E-Commerce Order Management with Salesforce CRM

Phase 1: Problem Understanding & Industry Analysis

This is where business needs are understood, pain points are identified, and goals are defined.

- **Requirement Gathering:**
    - Customer registration & profile management.
    - Shopping cart & checkout workflows.
    - Order placement, cancellation, and return processes.
    - Payment status updates.
    - Salesforce sync for leads, accounts, opportunities, and orders.
- **Stakeholder Analysis:**
    - *Customers* → Smooth purchase and real-time order tracking.
    - *Sales Team* → Visibility into customer purchase history, ability to follow up.
    - *Management* → Dashboards for revenue, top products, conversion trends.
- **Business Process Mapping:**
    - Map the order lifecycle: `Customer Signup → Browse Products → Add to Cart → Checkout → Order → Salesforce Sync`.
    - Capture where CRM must intervene (lead creation, order tracking, upsell opportunity).
- **Industry Analysis:**
    - Most eCommerce systems lack native CRM → sales data and customer support often remain fragmented.
    - Salesforce adds **customer 360° view**, enabling better cross-sell, upsell, and marketing campaigns.
- **AppExchange Exploration:**
    - Shipping & logistics connectors.
    - Payment gateway integrations.

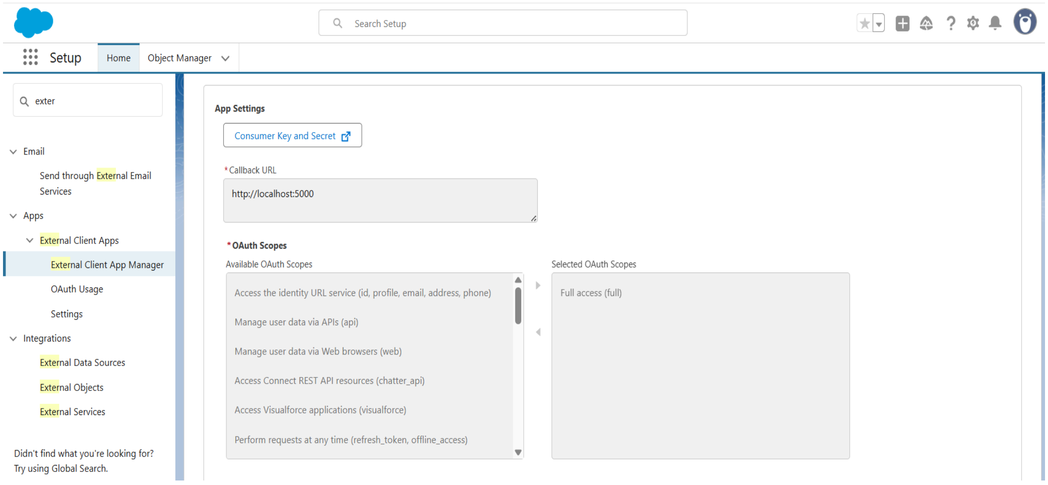
- Marketing automation (Salesforce Marketing Cloud).

Phase 2: Org Setup & Configuration

Lays the **foundation** of Salesforce CRM org for eCommerce.

- **Salesforce Edition:** Enterprise / Sales Cloud.
- **Company Profile Setup:** Configure multi-currency (USD, INR, EUR, etc.), fiscal year, and business hours.
- **User Setup & Licenses:**
  - *Admin* → Full access.
  - *Sales Reps* → Manage opportunities, customers, orders.
  - *Customer Support Agents* → Handle returns and cases.
- **Profiles, Roles & Permission Sets:**
  - Profile: “ECommerce Agent Profile.”
  - Role: Sales Manager > Sales Rep.
  - Permission Set: “Refund Access,” “Discount Approval.”
- **OWD (Org Wide Defaults):**
  - Orders: Private (only owner/manager can view).
  - Products: Read-only for all.
  - Leads: Controlled by role.
- **Sharing Rules:** Share orders across teams when manager involvement is required.
- **Login Access Policies:** Restrict unauthorized logins, enforce MFA.
- **Sandbox Usage:**
  - Dev Sandbox for new workflows.
  - UAT Sandbox for user acceptance testing.

- **Deployment:** Via Change Sets or SFDX/VS Code CI/CD pipelines.

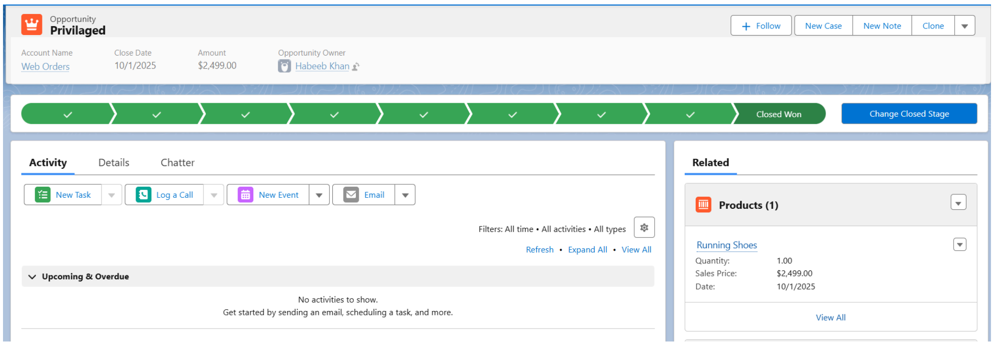


Phase 3: Data Modeling & Relationships

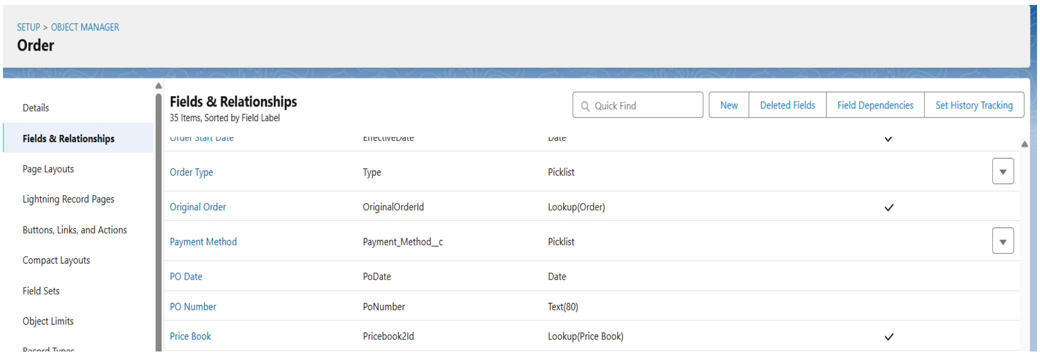
This phase defines the **CRM data architecture**.

- **Standard Objects Used:**
    - **Lead** → Captures potential customers signing up or leaving abandoned carts.
    - **Account** → Stores customer companies (for B2B).
    - **Contact** → Stores individual customers (for B2C).
    - **Opportunity** → Represents a potential deal (e.g., big cart order).
    - **Product** → Stores product catalog.
    - **Order & OrderItem** → Stores purchase details.
- **Custom Objects:**
    - **Cart__c** → Temporary object for shopping cart.

- **Payment__c** → Tracks payment gateway status.



- **Relationships:**
  - One Account → Many Orders.
  - One Order → Many Products (via OrderItem).
  - Lookup from Payment__c → Order.



- **Record Types:**
  - *Lead Types*: Website Lead, Social Media Lead.
  - *Order Types*: Normal Order, Bulk Order, Return Order.
- **Schema Builder:** Use Salesforce Schema Builder to visually map eCommerce flow.

Phase 4: Process Automation (Admin)

Automation ensures **customer experience is fast and accurate**.

- **Validation Rules:**
  - Prevent negative product quantity.

    - Order cannot be closed unless payment is confirmed.
- **Workflow Rules:**
    - Send order confirmation email.
    - Notify manager when discount > 20%.
- **Process Builder:**
    - Auto-convert a Lead into Contact + Account when first purchase happens.
    - Update Opportunity Stage → “Won” when Order is placed.
- **Approval Process:**
    - Discount Approval workflow.
    - Refund Approval for returns.
- **Flow Builder:**
    - *Record-Triggered Flow*: Auto-create Opportunity when cart > $500.
    - *Screen Flow*: Order cancellation form.
    - *Scheduled Flow*: Daily sync of abandoned carts into Leads.
- **Other Actions:**
    - *Email Alerts*: Order confirmation, shipment, refund.
    - *Tasks*: Assign follow-up calls for high-value customers.
    - *Custom Notifications*: Mobile push notifications for agents.

Phase 5: Apex Programming (Developer)

Custom code for scenarios beyond point-and-click tools.

- **Classes & Objects:** Handle order allocation and discount calculation.
- **Apex Triggers:**
    - Before Insert: Validate cart stock.
    - After Insert: Create Salesforce Order when payment received.
    - After Update: Update opportunity stage if order is shipped.
- **SOQL & SOSL:** Fetch customer purchase history.

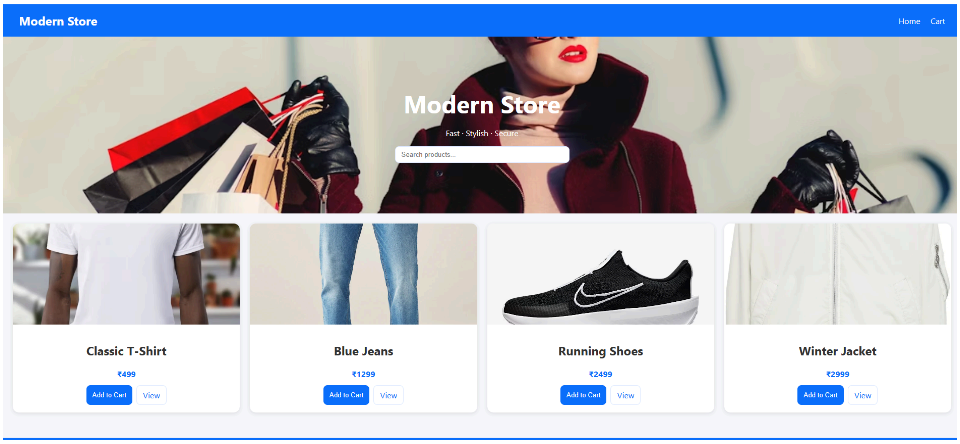
- **Collections (List, Set, Map):** Store bulk product IDs during checkout.
- **Batch Apex:** Bulk sync orders every night.
- **Queueable Apex:** Payment reconciliation with external gateway.
- **Scheduled Apex:** Daily email report of new orders to managers.
- **Future Methods:** Async calls to external APIs (shipping, payments).
- **Exception Handling:** Try-Catch to avoid failed transactions.
- **Test Classes:** Ensure 75% coverage.

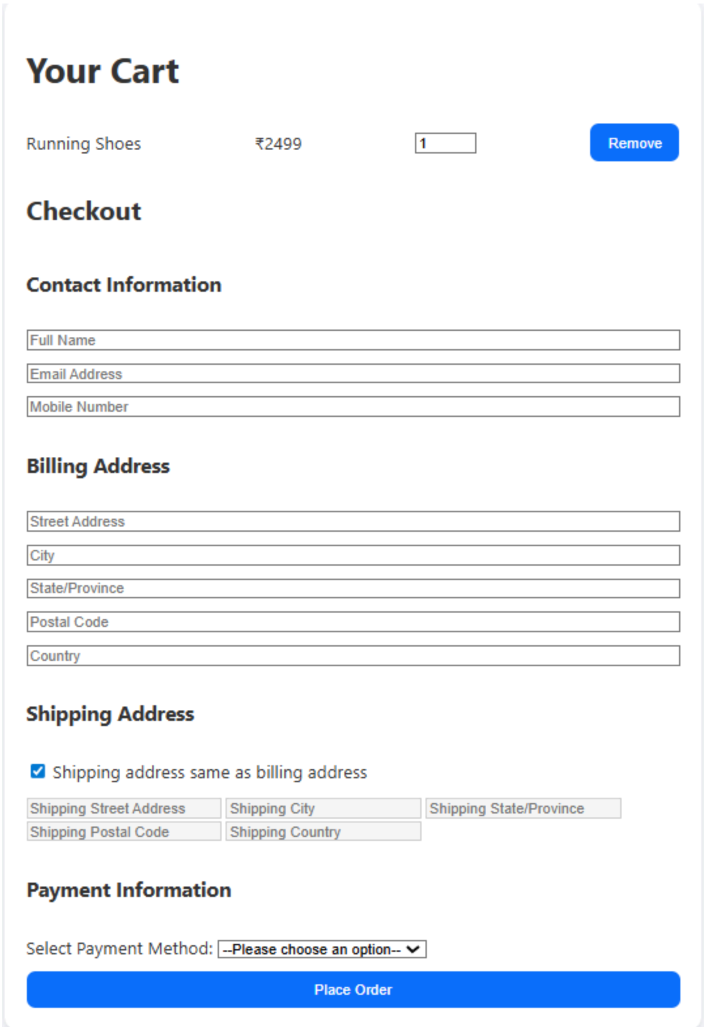
Phase 6: User Interface Development

Front-end design inside Salesforce.

- **Lightning App Builder:** Create “ECommerce CRM App.”
- **Custom Tabs:** Products, Orders, Leads, Payments.
- **Record Pages:** Customize Order page → show Product Items + Payment.
- **Utility Bar:** Quick order search.
- **LWC (Lightning Web Components):**
    - Product Search & Filter.
    - Cart component inside Salesforce.
    - Live order tracking view.
- **LWC + Apex:** Show “Recommended Products” (cross-sell/upsell).
- **Events & Wire Adapters:** Fetch stock availability.

- **Navigation Service:** Quick jump from Lead → Order → Payment.

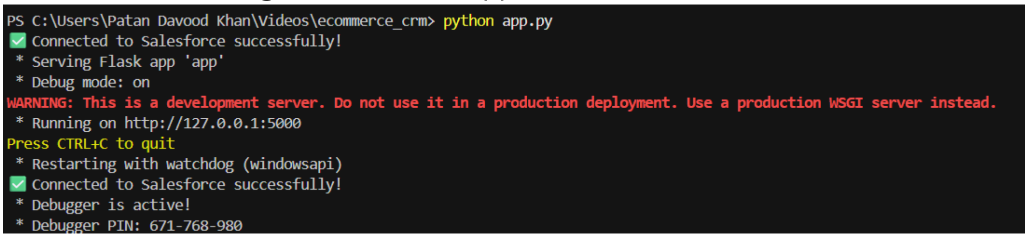




Phase 7: Integration & External Access

Bridge between Flask eCommerce App and Salesforce.

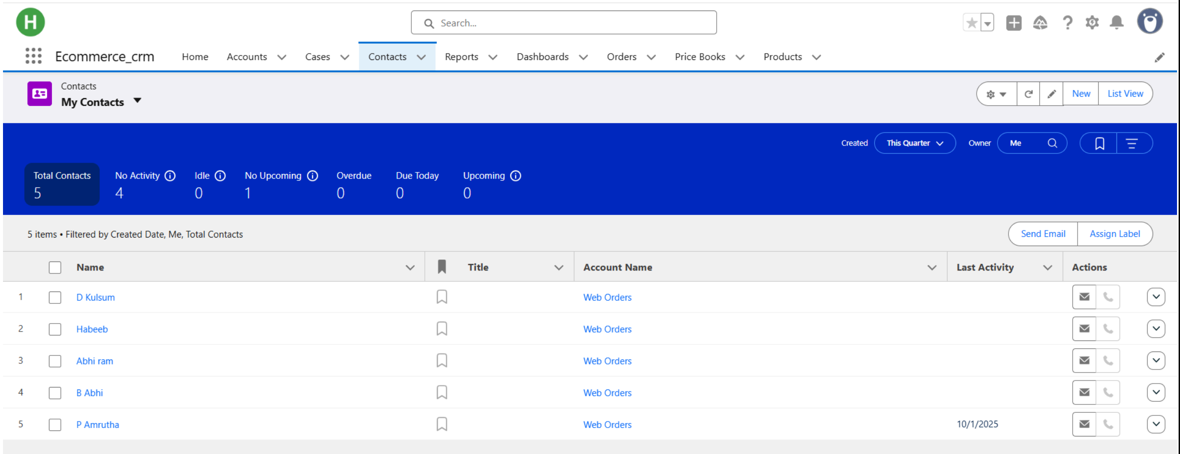
- **Named Credentials:** Store API keys securely.
- **External Services:** Integrate shipping APIs.
- **Web Services:**
    - REST → Sync orders & customers from Flask app.
    - SOAP → For older ERP integrations.
- **Callouts:** Payment gateway verification.
- **Platform Events:** Notify sales team when big order placed.
- **Change Data Capture:** Real-time sync for inventory.
- **Salesforce Connect:** If external product catalog is huge.
- **API Limits:** Monitor governor limits to avoid failures.
- **OAuth & Authentication:** Secure customer login.
- **Remote Site Settings:** Allow Flask app domain for API calls.



Phase 8: Data Management & Deployment

Ensures clean data & smooth migration.

- **Data Import Wizard:** Import small CSVs of products.
- **Data Loader:** Bulk import 10,000+ orders.
- **Duplicate Rules:** Prevent duplicate Leads & Accounts.
- **Data Export & Backup:** Weekly scheduled backup.
- **Change Sets:** Deploy flows, objects, and layouts.
- **Packages:** Managed for reusable components, unmanaged for internal.
- **ANT Migration Tool:** For DevOps CI/CD pipelines.



- **VS Code & SFDX:** Modern development & deployment.

Phase 9: Reporting, Dashboards & Security Review

For management insights.

- **Reports:**
  - Tabular → All orders placed today.
  - Summary → Sales by product category.
  - Matrix → Orders by Region vs Sales Rep.
  - Joined → Revenue + Refund trends.
- **Dashboards:**
  - Top 10 Products.
  - Monthly Sales Funnel.
  - Order Conversion Rate.
- **Dynamic Dashboards:** Different KPIs for Manager vs Rep.
- **Security Settings:**
  - Field-Level Security for payment info.
  - Session Settings for MFA.
  - Login IP Ranges for secure access.
  - Audit Trail → Track admin changes.

Phase 10: Final Presentation & Demo Day

Wrap-up phase.

- **Pitch Presentation:** Explain business problem → solution.
- **Demo Walkthrough:** Show Flask eCommerce order → sync with Salesforce.
- **Feedback Collection:** From stakeholders.
- **Handoff Documentation:** Admin guide, developer API guide.
- **Portfolio Showcase:** Share on LinkedIn/Resume as “Salesforce eCommerce CRM Implementation.”