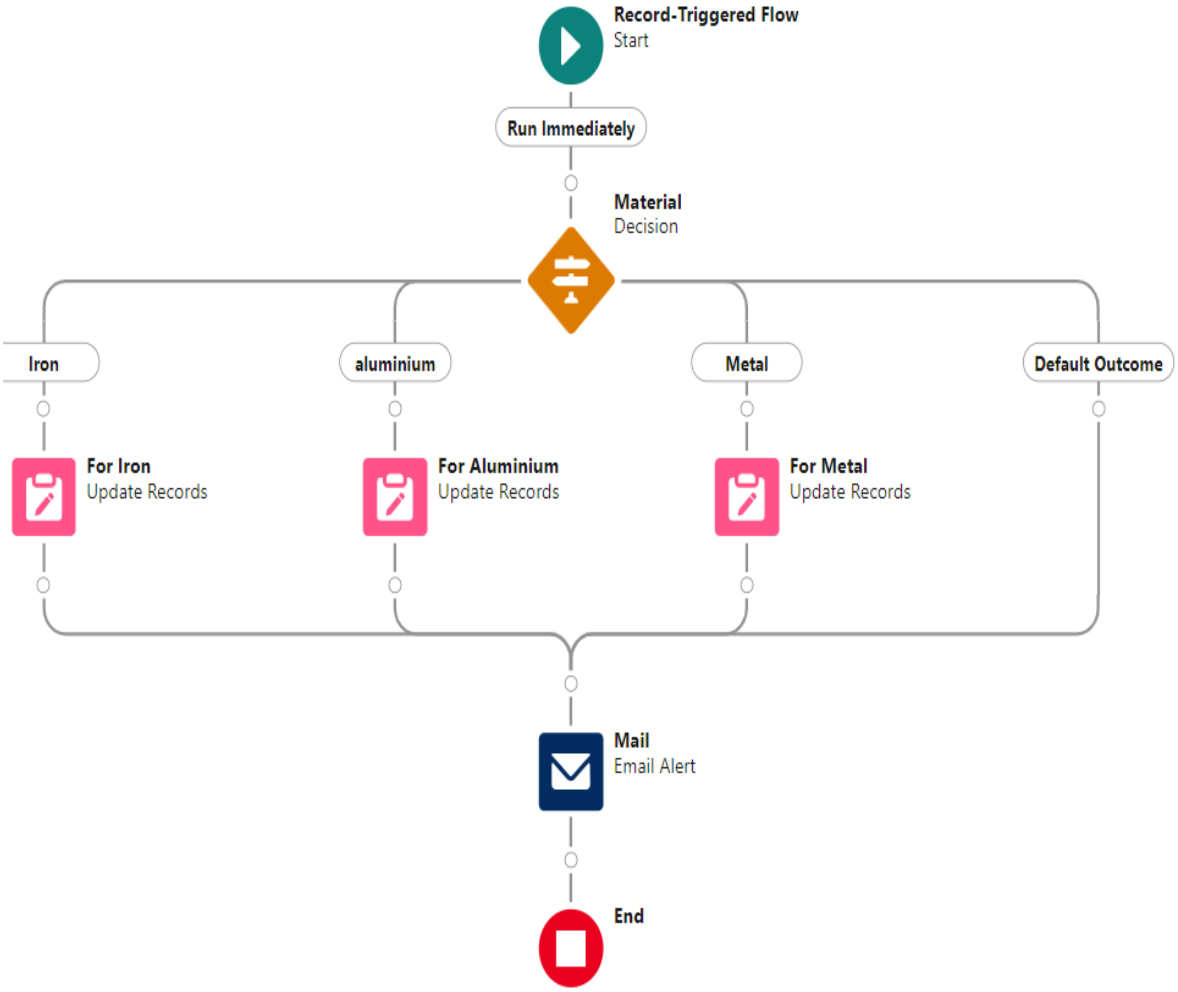
Step 9: Email Templates

- Upload Logo Into Salesforce: Uploaded the company logo to Salesforce to be used in email templates.
- Creation Of Letterhead For Salesforce: Designed a letterhead for consistent branding in Salesforce communications.
- Creation Of Letterhead For Email Purpose: Customized the letterhead specifically for email usage.
- Create Email Template: Developed email templates for standardized communication with clients and stakeholders.
- Create Email Alert: Set up email alerts to notify users based on specific triggers within the CRM application.



Step 10: Flows

1. Create Flow To Calculate Final Price On Fabrication Object Based On Material Type: Automated the price calculation for fabrication tasks considering the material type used.
2. Create Flow to calculate Final Price on Shed Work Object based on Material Type: Automated the price calculation for Shed Work tasks considering the material type used.
3. Create Flow to calculate Final Price on Pipe Lining Object based on Material Type: Automated the price calculation for Pipe Lining tasks considering the material type used.



Step 11: Conclusion

The CRM application project was successfully completed, meeting all the specified requirements. The application provides a streamlined approach to managing various engineering tasks such as fabrication, shed work, and pipe lining. It offers a user-friendly interface with efficient workflows and automated processes, improving the overall efficiency of managing engineering projects. The system includes robust data handling, validation rules, customized email alerts, and dynamic pricing calculations, making it a comprehensive solution for engineering firms.

.