

Project Title: Golden Era Enterprises CRM – Elevating Jewelry Retail with Smart Customer Engagement

Problem Statement

Jewelry stores like Golden Era Enterprises face challenges in managing customer relationships, tracking sales, and offering personalized services. Customers often do not receive timely updates on new collections, exclusive offers, or important services such as repairs and maintenance. Sales staff may not have access to complete customer profiles or purchase history, making it difficult to deliver personalized recommendations or upsell effectively. Inventory tracking and post-sale services like resizing or repair updates are often handled manually, resulting in inefficiencies and delays. There is no single system that connects customer preferences, sales data, inventory, and marketing efforts—making it harder to deliver a seamless and memorable shopping experience.

Proposed Salesforce Solution

- Customers create profiles with their preferences, past purchases, anniversaries, and style interests.
- Sales team records interactions and purchase history directly in the CRM.
- Salesforce sends automated notifications to customers about:
 - Order Confirmation
 - Personalized offer
 - Service reminders
- Inventory is tracked in real-time, showing availability across collections and categories.
- Appointments for in-store visits or virtual consultations can be scheduled and tracked inside Salesforce.
- Dashboards provide real-time insights to store.

PHASE 1: PROBLEM UNDERSTANDING & INDUSTRY ANALYSIS

1. REQUIREMENT GATHERING

Goal: Understand the business needs and pain points.

- Talk to store managers, sales staff, marketing, and inventory teams.

- Identify current issues like manual tracking, poor customer communication, and lack of personalization.
- Gather real examples of what users want Salesforce to do.

2. STAKEHOLDER ANALYSIS

Goal: Identify who will use or benefit from the CRM.

Internal Users:

- Sales Team: Needs customer history and inventory info.
- Managers: Want reports and dashboards.
- Marketing Team: Needs customer data for targeted campaigns.
- Inventory Staff: Needs live stock updates and alerts.

External Users:

- Customers: Want timely updates, offers, and personalized service.

3. BUSINESS PROCESS MAPPING

Goal: Understand how work is currently done and where Salesforce can help.

Key Areas:

- Customer onboarding is manual.
- No system to track customer purchases.
- Inventory is tracked separately, often manually.
- No proper tracking of post-sale services like repairs or resizing.
- Marketing messages are not personalized.

How Salesforce Helps:

- Automates data entry and updates.
- Centralizes sales and customer info.
- Tracks inventory in real-time.
- Sends automatic reminders and personalized offers.

4. INDUSTRY USE CASE ANALYSIS

Goal: Understand jewelry industry needs to design a better CRM.

Jewelry Retail Needs:

- Personalized customer service (preferences, occasions).
- Follow-ups for high-value purchases.
- Regular reminders for cleaning or repairs.
- Building long-term customer loyalty.

Salesforce Solutions:

- Custom fields for preferences, ring size, etc.
- Service Cloud for tracking repairs.
- Marketing automation for events like birthdays or anniversaries.
- Dashboards to track trends and performance.

5. APPEXCHANGE EXPLORATION

Goal: Find ready-to-use Salesforce apps that add value.

Helpful App Types:

- Appointment booking
- Loyalty and rewards management
- Inventory and repair tracking

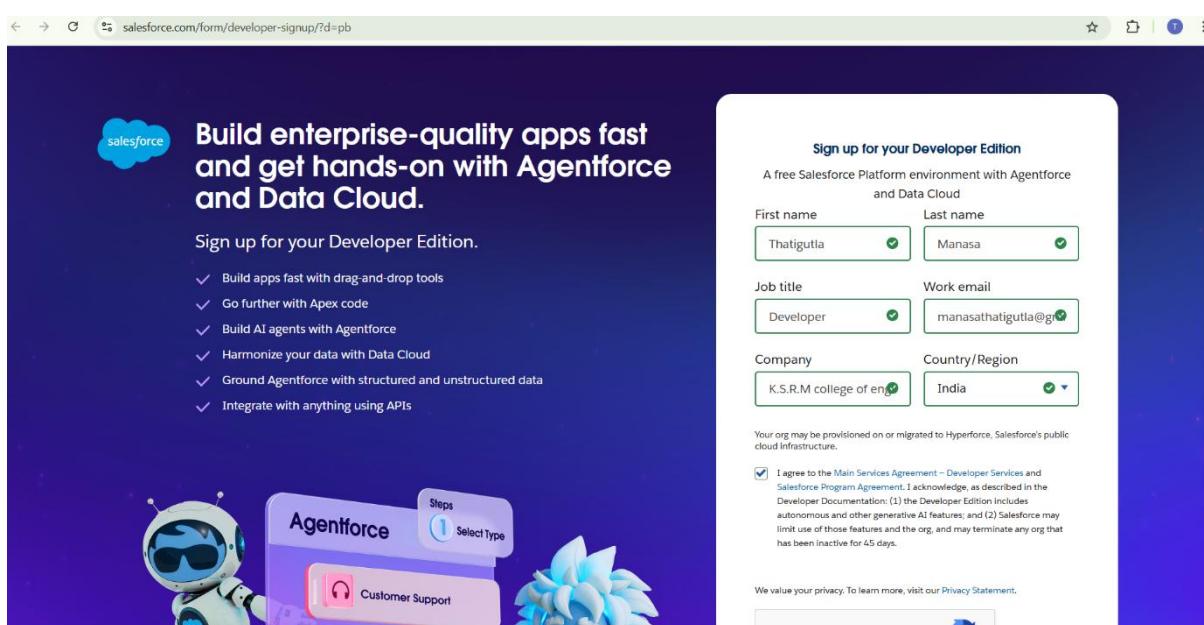
Action Steps:

- Explore top-rated apps on AppExchange.
- Check for compatibility with Sales or Service Cloud.
- Choose between using apps or custom development.

Phase 2: Org Setup & Configuration

Step 1- Sign up

sign up for your developer edition



The screenshot shows the sign-up page for the Salesforce Developer Edition. The page has a dark blue header with the Salesforce logo and a sub-header: "Build enterprise-quality apps fast and get hands-on with Agentforce and Data Cloud." Below this, there's a section titled "Sign up for your Developer Edition" with a list of benefits:

- ✓ Build apps fast with drag-and-drop tools
- ✓ Go further with Apex code
- ✓ Build AI agents with Agentforce
- ✓ Harmonize your data with Data Cloud
- ✓ Ground Agentforce with structured and unstructured data
- ✓ Integrate with anything using APIs

On the right side, there's a form titled "Sign up for your Developer Edition". It includes fields for First name (Thatigutla), Last name (Manasa), Job title (Developer), Work email (manasathatigutla@gmail.com), Company (K.S.R.M college of engg.), and Country/Region (India). A checkbox for agreeing to the Main Services Agreement is checked. At the bottom, there's a note about org provisioning and a link to the Privacy Statement.

Step 2: Open Setup

1. Login to Salesforce Lightning.
2. Click the **Gear icon** in the top-right → select **Setup**.

The screenshot shows the Salesforce Lightning Setup Home page. At the top, there's a navigation bar with icons for Setup, Home, and Object Manager. A search bar says "Search Setup". On the left, a sidebar lists categories like Setup Home, Service Setup Assistant, Commerce Setup Assistant, Field Service Setup Home (Beta), Hyperforce Assistant, Release Updates, Salesforce Mobile App, Lightning Usage, Optimizer, Sales Cloud Everywhere, Administration (Users, Data, Email), and Platform Tools. The main content area has a "Home" tab selected. It features three cards: "Data Cloud" (Watch Video, Let's Go), "Get Started with Einstein Bots" (Get Started), and "Mobile Publisher" (Learn More). Below these is a section titled "Most Recently Used" with 10 items, showing entries like Reason, Service Type, and GoldenEra Marketing Campaign. The URL in the address bar is https://orgfarm-45c2165c55-dev-ed.lightning.force.com/lightning/setup/SetupOneHome/home.

Step 3: Update Company Information

1. In Setup, use **Quick Find** → type **Company Information** → open it.
2. Click **Edit**.
3. Update:
 - **Organization Name:** KSRM College of Engineering
 - **Default Time Zone:** (09:00 – 18:00)
4. Click **Save**.

The screenshot shows the Salesforce Setup interface with the 'Company Information' page selected. The page displays organization details for 'K.S.R.M college of engineering'. Key information includes:

- Organization Name:** K.S.R.M college of engineering
- Primary Contact:** OrgFarm EPIC
- Address:** United States
- Fiscal Year Starts In:** January
- Phone:** (GMT-07:00) Pacific Daylight Time (America/Los_Angeles)
- Default Locale:** English (United States)
- Default Language:** English
- Currency Locale:** English (United States) - USD
- Used Data Space:** 342 KB (7%) [View]
- Used File Space:** 24 KB (0%) [View]
- API Requests, Last 24 Hours:** 0 (15,000 max)
- Streaming API Events, Last 24 Hours:** 0 (10,000 max)
- Restricted Logins, Current Month:** 0 (0 max)
- Salesforce.com Organization ID:** 00QgL00000BKSJ
- Organization Edition:** Developer Edition
- Instance:** CAN98

Below the main content, there are 'Created By' and 'Modified By' fields, both set to 'OrgFarm EPIC' with the date '9/10/2025, 11:49 AM'.

Step 4: Set Business Hours

1. Quick Find → **Business Hours** → click **New**.
2. Fill in:

Name: Default Hours

Hours: 09:00 – 18:00 (or your actual business hours)

3. Click **Save**.

Why: Defines working hours for workflows, notifications, and approval processes

Step 5: Profiles

Profiles define what users **can do**. For Golden Era Enterprises, you'd create these Salesforce profiles:

a) System Administrator

- Full access to all standard/custom objects, settings, and configuration.
- Used by IT/Admins

Phase 3: Data Modeling & Relationships

Step 1: Standard & Custom Objects

Six custom objects were created to store business-critical data:

- **GoldenEra Customer** – Stores customer details such as preferences, anniversaries, and purchase history.
- **GoldenEra Product** – Stores product catalog details such as category, material, price, and SKU.
- **GoldenEra Order** – Stores orders placed by customers, including order date, payment status, and delivery status.
- **GoldenEra Inventory** – Tracks stock availability, reorder levels, and store location.
- **GoldenEra Marketing Campaign** – Stores details of promotional campaigns such as campaign name, offers, and status.
- **GoldenEra Service Request** – Stores after-sales service requests such as repairs, resizing, cleaning, and their status.

Steps followed:

- Navigated to Setup → Object Manager → Create → Custom Object
- Provided label, name, and enabled reports/search
- Saved and created Tabs for each object

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes links for Setup, Home, and Object Manager. The main title is "SETUP > OBJECT MANAGER" and the specific object name is "GoldenEra Customer".

The left sidebar contains a navigation menu with the following items:

- 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

The right panel displays the "Details" section for the "GoldenEra Customer" object. It includes fields for:

- Description: (empty)
- API Name: GoldenEra_Customer_c
- Custom: ✓
- Singular Label: GoldenEra Customer
- Plural Label: GoldenEra Customers
- Enable Reports: ✓
- Track Activities: (empty)
- Track Field History: (empty)
- Deployment Status: Deployed
- Help Settings: Standard salesforce.com Help Window

At the bottom right of the panel are "Edit" and "Delete" buttons.

Same steps followed for all six custom object creation

The screenshot shows the Salesforce Object Manager interface. At the top, there are tabs for 'Setup' and 'Object Manager'. A search bar at the top right contains the text 'golder'. Below the search bar, there is a 'Schema Builder' button and a 'Create' button. The main area displays a table titled 'Object Manager' with the following columns: 'LABEL', 'API NAME', 'TYPE', 'DESCRIPTION', 'LAST MODIFIED', and 'DEPLOYED'. The table lists six custom objects:

Label	API Name	Type	Description	Last Modified	Deployed
GoldenEra Customer	GoldenEra_Customer__c	Custom Object		9/16/2025	✓
GoldenEra Inventory	GoldenEra_Inventory__c	Custom Object		9/17/2025	✓
GoldenEra Marketing Campaign	GoldenEra_Marketing_Campaign__c	Custom Object		9/17/2025	✓
GoldenEra Order	GoldenEra_Order__c	Custom Object		9/17/2025	✓
GoldenEra Product	GoldenEra_Product__c	Custom Object		9/16/2025	✓
GoldenEra Service Request	GoldenEra_Service_Request__c	Custom Object		9/17/2025	✓

Step 2: Fields

GoldenEra Customer

- **GoldenEra Customer Name** (Text, 80) – Standard Name field
- **FirstName** (Text, 60)
- **LastName** (Text, 60)
- **FullName** (Formula, Text → FirstName + LastName)
- **Email** (Email)
- **Phone** (Phone)
- **Loyalty Status** (Picklist: Gold, Silver, Bronze, Platinum)
- **Total Purchases** (Number, 18,0)
- **Owner** (Lookup → User/Group)
- **Created By** (Lookup → User)
- **Last Modified By** (Lookup → User)

The screenshot shows the Salesforce Setup interface with the following details:

- Object Manager**: GoldenEra Customer
- Fields & Relationships**: 11 Items, Sorted by Field Label
- Table Headers**: FIELD, FIELD NAME, DATA TYPE, CONTROLLING FIELD, INDEXED
- Table Data**:

FIELD	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Email	Email__c	Email		
FirstName	FirstName__c	Text(60)		
FullName	FullName__c	Formula (Text)		
GoldenEra Customer Name	Name	Text(80)		
Last Modified By	LastModifiedById	Lookup(User)		
LastName	LastName__c	Text(60)		
Loyalty Status	Loyalty_Status__c	Picklist		
Owner	OwnerId	Lookup(User,Group)		
Phone	Phone__c	Phone		
Total Purchases	Total_Purchases__c	Number(18, 0)		

GoldenEra Product

- GoldenEra Product Name** – Name of the jewelry product (e.g., Diamond Ring, Gold).
- Price** – Selling price of the product.
- SKU** – Unique identifier/code for the product.
- Stock Quantity** – Number of items available in inventory.
- Owner** – Salesforce user or group responsible for managing the product.
- Created By** – User who created the product record.
- Last Modified By** – User who last updated the product record.

The screenshot shows the Salesforce Setup interface with the following details:

- Object Manager**: GoldenEra Product
- Fields & Relationships**: 7 Items, Sorted by Field Label
- Table Headers**: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, INDEXED
- Table Data**:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
GoldenEra Product Name	Name	Text(80)		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		
Price	Price__c	Currency(18, 0)		
SKU	SKU__c	Text(60)		
Stock Quantity	Stock_Quantity__c	Number(18, 0)		

GoldenEra Order

- **Customer** (Lookup → GoldenEra Customer)
- **Product** (Lookup → GoldenEra Product)
- **Order Date** (Date)
- **Payment Status** (Picklist: Pending, Paid, Refunded)
- **Delivery Status** (Picklist: Pending, Shipped, Delivered)

GoldenEra Inventory

- **Product** (Lookup → GoldenEra Product)
- **Available Quantity** (Number)
- **Reorder Level** (Number)
- **Store Location** (Text)
- **Stock Status** (Formula → IF(Available_Quantity__c > Reorder_Level__c, "Available", "Low Stock"))

GoldenEra Marketing Campaign

- **Campaign Name** (Text)
- **Start Date** (Date)
- **End Date** (Date)
- **Offer Type** (Picklist: Discount %, Free Gift, Exclusive Access)
- **Campaign Status** (Picklist: Planned, Active, Completed)

GoldenEra Service Request

- **Customer** (Lookup → GoldenEra Customer)
- **Product** (Lookup → GoldenEra Product)
- **Request Type** (Picklist: Repair, Cleaning, Resizing, Engraving)
- **Request Status** (Picklist: New, In Progress, Completed)
- **Service Date** (Date)

The screenshot shows the Salesforce Object Manager interface for the 'GoldenEra Service Request' object. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The main title is 'SETUP > OBJECT MANAGER' followed by 'GoldenEra Service Request'. On the left, a sidebar lists various setup categories like 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, and Scoping Rules. The main content area is titled 'Fields & Relationships' and shows 8 items, sorted by Field Label. It includes columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are: Created By (CreatedBy), GoldenEra Customer (GoldenEra_Customer__c), GoldenEra Product (GoldenEra_Product__c), Last Modified By (LastModifiedBy), Owner (OwnerId), Reason (Reason_c), Request Number (Name), and Service Type (Service_Type__c). The 'CONTROLLING FIELD' column indicates which field controls the relationship for each lookup field.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
GoldenEra Customer	GoldenEra_Customer__c	Lookup(GoldenEra Customer)		✓
GoldenEra Product	GoldenEra_Product__c	Lookup(GoldenEra Product)		✓
Last Modified By	LastModifiedBy	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Reason	Reason_c	Text(100)		
Request Number	Name	Auto Number		✓
Service Type	Service_Type__c	Picklist		

3. Record Types

- Used to **differentiate business processes** if needed.
- Example:
 - **GoldenEra Service Request** → Record Types: *Repair Request, Cleaning Request, Resizing Request*
 - **GoldenEra Order** → Record Types: *Online Order, In-Store Order*

4. Page Layouts

- Each object has **custom page layouts** to show only relevant fields to different users.
- Example:
 - **Sales team** sees Customer Name, Email, Phone, Orders, Total Purchases.
 - **Service team** sees Service Requests, Product details, Request Status.

The screenshot shows the Salesforce Setup interface with the following details:

- Header:** Includes the Salesforce logo, Setup, Home, Object Manager, and a search bar labeled "Search Setup".
- Breadcrumbs:** SETUP > OBJECT MANAGER
- Section:** GoldenEra Service Request
- Left Sidebar:** A navigation menu with the following items:
 - Details
 - Fields & Relationships
 - Page Layouts** (selected)
 - 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
- Table:** Page Layouts (1 Items, Sorted by Page Layout Name)

PAGE LAYOUT NAME	CREATED BY	MODIFIED BY
GoldenEra Service Request Layout	Thatigutla Manasa, 9/17/2025, 1:44 AM	Thatigutla Manasa, 9/17/2025, 4:16 AM
- Buttons:** Quick Find, New, Page Layout Assignment

5. Compact Layouts

- Provides **summary info on record highlights** (used in mobile view or hover cards).
- Example:
 - **GoldenEra Customer Compact Layout:** Full Name, Email, Phone, Loyalty Status, Total Purchases.
 - **GoldenEra Product Compact Layout:** Product Name, Price, Stock Quantity.

But I used Compact Layout as System Default.

6. Schema Builder

- Used to **visualize all objects and their relationships**.
- Shows **custom and standard objects**, field types, and lookup/master-detail links.
- Helps stakeholders understand **data flow and connections**.

7. Lookup vs Master-Detail vs Hierarchical Relationships

- **Lookup Relationship:**
 - Simple connection between two objects.
 - Example: GoldenEra Order → Customer
- **Master-Detail Relationship:**

- Strong dependency, parent controls child record behavior.
- Example: GoldenEra Inventory → Product (Product is parent, Inventory is child)
- **Hierarchical Relationship:**
 - Special relationship for **User object** only.
 - Example: Manager → Employee (not used heavily in this project)

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Customer Email	Customer_Email__c	Email		
GoldenEra Customer	GoldenEra_Customer__c	Lookup(GoldenEra Customer)	▼	▼
GoldenEra Product	GoldenEra_Product__c	Lookup(GoldenEra Product)	▼	▼
Last Modified By	LastModifiedById	Lookup(User)		
Order Number	Name	Auto Number	▼	▼
Owner	OwnerId	Lookup(User,Group)	▼	▼
Quantity	Quantity__c	Number(18, 0)	▼	▼
Status	Status__c	Picklist	▼	▼

8. Junction Objects

- Used for **many-to-many relationships**.
- Example (optional for future enhancement):
 - **GoldenEra Customer ↔ GoldenEra Marketing Campaign**
 - A single customer can belong to multiple campaigns, and a campaign can target multiple customers.

Phase 4: Process Automation (Admin)

1• Validation Rules

Validation Rules ensure that the data entered into Salesforce records meets specific business criteria. They prevent incorrect or inconsistent data from being saved.

Examples for GoldenEra Enterprisees:

- GoldenEra Order__c: Total_Amount__c <= 0
 - Error Message: “Please Enter Correct Amount”
 - Ensures orders have a positive total amount.

- Inventory__c: Stock_Quantity__c <= 0
 - Error Message: “Inventory count cannot be less than zero”
 - Prevents stock from being negative.
- GoldenEra Customer__c: NOT(CONTAINS>Email, "@gmail.com"))
 - Error Message: “Please fill Correct Gmail”
 - Ensures customer email follows a valid format.

Steps to create a validation rule:

1. Setup → Object Manager → Select the Object → Validation Rules → New.
2. Enter Rule Name, Error Condition Formula, and Error Message.
3. Choose error location (Field or Top of Page) → Save.

The screenshot shows the Salesforce Object Manager interface. The left sidebar lists various object settings like Details, Fields & Relationships, Page Layouts, etc. The main area displays a validation rule for the 'GoldenEra Customer' object. The rule details are as follows:

Validation Rule Detail	
Rule Name	Email
Error Condition Formula	NOT CONTAINS>Email__c, "@gmail.com"
Error Message	Please fill Correct Gmail
Description	
Created By	Thatigutta Manasa 9/20/2025, 6:13 AM
Modified By	Thatigutta Manasa 9/20/2025, 6:13 AM
<input type="button" value="Edit"/> <input type="button" value="Clone"/>	

2. Workflow Rules

Workflow Rules automate standard internal processes. They can trigger Email Alerts, Field Updates, Tasks, or Outbound Messages when record conditions are met.

Example for GoldenEra Enterprises:

- When Inventory__c.Stock_Quantity__c < 5, send an email alert to the Inventory Manager.
- When GoldenEra_Order__c.Status__c = Confirmed, update a field Order_Confirmed__c to true.

3.Process Builder

Process Builder allows multi-step automation beyond what workflow rules can do. It can:

- Update related records

- Post to Chatter
- Launch Flows or Apex
- Send Email Alerts

Example for GoldenEra Enterprises :

- When Total_Purchases__c of a customer exceeds 1000, update Loyalty_Status__c to Diamond.
- When GoldenEra_Order__c.Status__c = Rejection, notify the Sales team automatically.

Steps:

1. Setup → Process Builder → New → Name your process → Choose Object.
2. Define criteria → Add Immediate or Scheduled Actions.
3. Save & Activate.

4. Approval Process

Approval Processes manage record approvals in stages.

Examples:

- Orders above a certain amount require manager approval.
- Automated actions: update order status, send notification emails to approvers.

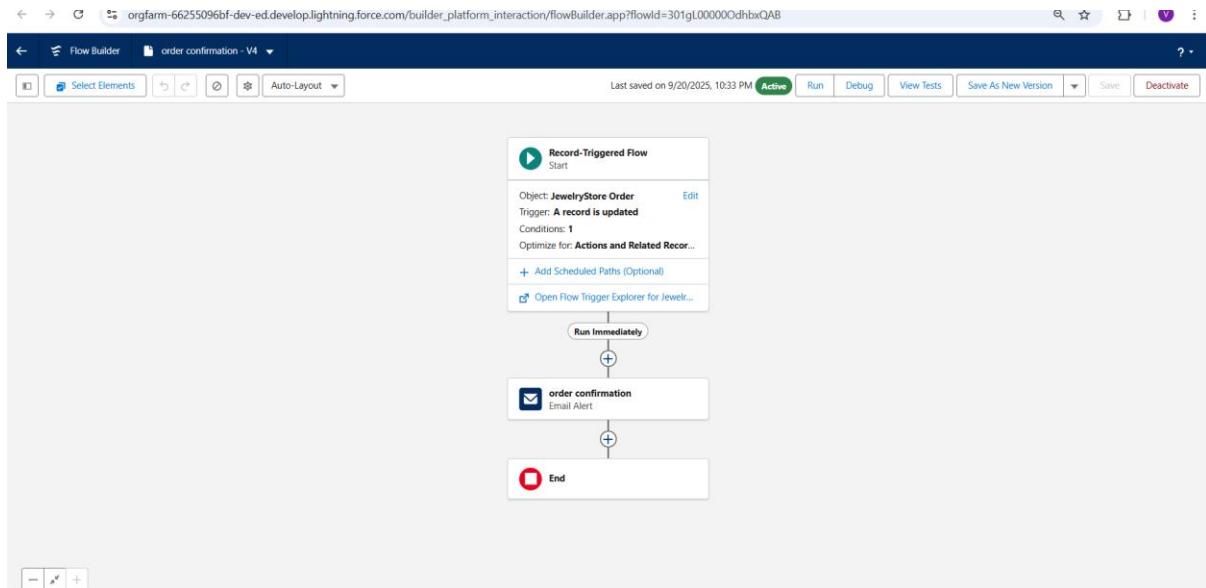
Useful for enforcing business policies and checks.

5. Flow Builder

Flow Implementations

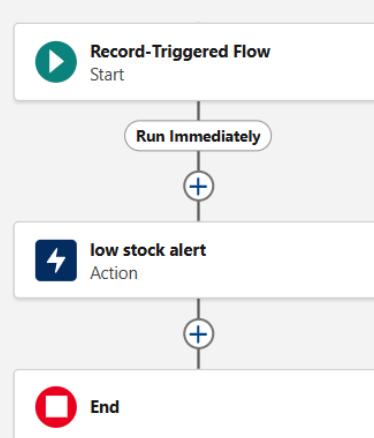
a. Order Confirmation Flow

- Triggered when an order is updated to Confirmed.
- Sends an Order Confirmation email to the related customer.



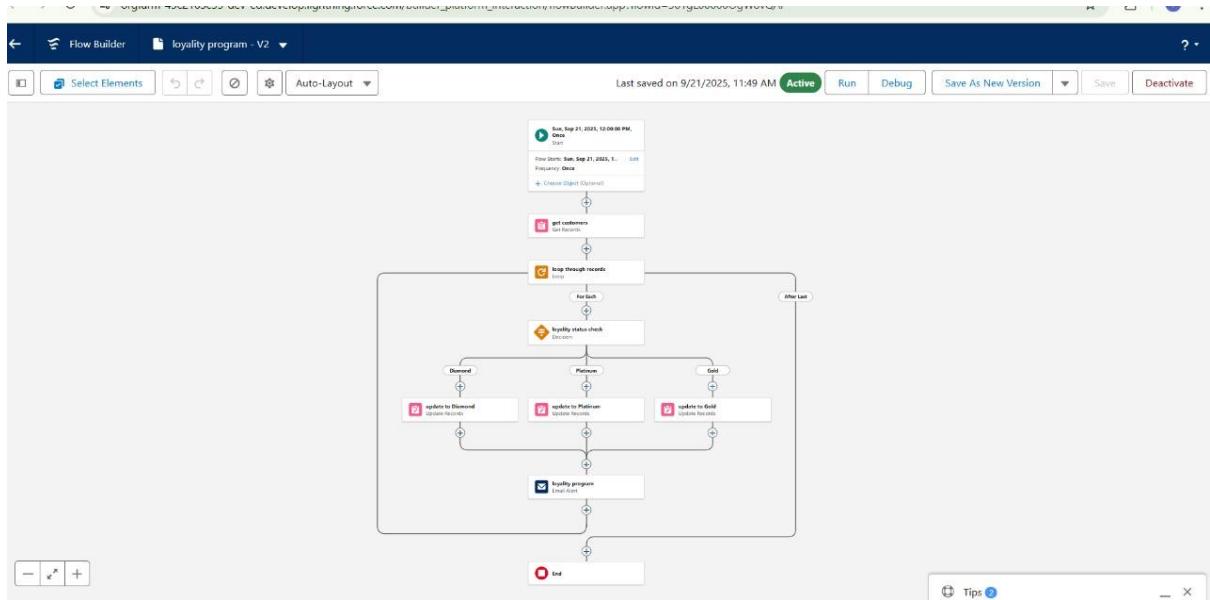
b. Stock Alert Flow

- Triggered when Inventory stock drops below 5.
- Sends Low Stock email to Inventory Manager.



c. Scheduled Flow:

- Loyalty Update
- Runs daily at midnight.
- Loops through customers and updates their Loyalty Status based on total purchases.

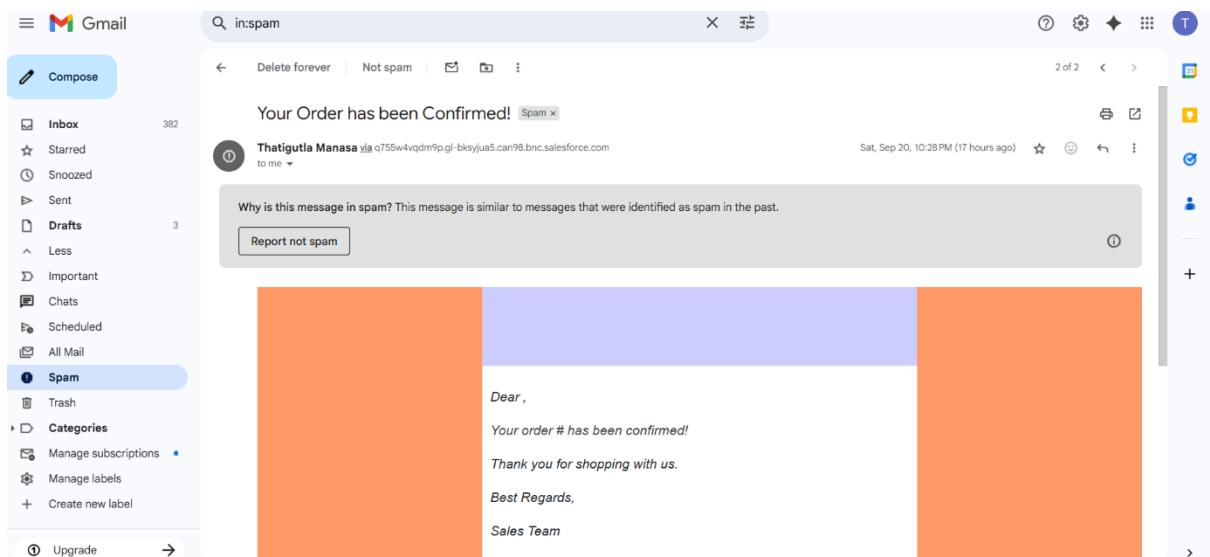


6. Email Alerts

Send automated emails based on workflows, processes, or flows.

Examples:

- Order Confirmation Email to customer.



- Low Stock Alert to Inventory Manager.

The screenshot shows a Gmail inbox with a search bar at the top containing "in:spam". There are 382 messages in the inbox. A message from "Thatigutla Manasa" is selected, with the subject "Low Stock Alert Email". The message is identified as spam and has a "Report not spam" button. The message content is as follows:

Dear Inventory Manager,
This is to inform you that the stock for the following product is running low.
Product Name: Gold Ring
Current Stock Quantity:
Please take the necessary steps to restock this item immediately.
Best Regards,
Inventory Monitoring System

Below the message are standard reply and forward buttons.

- Loyalty Program Email to qualifying customers.

The screenshot shows a Gmail inbox with a search bar at the top containing "Search mail". There are 382 messages in the inbox. A message from "OrgFarm EPIC" is selected, with the subject "Loyalty Program Email". The message content is as follows:

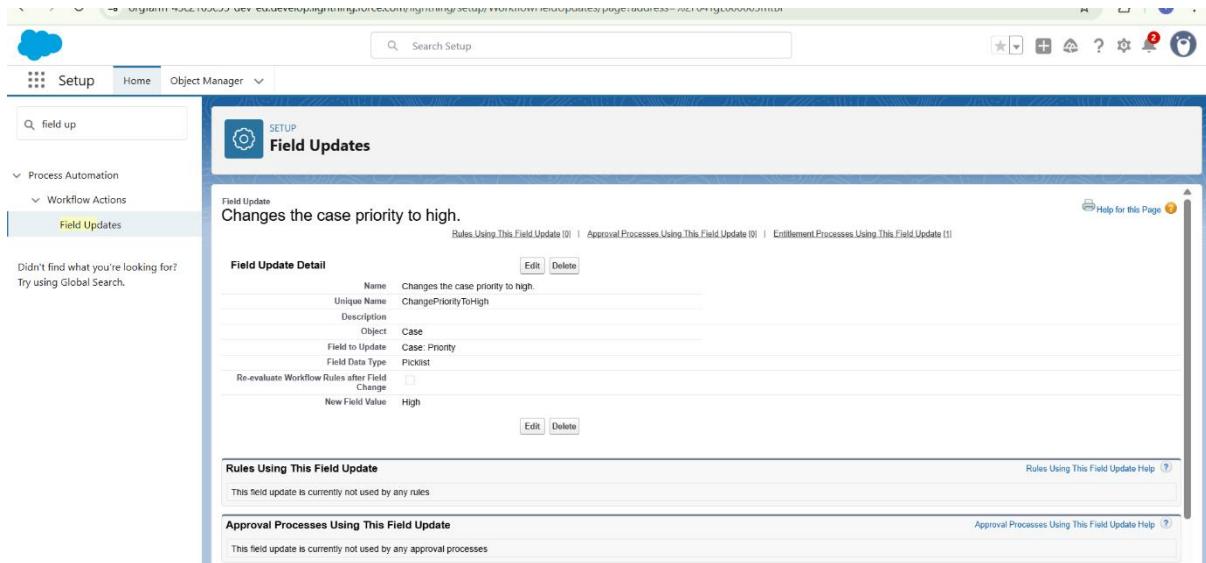
Congratulations! You are now a member and you are eligible for our Loyalty Rewards Program.
Enjoy exclusive discounts, early access to offers, and special member benefits.
Thank you for your continued Support.

7. Field Updates

Automatically update field values when criteria are met.

Examples:

- Mark Order_Confirmed_c = true when an order is confirmed.
- Update loyalty status based on total purchases.



8. Custom Notifications

Send real-time notifications to users on desktop or mobile.

Examples:

- Alert sales managers when high-value orders are placed.
- Alert inventory managers when stock is critically low.

Phase 5: Apex Programming (Developer)

Step 1: Classes & Objects

- **Apex is object-oriented:** It allows the creation of **classes** (blueprints) and **objects** (instances) to organize and reuse business logic.
- In this project, a **Trigger Handler Class** approach was implemented to follow best practices.



```
1 public class OrderTriggerHandler {
2
3     public static void validateOrderQuantity(List<GoldenEra_Order__c> orderList) {
4
5         for (GoldenEra_Order__c order : orderList) {
6
7             if (order.Status__c == 'Confirmed') {
8
9                 if (order.Quantity__c == null || order.Quantity__c <= 500) {
10
11                     order.Quantity__caddError('For Status "Confirmed", Quantity must be more than 500.');
12
13                 }
14
15             } else if (order.Status__c == 'Pending') {
16
17                 if (order.Quantity__c == null || order.Quantity__c <= 200) {
18
19                     order.Quantity__caddError('For Status "Pending", Quantity must be more than 200.');
20
21                 }
22
23             } else if (order.Status__c == 'Rejection') {
24
25                 if (order.Quantity__c == null || order.Quantity__c != 0) {
26
27                     order.Quantity__caddError('For Status "Rejection", Quantity must be 0.');
28
29                 }
30
31             }
32
33         }
34
35     }
36
37 }
```

Source Code:

```
public class OrderTriggerHandler {

    public static void validateOrderQuantity(List<GoldenEra_Order__c> orderList) {

        for (GoldenEra_Order__c order : orderList) {

            if (order.Status__c == 'Confirmed') {

                if (order.Quantity__c == null || order.Quantity__c <= 500) {

                    order.Quantity__caddError('For Status "Confirmed", Quantity must be more than 500.');

                }

            } else if (order.Status__c == 'Pending') {

                if (order.Quantity__c == null || order.Quantity__c <= 200) {

                    order.Quantity__caddError('For Status "Pending", Quantity must be more than 200.');

                }

            } else if (order.Status__c == 'Rejection') {

                if (order.Quantity__c == null || order.Quantity__c != 0) {

                    order.Quantity__caddError('For Status "Rejection", Quantity must be 0.');

                }

            }

        }

    }

}
```

```

        }
    }

    System.debug('All records validated successfully.');

}
}

```

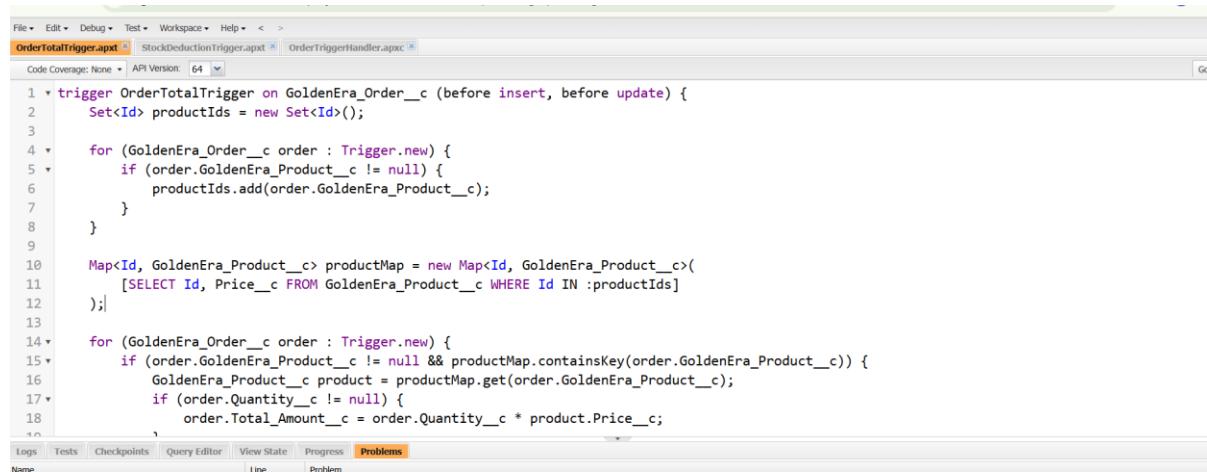
Step 2: Apex Triggers (before/after insert/update/delete)

In this project, two custom Apex triggers were implemented to automate critical processes in the Golden Era Enterprises CRM:

a) Order Total Trigger

Purpose:

- Automatically calculate the **Total Price** for each order.
- Formula: **Quantity × Product Price**



```

trigger OrderTotalTrigger on GoldenEra_Order__c (before insert, before update) {
    Set<Id> productIds = new Set<Id>();
    Map<Id, GoldenEra_Product__c> productMap = new Map<Id, GoldenEra_Product__c>(
        [SELECT Id, Price__c FROM GoldenEra_Product__c WHERE Id IN :productIds]
    );
    for (GoldenEra_Order__c order : Trigger.new) {
        if (order.GoldenEra_Product__c != null) {
            productIds.add(order.GoldenEra_Product__c);
        }
    }
    for (GoldenEra_Order__c order : Trigger.new) {
        if (order.GoldenEra_Product__c != null && productMap.containsKey(order.GoldenEra_Product__c)) {
            GoldenEra_Product__c product = productMap.get(order.GoldenEra_Product__c);
            if (order.Quantity__c != null) {
                order.Total_Amount__c = order.Quantity__c * product.Price__c;
            }
        }
    }
}

```

Source Code:

```

trigger OrderTotalTrigger on GoldenEra_Order__c (before insert, before update) {

    Set<Id> productIds = new Set<Id>();

    for (GoldenEra_Order__c order : Trigger.new) {

        if (order.GoldenEra_Product__c != null) {

```

```

productIds.add(order.GoldenEra_Product__c);

}

}

Map<Id, GoldenEra_Product__c> productMap = new Map<Id, GoldenEra_Product__c>(
    [SELECT Id, Price__c FROM GoldenEra_Product__c WHERE Id IN :productIds]
);

for (GoldenEra_Order__c order : Trigger.new) {
    if (order.GoldenEra_Product__c != null &&
        productMap.containsKey(order.GoldenEra_Product__c)) {
        GoldenEra_Product__c product = productMap.get(order.GoldenEra_Product__c);
        if (order.Quantity__c != null) {
            order.Total_Amount__c = order.Quantity__c * product.Price__c;
        }
    }
}

```

b) Stock Deduction Trigger

Purpose:

- Deduct stock from **Inventory** (or Product Stock Quantity) based on the order quantity.
- Example: If customer orders 2 rings, Inventory decreases by 2.

```
trigger StockDeductionTrigger on GoldenEra_Order__c (after insert, after update) {
    Set<Id> productIds = new Set<Id>();
    for (GoldenEra_Order__c order : Trigger.new) {
        if (order.Status__c == 'Confirmed' && order.GoldenEra_Product__c != null) {
            productIds.add(order.GoldenEra_Product__c);
        }
    }
    if (productIds.isEmpty()) return;
    // Query related inventories based on product
    Map<Id, GoldenEra_Inventory__c> inventoryMap = new Map<Id, GoldenEra_Inventory__c>(
        [SELECT Id, Stock_Quantity__c, GoldenEra_Product__c
         FROM GoldenEra_Inventory__c
         WHERE GoldenEra_Product__c IN :productIds]);
}
```

Source Code:

```
trigger StockDeductionTrigger on GoldenEra_Order__c (after insert, after update) {

    Set<Id> productIds = new Set<Id>();

    for (GoldenEra_Order__c order : Trigger.new) {

        if (order.Status__c == 'Confirmed' && order.GoldenEra_Product__c != null) {

            productIds.add(order.GoldenEra_Product__c);

        }

    }

    if (productIds.isEmpty()) return;

    // Query related inventories based on product

    Map<Id, GoldenEra_Inventory__c> inventoryMap = new Map<Id,
        GoldenEra_Inventory__c>(

        [SELECT Id, Stock_Quantity__c, GoldenEra_Product__c

         FROM GoldenEra_Inventory__c

         WHERE GoldenEra_Product__c IN :productIds]

    );
}
```

```

List<GoldenEra_Inventory__c> inventoriesToUpdate = new
List<GoldenEra_Inventory__c>();

for (GoldenEra_Order__c order : Trigger.new) {

    if (order.Status__c == 'Confirmed' && order.GoldenEra_Product__c != null) {

        for (GoldenEra_Inventory__c inv : inventoryMap.values()) {

            if (inv.GoldenEra_Product__c == order.GoldenEra_Product__c) {

                inv.Stock_Quantity__c -= order.Quantity__c;

                inventoriesToUpdate.add(inv);

                break;
            }
        }
    }
}

if (!inventoriesToUpdate.isEmpty()) {

    update inventoriesToUpdate;
}
}

```

Phase 6: User Interface Development

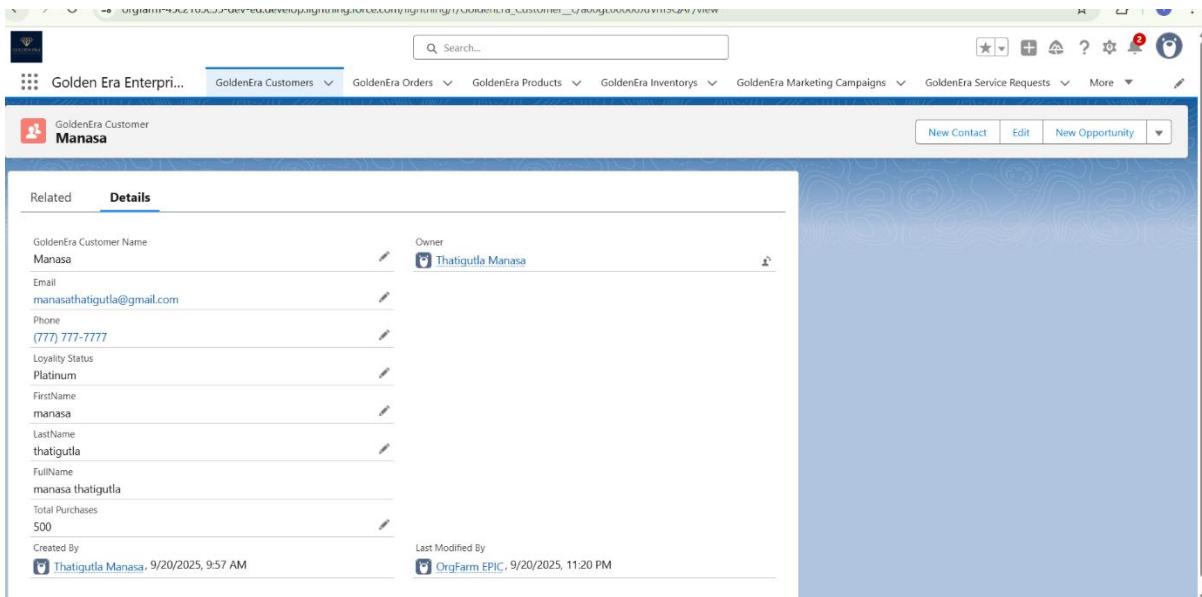
This phase focuses on creating a user-friendly interface that allows GoldenEra employees, managers, and customers to easily interact with Salesforce.

1. Lightning App Builder

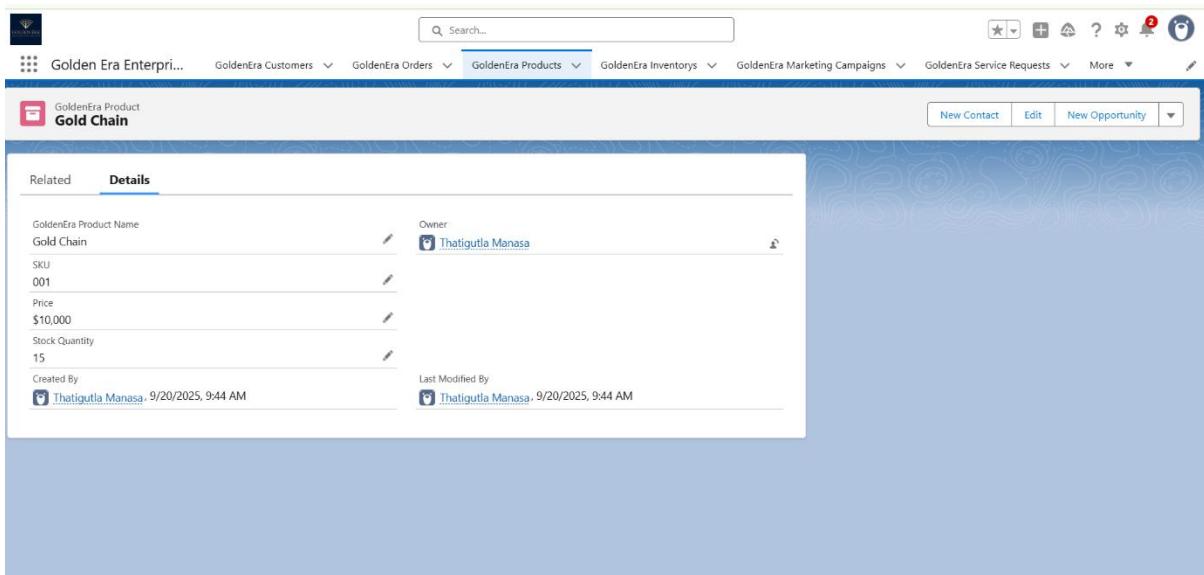
- A drag-and-drop tool used to build custom applications without writing code.
- Admins can design apps by combining standard and custom components.
- **GoldenEra Enterprises Example:** Build a “GoldenEra Enterprises CRM” that combines customers, orders, inventory, and loyalty programs into one central app for staff.

2. Record Pages

- Custom layouts for specific object records (Customer, Order, Inventory, Product).
- You can decide what fields, related lists, and components appear.
- **GoldenEra Example:**
 - **Customer Record Page:** Show customer details, loyalty points, past purchases.



- **Product Record Page:** Show product details, stock quantity, and pricing.



3. Tabs

- Tabs allow easy navigation across different objects in Salesforce.
- **GoldenEra Example:** Create separate tabs for Customers, Orders, Products, Inventory, and Loyalty Programs so store staff can quickly switch between them.

Action	Label	Tab Style	Description
Edit Del	GoldenEra Customers	People	
Edit Del	GoldenEra Inventory	Building	
Edit Del	GoldenEra Marketing Campaigns	Mail	
Edit Del	GoldenEra Orders	Shopping Cart	
Edit Del	GoldenEra Products	Box	
Edit Del	GoldenEra Service Requests	Wrench	

GoldenEra Customers:

This tab allows staff to view, create, and manage customer records, including details such as name, email, phone number, and loyalty status.

The screenshot shows the Salesforce Setup interface under the 'Tabs' section. A custom object tab named 'GoldenEra Customers' has been created for the 'GoldenEra Customer' object. The tab is styled with a 'People' icon and is set to appear on the splash page. It was created by Thatiyutla Manasa on 9/17/2025 at 1:50 AM.

Custom Tab Definition Detail
Tab Label: GoldenEra Customers
Object: GoldenEra Customer
Description:
Created By: Thatiyutla Manasa, 9/17/2025, 1:50 AM
Tab Style: People
Splash Page Custom Link:
Modified By: Thatiyutla Manasa, 9/17/2025, 1:50 AM

GoldenEra Inventories:

Staff can use this tab to check and manage the stock levels of jewelry products, helping to prevent stock shortages and ensuring smooth operations.

The screenshot shows the Salesforce Setup interface under the 'Tabs' section. A custom object tab named 'GoldenEra Inventory' has been created for the 'GoldenEra Inventory' object. The tab is styled with a 'Building' icon and is set to appear on the splash page. It was created by Thatiyutla Manasa on 9/17/2025 at 1:54 AM.

Custom Tab Definition Detail
Tab Label: GoldenEra Inventory
Object: GoldenEra Inventory
Description:
Created By: Thatiyutla Manasa, 9/17/2025, 1:54 AM
Tab Style: Building
Splash Page Custom Link:
Modified By: Thatiyutla Manasa, 9/17/2025, 1:54 AM

GoldenEra Marketing Campaigns: This tab is used by the marketing team to manage promotional campaigns, track their progress, and send loyalty program emails to customers.

The screenshot shows the Salesforce Setup interface. In the top left, there's a blue cloud icon. The top navigation bar includes 'Setup', 'Home', 'Object Manager', and a search bar labeled 'Search Setup'. On the far right are various icons for navigation and help. The main content area has a dark header with a gear icon and the word 'SETUP' followed by 'Tabs'. Below this, a section titled 'Custom Object Tab' shows a card for 'GoldenEra Marketing Campaigns'. The card includes a 'Help for this Page' link. The 'Custom Tab Definition Detail' table contains the following information:

Tab Label	GoldenEra Marketing Campaigns	Edit	Delete
Object	GoldenEra Marketing Campaign		
Description		Splash Page Custom Link	
Created By	Thatigutla Manasa, 9/17/2025, 1:55 AM		Modified By
			Thatigutla Manasa, 9/17/2025, 1:55 AM

On the left sidebar, under 'User Interface', 'Rename Tabs and Labels' is selected, and 'Tabs' is also listed. A message at the bottom left says 'Didn't find what you're looking for? Try using Global Search.'

GodenEra Orders: Through this tab, sales staff can track all customer orders, including Pending, Confirmed, and Rejected statuses. It also allows easy creation and management of new orders.

This screenshot is similar to the previous one but shows a different custom tab. The main content area displays a card for 'GoldenEra Orders'. The 'Custom Tab Definition Detail' table contains the following information:

Tab Label	GoldenEra Orders	Edit	Delete
Object	GoldenEra.Order		
Description		Splash Page Custom Link	
Created By	Thatigutla Manasa, 9/17/2025, 1:51 AM		Modified By
			Thatigutla Manasa, 9/17/2025, 1:51 AM

The left sidebar and global search message are identical to the first screenshot.

GoldenEra Products:

This tab contains the complete product catalog, allowing staff to view jewelry items, their prices, and stock information.

The screenshot shows the Salesforce Setup interface with the 'Tabs' page selected under 'User Interface'. A custom object tab named 'GoldenEra Products' is displayed. The tab definition details are as follows:

Custom Tab Definition Detail
Tab Label: GoldenEra Products
Object: GoldenEra Product
Description:
Created By: Thaligutta Manasa, 9/17/2025, 1:52 AM
Tab Style: Box
Splash Page Custom Link:
Modified By: Thaligutta Manasa, 9/17/2025, 1:52 AM

GoldenEra Service Requests:

This tab is designed for logging and tracking jewelry repair requests, ensuring after-sales services are handled efficiently and customers are updated on the progress.

The screenshot shows the Salesforce Setup interface with the 'Tabs' page selected under 'User Interface'. A custom object tab named 'GoldenEra Service Requests' is displayed. The tab definition details are as follows:

Custom Tab Definition Detail
Tab Label: GoldenEra Service Requests
Object: GoldenEra Service Request
Description:
Created By: Thaligutta Manasa, 9/17/2025, 1:59 AM
Tab Style: Wrench
Splash Page Custom Link:
Modified By: Thaligutta Manasa, 9/17/2025, 1:59 AM

4. Home Page Layouts

- The home page can be customized for different profiles (e.g., Sales Rep, Manager).
- Provides dashboards, tasks, and quick actions.
- **GodenEra Example:**
 - **For Sales Reps:** Show today's appointments, new leads, and pending orders.
 - **For Managers:** Display KPIs like daily revenue, low stock alerts, and customer complaints.

The screenshot shows a Salesforce-like interface for 'Golden Era Enterprises'. At the top, there's a navigation bar with links for 'Golden Era Customers', 'Golden Era Orders', 'Golden Era Products', 'Golden Era Inventory', 'Golden Era Marketing Campaigns', 'Golden Era Service Requests', and 'More'. Below the navigation is a search bar and a toolbar with icons for 'New', 'Import', 'Change Owner', and 'Assign Label'. A 'Recently Viewed' section is displayed, showing a list of 'Golden Era Customer Name' entries. The first entry, 'Manasa', is selected and highlighted with a blue border. Other entries include 'Varshitha'. The interface has a clean, modern design with a light blue header and a white body.

Phase 7: Integration & External Access

1. API Limits

- Salesforce tracks the number of **API calls** made by external systems or integrations.
- In **Golden Era Enterprises CRM**, all major actions (Customer registration, Orders, Inventory tracking, Marketing Campaigns, Service Requests) are handled **inside Salesforce**.
- No external APIs are currently being used in this project, so **API limits are not a concern**.
- You can monitor API usage in **Setup → System Overview**, but no special configuration is required.

The screenshot shows the 'System Overview' page in the Salesforce Setup. The left sidebar includes 'Setup', 'Home', 'Object Manager', and a search bar. Under 'Environments', 'System Overview' is selected. The main content area is titled 'System Overview' and displays key usage data for the organization. It includes two main sections: 'Schema' and 'API Usage'. The 'Schema' section provides metrics for custom objects, settings, metadata types, and data storage. The 'API Usage' section shows the number of API requests over the last 24 hours. The interface is clean with a blue header and a white body, featuring various charts and progress bars.

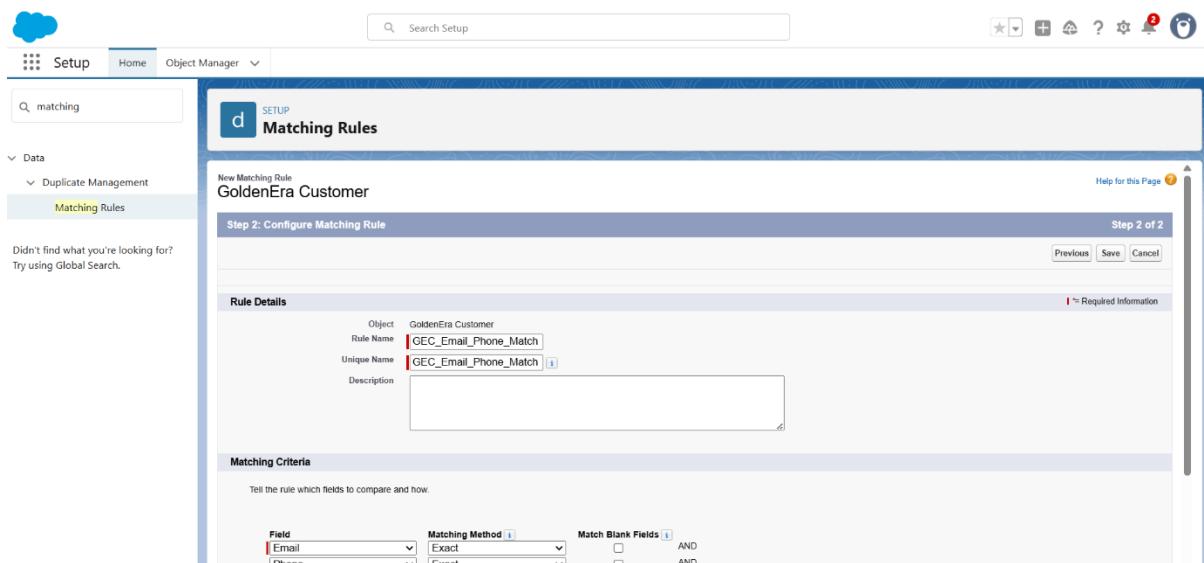
Phase 8: Data Management & Deployment

Step 1: Duplicate Management

Prevent duplicate **GoldenEra Customer** records (by Email/Phone/Name) and surface potential duplicates during data entry or import.

1) Create the Matching Rule

1. Setup → Quick Find → **Matching Rules** → New Rule.
2. **Object:** GoldenEra Customer (GoldenEra_Customer__c).
3. **Rule Name:** GEC_Email_Phone_Match (or any clear name).
4. **Add Matching Criteria:**
 - o Field = **Email** → Matching Method = **Exact**.
 - o Click **Add Row** → Field = **Phone** → Matching Method = **Exact**.
5. **Save** the rule.
6. Click **Activate** (only active rules can be used by Duplicate Rules).



2) Create the Duplicate Rule

1. Setup → Quick Find → **Duplicate Rules** → New Rule.
2. **Object:** GoldenEra Customer.
3. **Rule Label:** GEC_DuplicateRule.
4. Under **Matching Rules**, click **Add** and select the GEC_Email_Phone_Match matching rule you just activated.
5. **Action on Create:** choose **Alert** (start in Alert mode while testing).
6. **Action on Edit:** choose **Alert**.
7. (Optional) Scope: set record types or profiles if you want the rule to apply only to some users.
8. **Save**, then click **Activate**.

Step 2: Data Backup

Steps:

- Go to **Setup**.
- In Quick Find, type **Data Export** → click **Data Export**.
- Choose one:
 - **Export Now** → run a one-time backup.
 - **Schedule Export** → set weekly/monthly backups.
- Select the objects you want:
 - **GoldenEra Customer, GoldenEra Product, GoldenEra Order, GoldenEra Inventory, GoldenEra Marketing Campaign, GoldenEra Service Request**, and any standard objects you use (e.g., Users).
- Click **Start Export** (for immediate) or **Save** (for scheduled).
- Wait → Salesforce emails you when the backup is ready.
- Download the **.zip file** from the export page → extract CSV files.
- **Store the backup securely** (encrypted drive, company server, cloud storage).

GoldenEra_Product_c.csv [Read-Only] - Excel

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Id	OwnerId	IsDeleted	Name	CreatedDate	CreatedBy	LastModifiedDate	LastModifiedBy	SystemModstamp	SKU__c	Price__c	Stock_Quantity__c										
2	a01gl.0000000505gl.0000	0	Gold Ring	#####005gl.0000	#####005gl.0000	005gl.0000	#####005gl.0000	005gl.0000	#####005gl.0000	2	20000	1										
3	a01gl.0000000505gl.0000	0	Gold Chair	#####005gl.0000	#####005gl.0000	005gl.0000	#####005gl.0000	005gl.0000	#####005gl.0000	1	10000	15										
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
17																						
18																						
19																						
20																						
21																						
22																						
23																						
24																						
25																						

GoldenEra_Product_c

Ready Accessibility: Unavailable

GoldenEra_Inventory_c.csv [Read-Only] - Excel

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W
1	Id	IsDeleted	Name	CreatedDate	CreatedBy	LastModifiedDate	LastModifiedBy	SystemModstamp	GoldenEra Stock_Quantity__c	Warehouse__c												
2	a03gl.0000000505gl.0000	0	I-0001	#####005gl.0000	#####005gl.0000	005gl.0000	#####005gl.0000	005gl.0000	#####005gl.0000	12	Kalyan Jewellers											
3	a03gl.0000000505gl.0000	0	I-0002	#####005gl.0000	#####005gl.0000	005gl.0000	#####005gl.0000	005gl.0000	#####005gl.0000	4	Manasa store											
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
16																						
17																						
18																						
19																						
20																						
21																						
22																						
23																						
24																						
25																						

GoldenEra_Inventory_c

Ready Accessibility: Unavailable

Phase 9: Reporting, Dashboards

Step 1: Reporting

A Report is a list or summary of records in Salesforce that helps you analyze data.

- Reports allow you to **filter, sort, group, and summarize** your Salesforce data.
- Example: You can create a report to see **all orders placed this month or top-selling pro**

Steps:

- **Go to the App Launcher** → search **Reports** → click **Reports**.
- Click **New Report**.
- **Select the Report Type** (object to report on, e.g., GoldenEra Orders, GoldenEra Customer).
- Click **Continue**.
- **Add Filters**
 - Example: Show Orders where Status = Completed and Date = This Month.
- **Add Columns**
 - Choose which fields to display (like Customer Name, Order Date, Total Amount).
- **Group Data (optional)**
 - Example: Group orders by Product or by Customer.
- **Summarize (optional)**
 - Add totals, averages, or counts.
- Click **Save & Run** → Give report a name → Choose a folder to save.

Report Name	Description	Folder	Created By	Created On	Subscribed
GoldenEra Customers Report		Public Reports	Thatigutla Manasa	9/22/2025, 8:39 AM	<input type="checkbox"/>
GoldenEra Orders Report		Public Reports	Thatigutla Manasa	9/22/2025, 8:38 AM	<input type="checkbox"/>
GoldenEra Products Report		Public Reports	Thatigutla Manasa	9/22/2025, 8:37 AM	<input type="checkbox"/>

Step 2: Dashboards

A **Dashboard** is a visual representation of your reports.

- Shows charts, graphs, metrics, or tables from one or multiple reports.
- Helps managers and teams quickly understand performance and trends.
- Example: A dashboard showing **Top-Selling Products**, **Customer Engagement**, and **Inventory Levels**.

Dashboard Components:

- **Charts** (Bar, Pie, Line)
- **Gauges** (show progress toward a target)
- **Metrics** (single numbers, e.g., total orders this month)
- **Tables** (report data in a grid)

Steps:

- Go to App Launcher → search **Dashboards** → click **Dashboards**.
- Click **New Dashboard**.
- Give it a **Name** and choose a **Folder** to save.
- Click **Create**.
- Click + **Component** to add a chart or metric.
- Select a **Report** you already created.
- Choose **Visualization Type**

- Bar Chart, Pie Chart, Gauge, Metric, Table.
- Configure **Data Display**
 - Select fields, groupings, and filters for the chart.
- Click **Add** → Repeat for other components.
- Click **Save** → **Done**.
- You can **refresh dashboard** to see updated data anytime.

Golden Era Business Dashboard

GoldenEra Customers Report

GoldenEra Customer: GoldenEra Customer Name ↑

Manasa
Varshitha

View Report (GoldenEra Customers Report)

GoldenEra Orders Report

GoldenEra Order: Order Number ↑

O-0001
O-0002
O-0003
O-0004

View Report (GoldenEra Orders Report)