

# **CRM APPLICATION TO ENGINEERING WORKS SALESFORCE PROJECT REPORT**

## **PROJECT CREATED BY**

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## **COLLEGE CODE**

**4224**

## **PROJECT REVIEWED BY**

# ProjectTitle : A CRM APPLICATION TO ENGINEERING WORKS

## 1. Project Overview

This project involves the development and implementation of a Customer Relationship Management (CRM) system tailored specifically for engineering works. The goal of the project is to streamline client management, enhance customer engagement, and optimize operational processes through Salesforce. By leveraging Salesforce's comprehensive CRM platform, engineering firms can efficiently manage customer data, track interactions, and improve the client experience from project initiation to completion.

## 2. Project Objectives (Points only)

**Centralized Customer Data Management:** Maintain a unified database for client information, ensuring ease of access and management.

**Streamlined Communication:** Implement channels for seamless interaction between clients and the engineering team.

**Analytics and Reporting:** Provide actionable insights into project performance, client engagement, and overall business metrics.

### 3. Salesforce Key Features and Concepts Utilized

In implementing this CRM application, several core Salesforce features and concepts were utilized:

- **Salesforce CRM:** To consolidate customer interactions, lead tracking, and account management within a single platform.
- **Salesforce Automation:** Used to streamline repetitive tasks such as follow-ups, task assignments, and project updates.
- **Sales Cloud:** Enabled for lead conversion, pipeline management, and sales forecasting specific to engineering project workflows.
- **Custom Objects and Fields:** Created to capture engineering-specific data that standard Salesforce fields do not support.
- **Reports and Dashboards:** Configured to provide visual insights on project statuses, customer engagement, and team performance.
- **Workflow Rules and Process Builder:** Implemented to automate workflows based on certain triggers, such as notifying the sales team when a new lead is entered.
- **API Integrations:** Set up to sync data between Salesforce and other applications used by engineering teams, ensuring a unified data flow.

## 4. Detailed Steps to solution Design

### 1. Requirement Gathering and Analysis:

- Consulted stakeholder to gather requirements specific to engineering workflows.
- Identified key CRM features to support customer interaction tracking, project status monitoring, and documentation management.

### 2. Salesforce Setup and Configuration:

- Configured Salesforce instances with Sales Cloud.
- Created custom objects to accommodate data unique to engineering works (e.g., project specs, engineering documents).
- Set up roles and profiles to ensure data security and access control.

### 3. Data Modeling and Field Customization:

- Defined custom objects such as Projects, Clients, and Tasks.
- Added fields to capture essential data, including project start and end dates, budgets, materials used, etc.

### 4. Workflow Automation:

- Configured workflows to automate task assignments, lead conversions, and client follow-ups.
- Created rules that trigger email notifications for new leads or when projects reach critical milestones.

## 5. Integration with Engineering Tools:

- Integrated Salesforce with project management and engineering software to sync project updates in real time.
- Used APIs to allow seamless data transfer between Salesforce and other engineering tools.

## 6. Design of Dashboards and Reports:

- Developed dashboards to display key performance indicators, such as project progress, team efficiency, and client satisfaction.
- Created real-time reports for tracking the sales pipeline, revenue forecasts, and project health.

## 5. Testing and Validation

- **Unit Testing:** Validated each module of the CRM application for engineering workflows independently.
- **System Testing:** Ensured all Salesforce features, including custom objects, workflows, and integrations, functioned cohesively.
- **User Acceptance Testing (UAT):** Conducted with stakeholders to confirm that the CRM solution met business requirements.
- **Load Testing:** Tested system performance under different loads to ensure stability during peak usage times.

## 6. Key Scenarios Addressed by Salesforce in this Implementation Process

- **Lead Management:** Automated lead assignment to sales engineers, ensuring prompt follow-ups and reducing the chances of losing potential clients.
- **Project Lifecycle Tracking:** Allowed teams to track the status of each engineering project, from design and approval to implementation and delivery.
- **Client Communication and Documentation:** Centralized client communications and engineering documents within Salesforce for easy access and retrieval.
- **Forecasting and Budget Management:** Provided accurate forecasting of project costs and timelines to help engineers and managers make informed decisions.
- **Customer Feedback and Follow-Up:** Enabled tracking of customer satisfaction and automated reminders for post-project feedback collection.

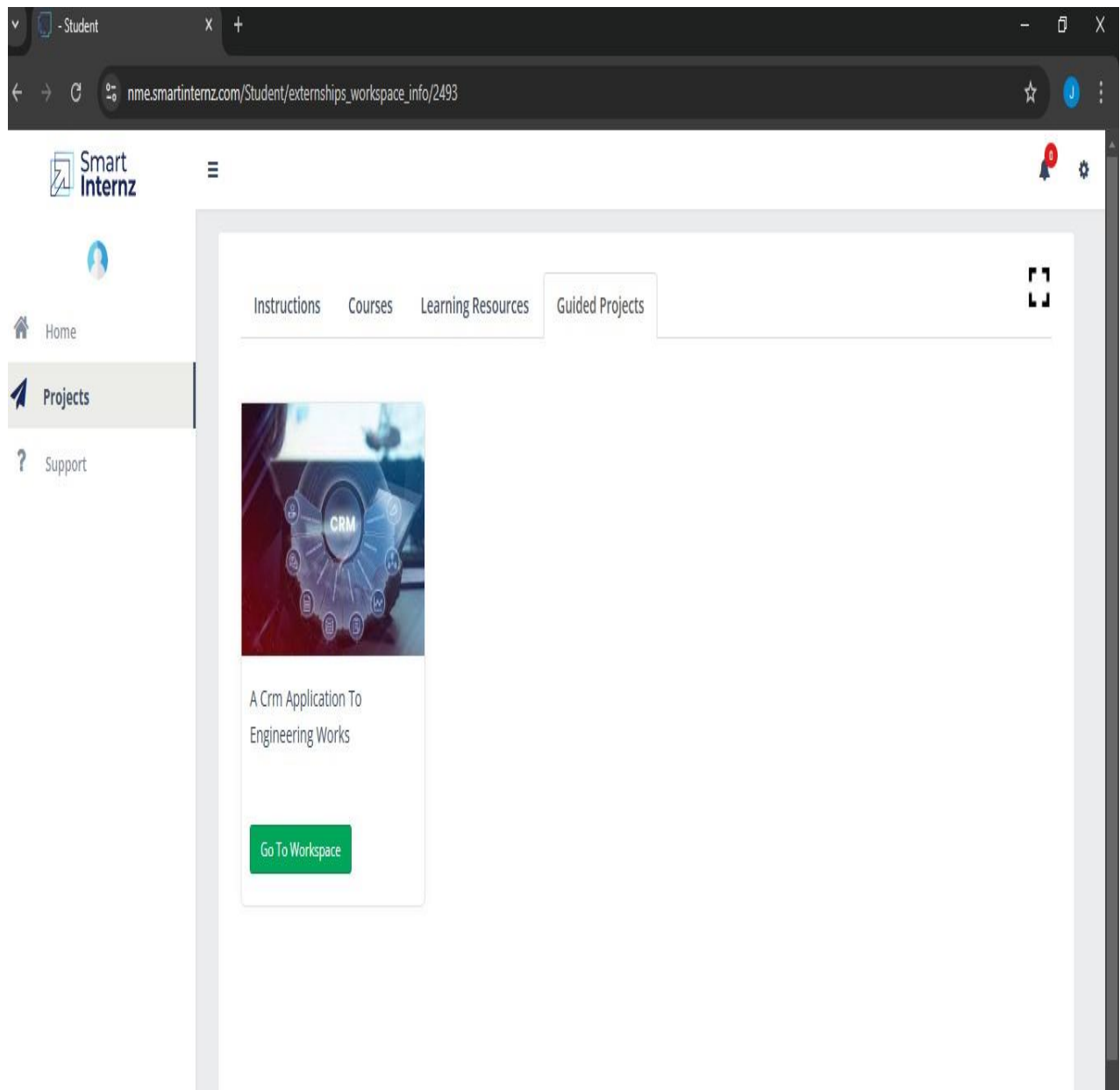
## 7. Conclusion

The CRM application for engineering works successfully streamlined client relationship management, project tracking, and communication processes within engineering teams. By utilizing Salesforce's extensive CRM capabilities, the application provided a unified platform that improved efficiency, boosted client satisfaction, and enabled more informed decision-making across engineering projects. This implementation highlights Salesforce's adaptability in addressing the unique needs of engineering workflows, offering an agile, data-driven solution for customer management and project oversight.

## ScreenShots of the CRM Application:

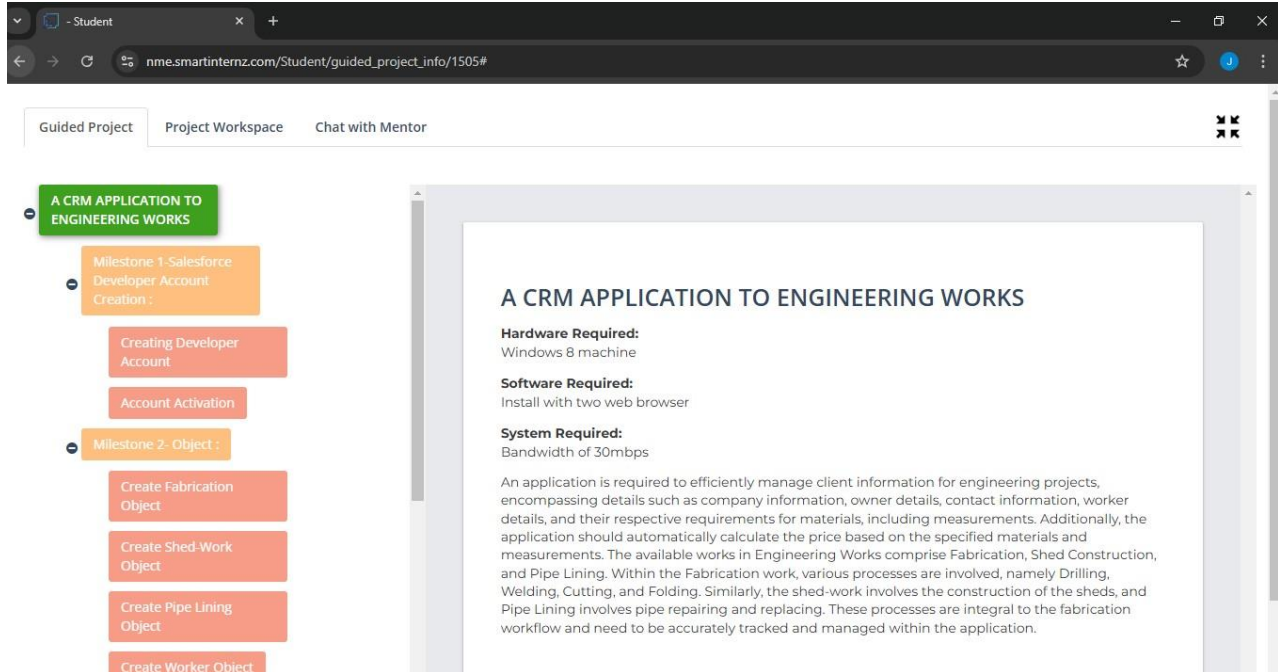
### Guided Project :

A CRM Application to Engineering Works





## Work Flow for the Project:



The screenshot displays a web browser window with the URL `nme.smartinternz.com/Student/guided_project_info/1505#`. The application interface includes a navigation bar with tabs: "Guided Project", "Project Workspace", and "Chat with Mentor". The "Guided Project" tab is active, showing a workflow diagram on the left and a detailed project description on the right.

**Workflow Diagram:**

- A CRM APPLICATION TO ENGINEERING WORKS** (Green box)
  - Milestone 1- Salesforce Developer Account Creation :** (Orange box)
    - Creating Developer Account (Red box)
    - Account Activation (Red box)
  - Milestone 2- Object :** (Orange box)
    - Create Fabrication Object (Red box)
    - Create Shed-Work Object (Red box)
    - Create Pipe Lining Object (Red box)
    - Create Worker Object (Red box)

**Project Description:**

### A CRM APPLICATION TO ENGINEERING WORKS

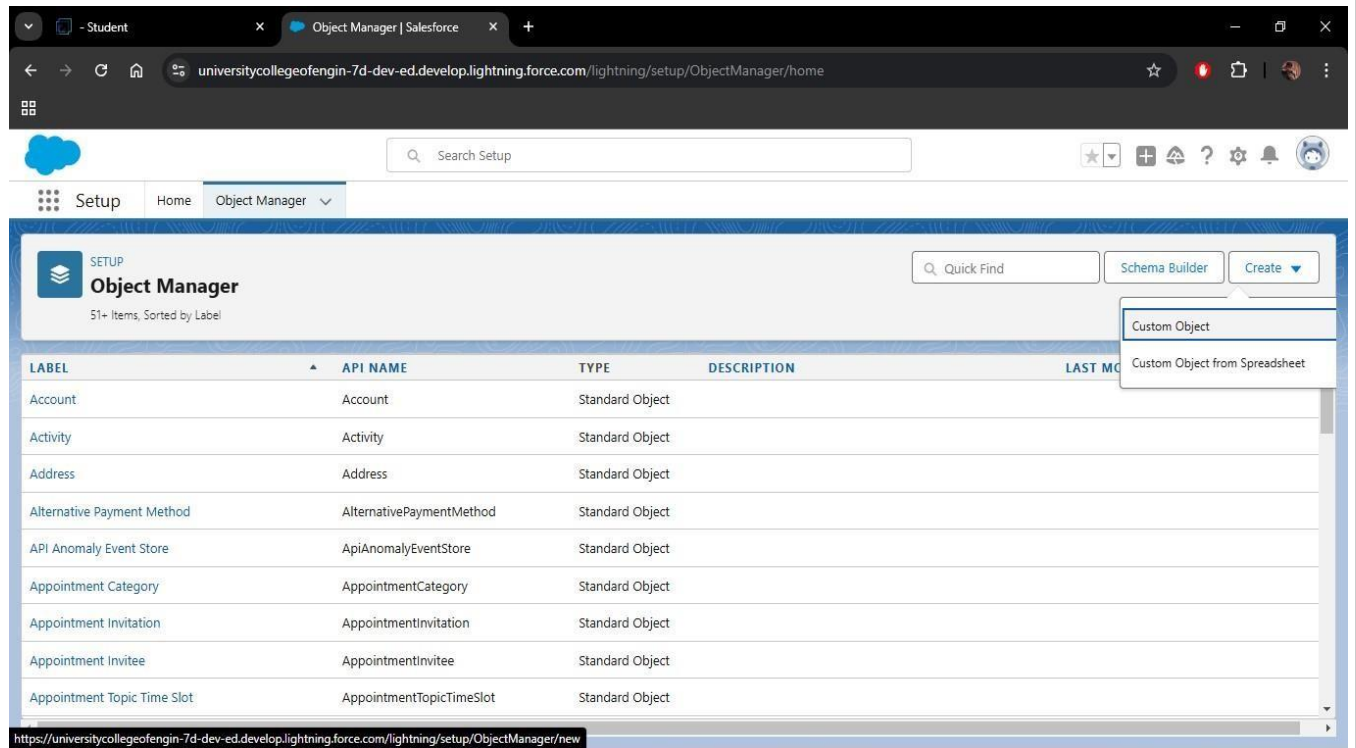
**Hardware Required:**  
Windows 8 machine

**Software Required:**  
Install with two web browser

**System Required:**  
Bandwidth of 30mbps

An application is required to efficiently manage client information for engineering projects, encompassing details such as company information, owner details, contact information, worker details, and their respective requirements for materials, including measurements. Additionally, the application should automatically calculate the price based on the specified materials and measurements. The available works in Engineering Works comprise Fabrication, Shed Construction, and Pipe Lining. Within the Fabrication work, various processes are involved, namely Drilling, Welding, Cutting, and Folding. Similarly, the shed-work involves the construction of the sheds, and Pipe Lining involves pipe repairing and replacing. These processes are integral to the fabrication workflow and need to be accurately tracked and managed within the application.

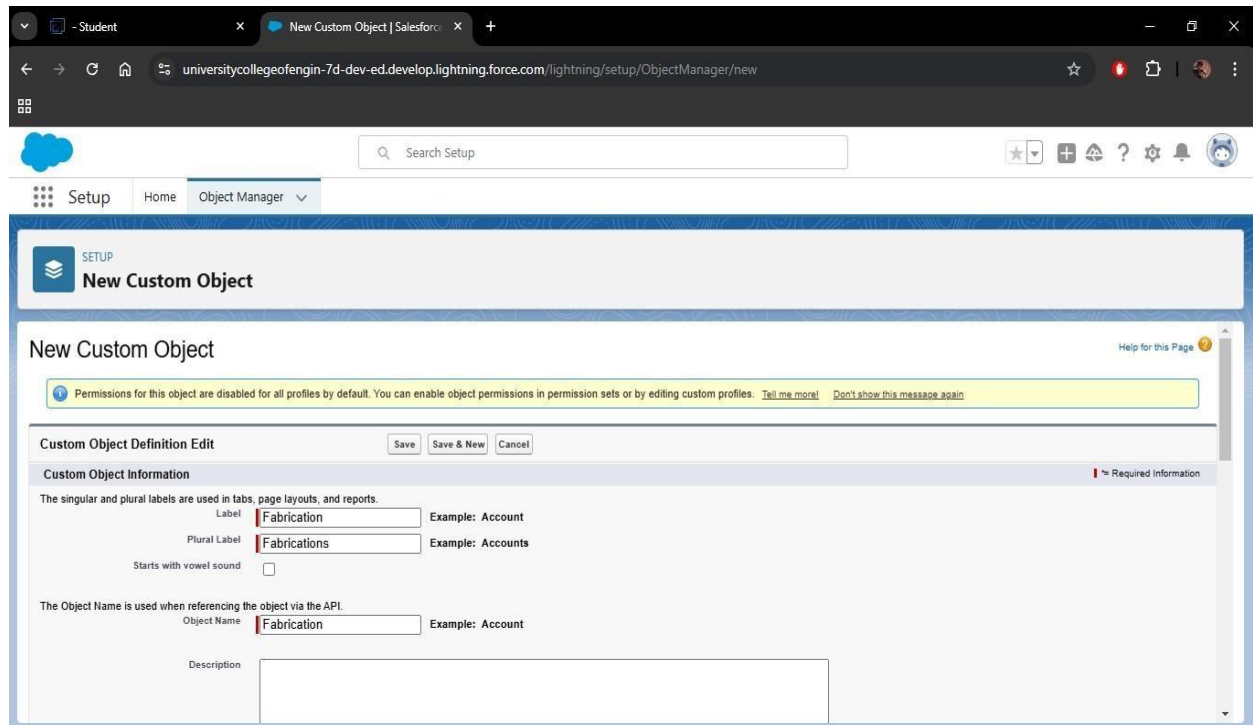
## Object Manager:



The screenshot shows the Salesforce Object Manager interface. The browser address bar displays the URL: `universitycollegeofengin-7d-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/home`. The page title is "Object Manager" with a sub-header "51+ Items, Sorted by Label". A search bar labeled "Search Setup" is at the top right. Below the header, there is a table of objects. A dropdown menu is open, showing "Custom Object" and "Custom Object from Spreadsheet".

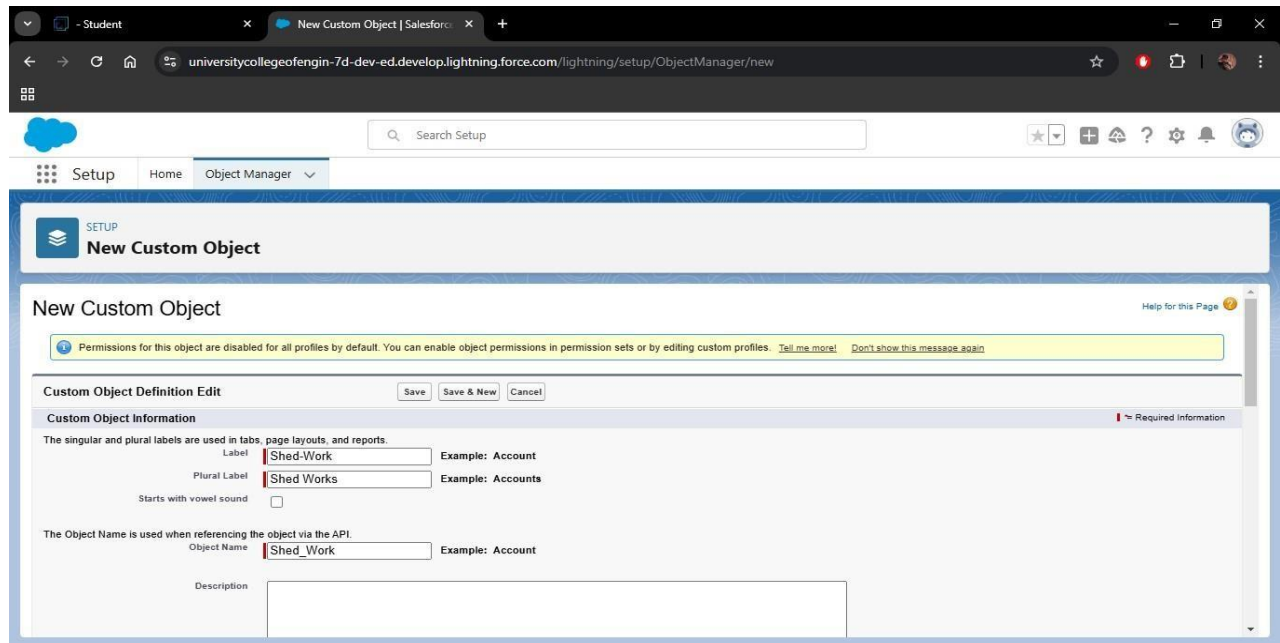
LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED
Account	Account	Standard Object		
Activity	Activity	Standard Object		
Address	Address	Standard Object		
Alternative Payment Method	AlternativePaymentMethod	Standard Object		
API Anomaly Event Store	ApiAnomalyEventStore	Standard Object		
Appointment Category	AppointmentCategory	Standard Object		
Appointment Invitation	AppointmentInvitation	Standard Object		
Appointment Invitee	AppointmentInvitee	Standard Object		
Appointment Topic Time Slot	AppointmentTopicTimeSlot	Standard Object		

## Creation of Various Objects in the Project:

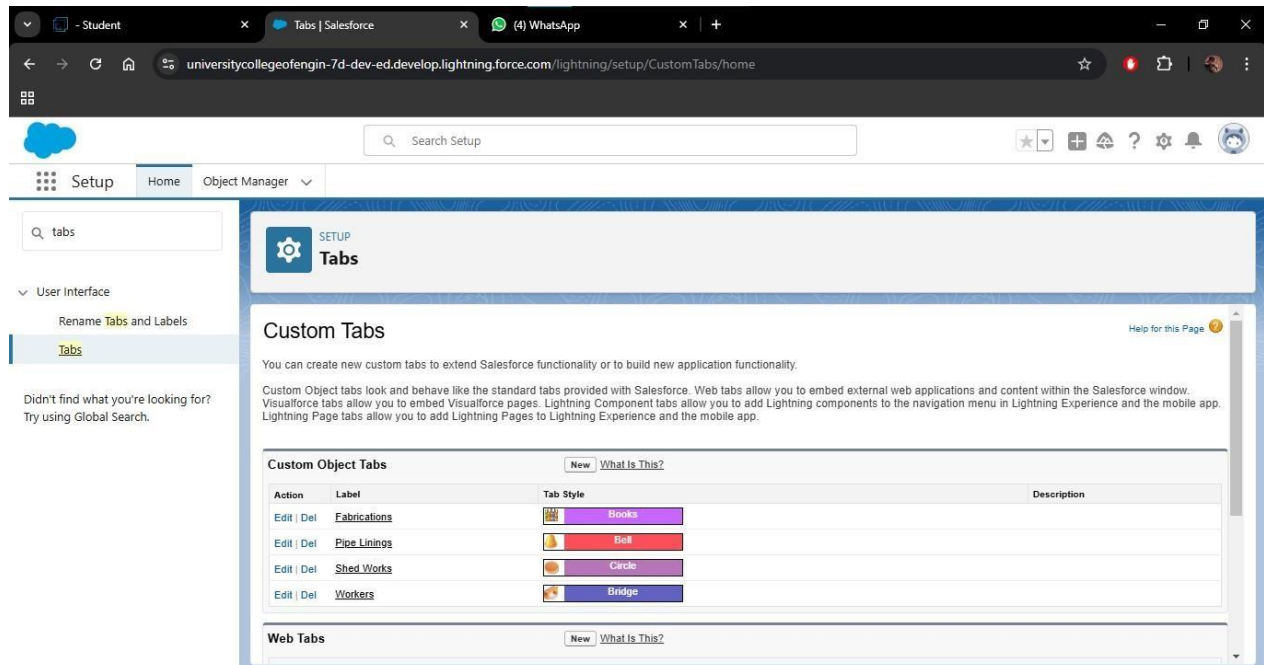


The screenshot shows the "New Custom Object" page in Salesforce. The browser address bar displays the URL: `universitycollegeofengin-7d-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/new`. The page title is "New Custom Object". A message at the top states: "Permissions for this object are disabled for all profiles by default. You can enable object permissions in permission sets or by editing custom profiles. [Tell me more!](#) [Don't show this message again](#)". Below the message, there is a "Custom Object Definition Edit" section with buttons for "Save", "Save & New", and "Cancel". The "Custom Object Information" section contains the following fields:

- Label:** Fabrication (Example: Account)
- Plural Label:** Fabrications (Example: Accounts)
- Starts with vowel sound:** ☐
- Object Name:** Fabrication (Example: Account)
- Description:** (Empty text area)

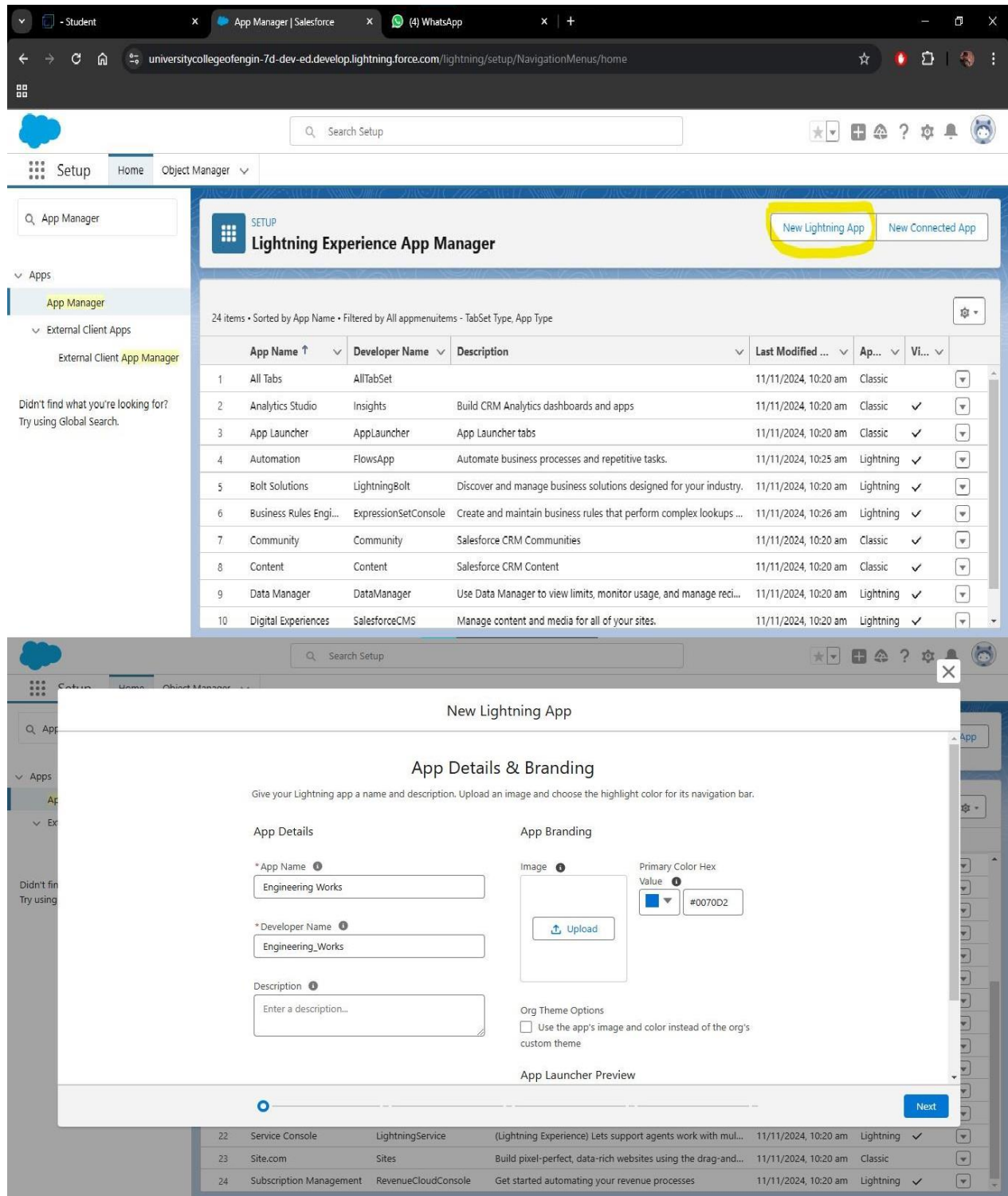


## Custom Tabs:



Action	Label	Tab Style	Description
Edit   Del	Fabrications	Books	
Edit   Del	Pipe Linings	Ball	
Edit   Del	Shed Works	Circle	
Edit   Del	Workers	Bridge	

## Creation of Lightning App:



The screenshot displays the Salesforce Lightning Experience App Manager interface. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The left sidebar shows 'App Manager' under 'Apps'. The main content area lists 24 items, sorted by App Name, filtered by All appmenuitems - TabSet Type, App Type. A table lists various apps, including All Tabs, Analytics Studio, App Launcher, Automation, Bolt Solutions, Business Rules Engi..., Community, Content, Data Manager, and Digital Experiences. A 'New Lightning App' button is highlighted in the top right. Below the table, a 'New Lightning App' modal is open, showing 'App Details & Branding'.

**App Details & Branding**

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

**App Details**

- \* App Name: Engineering Works
- \* Developer Name: Engineering\_Works
- Description: Enter a description...

**App Branding**

- Image: Upload
- Primary Color Hex Value: #0070D2
- Org Theme Options: ☐ Use the app's image and color instead of the org's custom theme

**App Launcher Preview**

Next

## Assigning Fields for the Objects:





Setup Home Object Manager

SETUP > OBJECT MANAGER

## Fabrication

Details

**Fields & Relationships**

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Object Access

### Fields & Relationships

17 Items, Sorted by Field Label

New

Deleted Fields

Field Dependencies

Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount_c	Formula (Currency)		
Area	Area_c	Formula (Number)		
Breadth	Breadth_c	Number(16, 2)		
Cost per Meter	Cost_per_meter_c	Number(18, 0)		
Created By	CreatedById	Lookup(User)		
Email	Email_c	Email		
Fabrication Name	Name	Text(80)		✓
Final Price	Final_Price_c	Currency(18, 0)		
Last Modified By	LastModifiedById	Lookup(User)		
Length	Length_c	Number(16, 2)		





Setup Home Object Manager

SETUP > OBJECT MANAGER

## Fabrication

Details

**Fields & Relationships**

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

Object Access

### Validation Rules

3 Items, Sorted by Rule Name

New

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
Rule_for_fabrication	Top of Page	Length, Breadth, Width and Quantity Values should not be zero	✓	Chandru S, 12/11/2024, 1:52 pm
Rule_for_Pipe_Lining	Top of Page	Length, Breadth, Width and Quantity Values should not be zero	✓	Chandru S, 12/11/2024, 2:00 pm
Rule_for_Shed_Work	Top of Page	Length, Breadth, Width and Quantity Values should not be zero	✓	Chandru S, 12/11/2024, 1:56 pm

Using Letterheads for Email Purpose:







Setup Home Object Manager

▼ Email

Classic Email Templates

Classic Letterheads

▼ Data Classification

Data Classification Download

Data Classification Settings

Data Classification Upload

Didn't find what you're looking for?  
Try using Global Search.

## SETUP Classic Letterheads

### Letterhead Letterhead for Email Purpose

Help for this Page

Preview your Letterhead details below.

#### Classic Letterhead Detail

Edit Properties Edit Letterhead Delete

Letterhead Label	Letterhead for Email Purpose
Letterhead Unique Name	Letterhead_for_Email_Purpose
Available For Use	<input checked="" type="checkbox"/>
Description	
Created By	Chandru S. 12/11/2024, 2:05 pm
Modified By	Chandru S. 12/11/2024, 2:07 pm



## Email Templates and Alerts:





Setup Home Object Manager

▼ Email

Classic Email Templates

Classic Letterheads

▼ Data Classification

Data Classification Download

Data Classification Settings

Data Classification Upload

Didn't find what you're looking for?  
Try using Global Search.

## SETUP Classic Email Templates

### HTML Email Template Shed-work Object

Help for this Page

Preview your email template below.

#### Email Template Detail

Edit Properties Edit HTML Version Edit Text Version Delete Clone

Email Templates from Salesforce	Unfiled Public Classic Email Templates
Email Template Name	Shed-work Object
Template Unique Name	Shed_work_Object
Classic Letterhead	Letterhead for Email Purpose
Email Layout	Formal Letter
Encoding	Unicode (UTF-8)
Author	Chandru S. [Change]
Description	Shed-work
Created By	Chandru S. 12/11/2024, 3:53 pm
Modified By	Chandru S. 12/11/2024, 3:54 pm

Edit Properties Edit HTML Version Edit Text Version Delete Clone

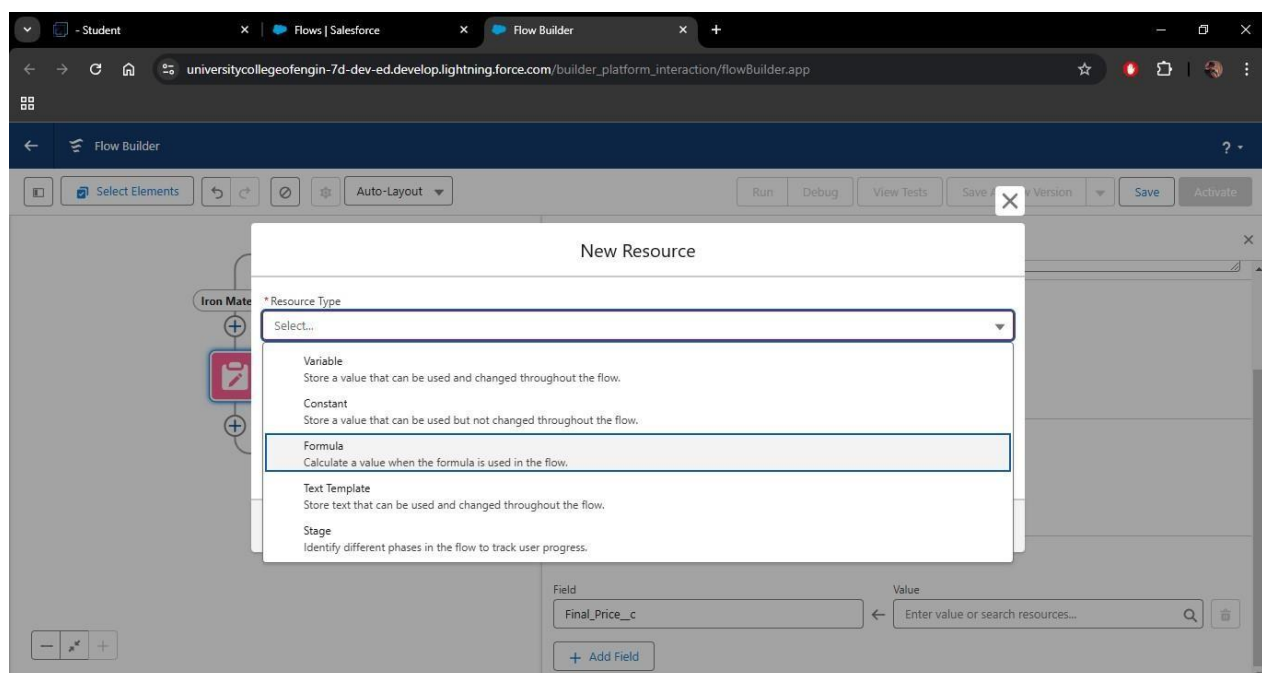
#### Email Template

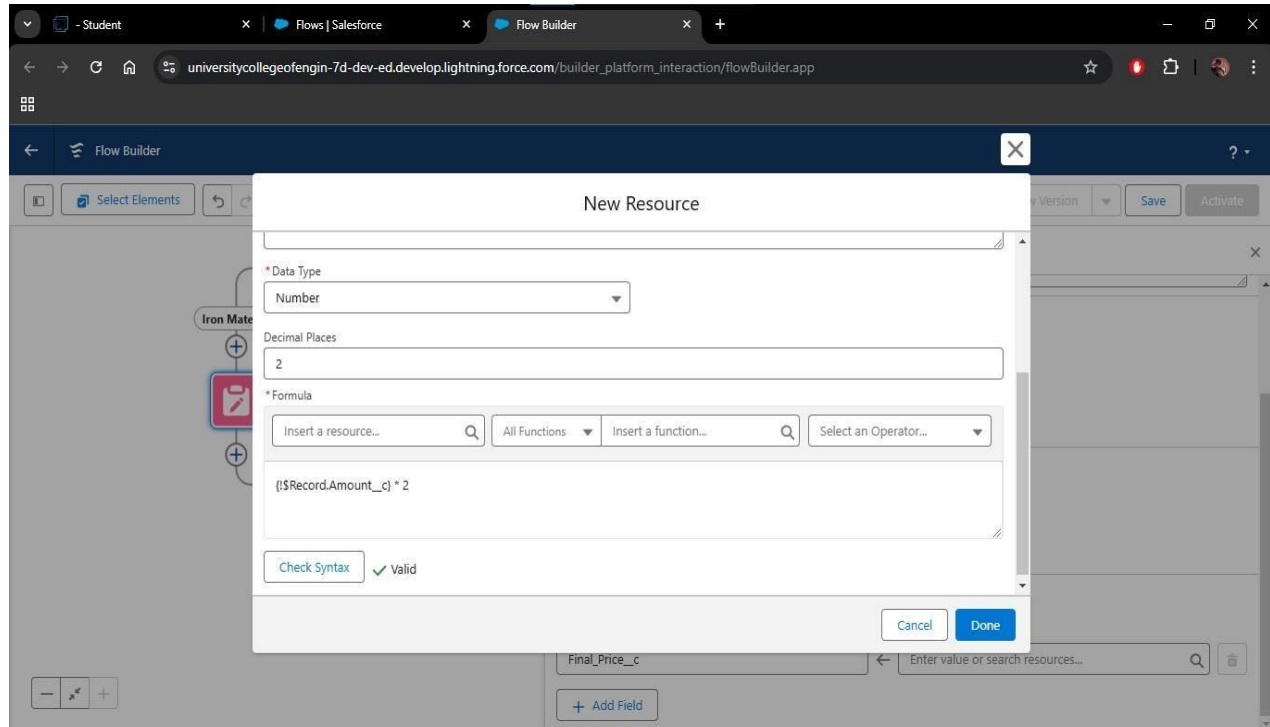
Send Test and Verify Merge Fields

Subject Shed-work Template

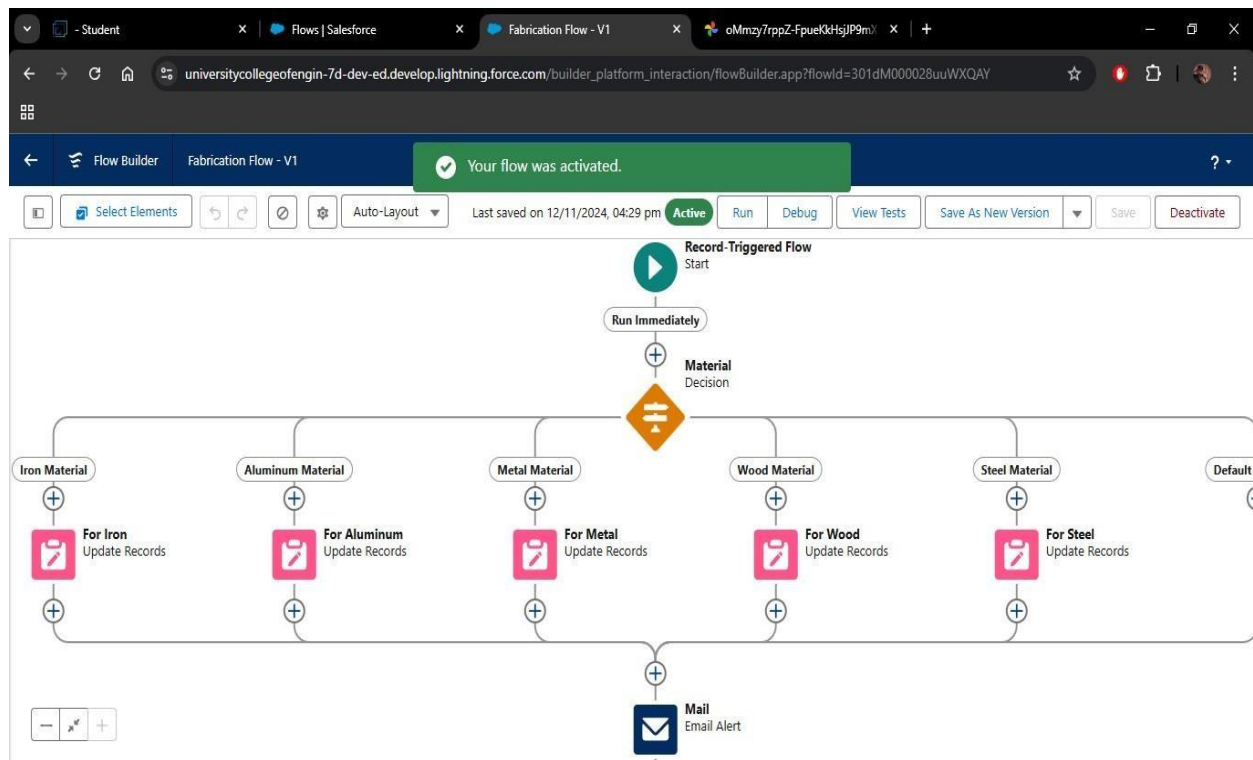
HTML Preview







## Activation of Flows:





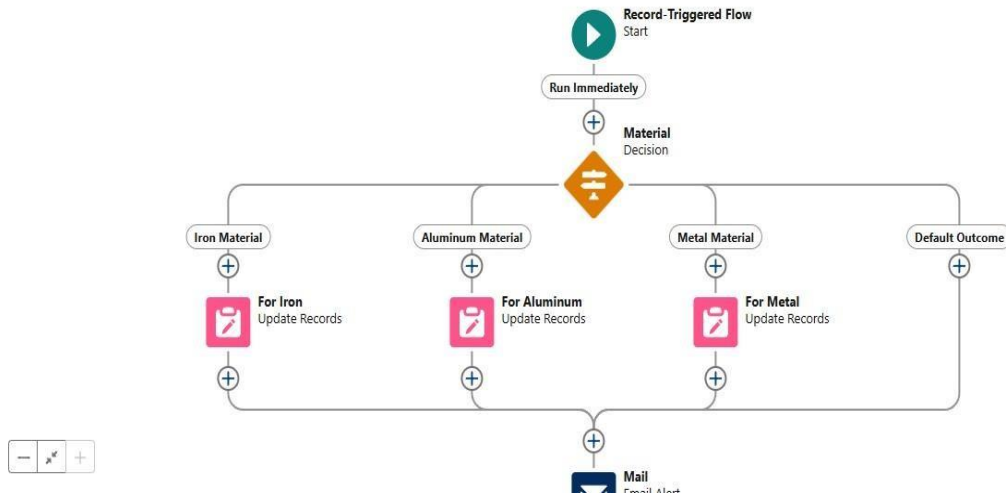
Student | Flows | Salesforce | Pipe Lining Flow - V1

universitycollegeofengin-7d-dev-ed.develop.lightning.force.com/builder\_platform\_interaction/flowBuilder.app?flowId=301dM000028tstQQAQ

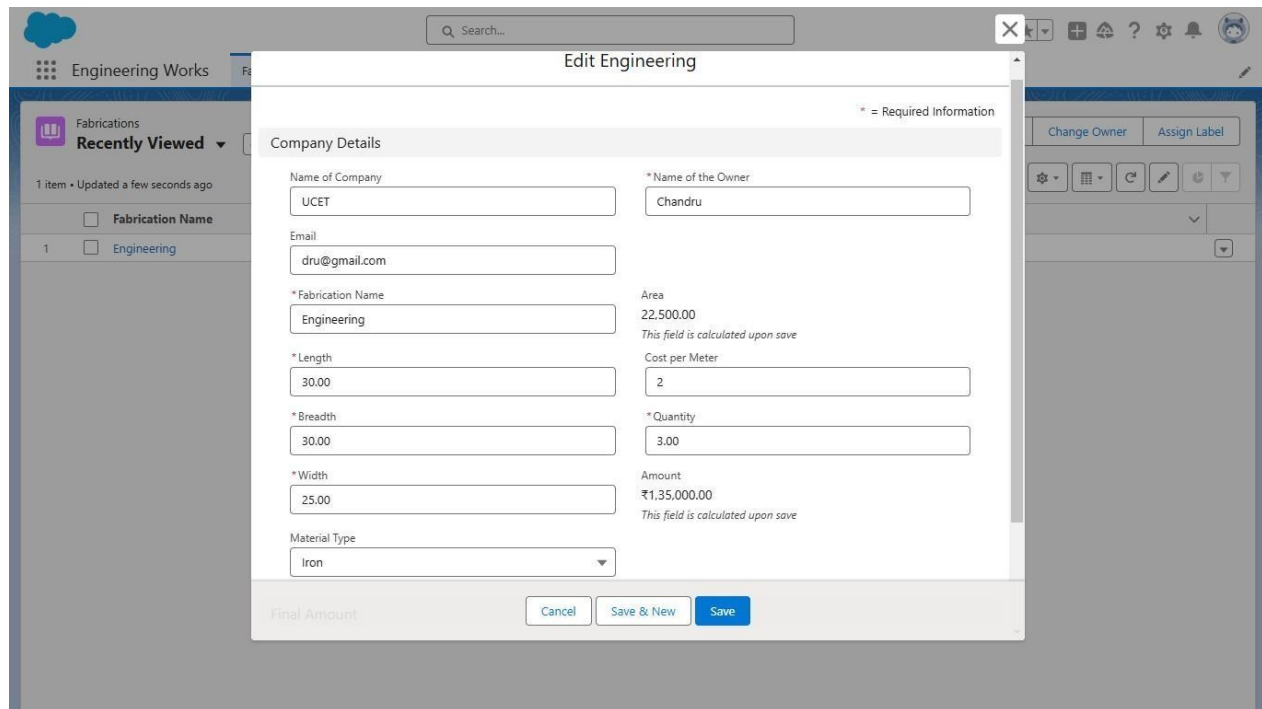
Flow Builder | Pipe Lining Flow - V1

Your flow was activated.

Select Elements | Auto-Layout | Last saved on 12/11/2024, 05:00 pm | Active | Run | Debug | View Tests | Save As New Version | Save | Deactivate



## Conclusion: Flow to calculate Final Price on Fabrication Object based on Material Type



**Edit Engineering**

\* = Required Information

**Company Details**

Name of Company: UCET

\* Name of the Owner: Chandru

Email: dru@gmail.com

\* Fabrication Name: Engineering

Area: 22,500.00  
*This field is calculated upon save*

\* Length: 30.00

Cost per Meter: 2

\* Breadth: 30.00

\* Quantity: 3.00

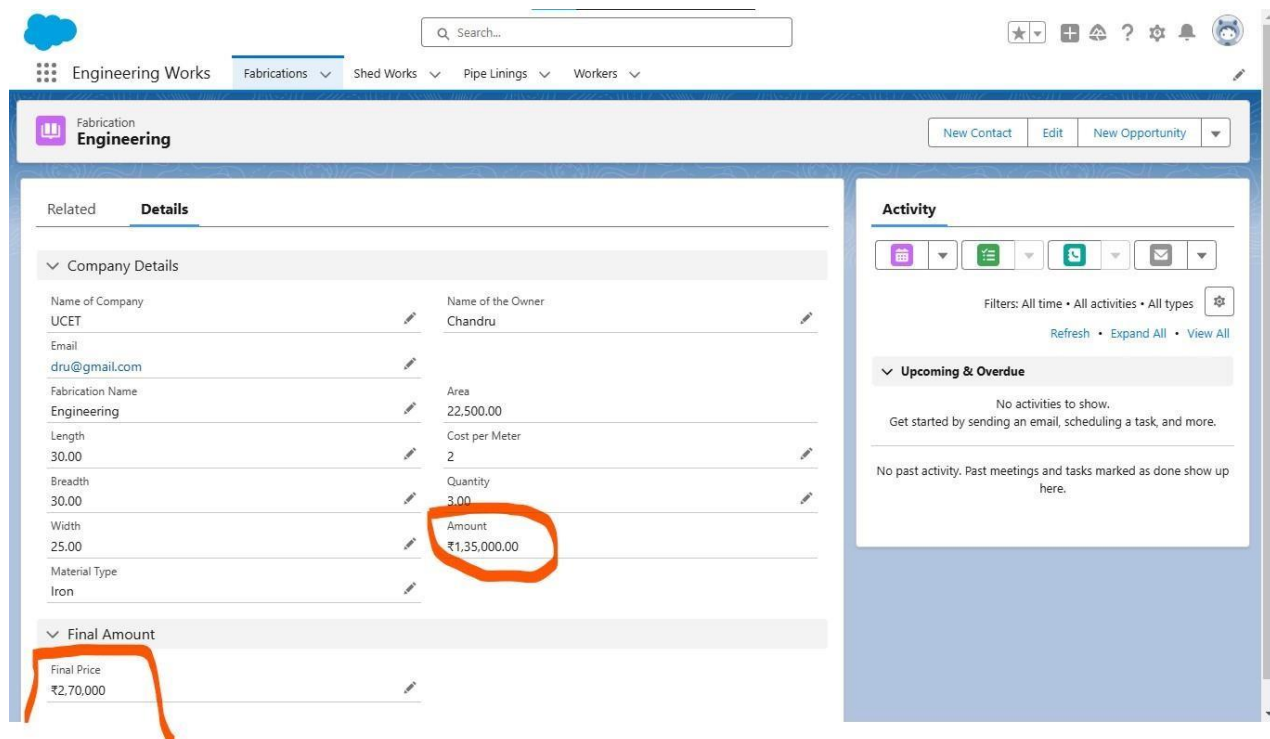
\* Width: 25.00

Amount: ₹1,35,000.00  
*This field is calculated upon save*

Material Type: Iron

Final Amount: ₹2,70,000

Buttons: Cancel, Save & New, Save



**Fabrication Engineering**

Buttons: New Contact, Edit, New Opportunity

**Details**

**Company Details**

Name of Company: UCET

Name of the Owner: Chandru

Email: dru@gmail.com

Fabrication Name: Engineering

Area: 22,500.00

Length: 30.00

Cost per Meter: 2

Breadth: 30.00

Quantity: 3.00

Width: 25.00

Amount: ₹1,35,000.00

Material Type: Iron

**Final Amount**

Final Price: ₹2,70,000

**Activity**

Filters: All time • All activities • All types

Refresh • Expand All • View All

**Upcoming & Overdue**

No activities to show.  
Get started by sending an email, scheduling a task, and more.

No past activity. Past meetings and tasks marked as done show up here.