Smart Retail Promotions & Discount CRM

Phase 1: Problem Understanding & Industry Analysis

☞ Goal: Understand what we're building and why.

1. **Requirement Gathering**

   ○ Talk to stakeholders (Retail Store Manager, Marketing Team, Customer Service).

   ○ Example requirement:

      ■ Track all active promotions and discounts with validity.
      ■ Allow personalized discount allocation to loyal customers.
      ■ Prevent overlapping promotions on the same product.
      ■ Generate sales uplift and ROI reports.

2. **Stakeholder Analysis**

   ○ **Admin** (you, managing CRM setup).

   ○ **Marketing Team** (create/manage promotions and campaigns).

   ○ **Store Manager** (approves high-value discounts, monitors sales impact).

   ○ **Customer** (end users who redeem offers).

3. **Business Process Mapping**

   ○ Draw a flow:
      Customer requests booking → CRM checks eligibility → Promotion applied →
      Approval (if high value) → SMS/Email sent to customer → Store/POS updated.

4. **Industry-specific Use Case Analysis**

   ○ In the retail industry, promotions must align with inventory levels and seasonal
      demand.

○ Real-time discount tracking, customer segmentation, and automated notifications are essential.

5. **AppExchange Exploration**

○ Look for "Retail Promotions/Discount CRM" apps. Some exist, but we'll build a simpler custom solution to learn.

Phase 2: Org Setup & Configuration

☞ Goal: Prepare Salesforce environment.

1. **Salesforce Editions**

○ Use **Developer Edition** (free Developer Org) for building and testing CRM features.
○ Suitable for testing promotions, discounts, and campaign workflows.

2. **Company Profile Setup**

○ Navigate: Setup → Company Settings → Company Information

○ Add details: Company Name, Address, Local Time Zone.

○ Set currency: INR (if India-based) or USD (for international operations).

○ Useful for financial reporting of discounts and sales campaigns.

3. **Business Hours & Holidays**

   ○ Define working hours (9am–6pm).

   ○ Add public holidays (no approvals on these days).

   ○ Helps schedule promotions accurately.

4. **Fiscal Year Settings**

   ○ Standard (Jan–Dec) → good for revenue reporting.

   ○ Aligns reporting with annual retail campaigns and discount season analysis.

5. **User Setup & Licenses**

   ○ Create users relevant to retail CRM:
   ☐ Promotion Manager – full access to campaigns, reports, and discounts.
   ☐ Store Agents / Sales Agents – access to campaigns they participate in.

   ○ Assign Salesforce licenses appropriately (Sales Cloud or custom license).

6. **Profiles**

   ○ Agent Profile: Can create/update promotion entries but cannot modify organization-wide sharing settings.

   ○ Manager Profile: Full access to create, edit, approve promotions, and view reports.

7. **Roles**

   ○ **Manager** → Top-level role (oversees all campaigns).
   ○ **Agents** → Under Manager (record visibility rolls up).

○ Ensures hierarchy-based access to campaign and discount records.

8. Permission Sets

○ Use when agents need extra access without changing their profile.
o   Example: Permission to view campaign analytics or historical discount data.

9. OWD (Org-Wide Defaults)

○ Promotions object: Public Read Only → all users can see active promotions.
○ Discount Bookings / Customer Deals: Private → only owner/manager sees.

10. Sharing Rules

● Optional: If multiple agents should view a customer's discount booking, configure sharing rules for the Discount Booking object.

11. Login Access Policies

● Restrict login hours (9am–6pm for agents).
● Manager role can have 24/7 access for approvals.

12. Dev Org Setup

● Treat Developer Org as Sandbox for building and testing CRM features.
● Avoid testing live data; use sample customers, promotions, and discount entries.

13. Sandbox Usage

● In production environments, build in Sandbox first, then deploy to Production.
● Ensures safe testing of workflows, approval processes, and automation.

14. Deployment Basics

● Deployment is moving config/code from sandbox → production using Change Sets.
● Useful when promotion campaigns, discounts, and workflows are finalized.

Phase 3: Data Modeling & Relationships

☞ Goal: Build data structure.

1. **Standard & Custom Objects**

   ○ Standard: Contact (customers). (name, email, phone, loyalty points).

   ○ Custom Object :
   o   Discount Booking / Redemption → tracks which customer availed which discount.
   o   Promotion Campaign → details of each promotion (seasonal, festive, flash sale).

2. **Fields**
   Custom Object: Promotion Campaign

Field Name	Data Type	Description / Notes
Name	Text (255)	Promotion campaign name (e.g., "Diwali Sale")
Start Date	Date	Campaign start date
End Date	Date	Campaign end date
Discount Type	Picklist	Options: Percentage, Flat Amount
Discount Value	Currency	Value of discount (e.g., 10%, ₹500 off)
Status	Picklist	Options: Active, Inactive, Completed
Products Included	Long Text Area	List of products applicable in the campaign

   Custom Object: Discount Booking / Redemption

Field Name	Data Type	Description / Notes
Customer	Lookup (Contact)	Links to the customer redeeming discount
Promotion Campaign	Lookup (Promotion Campaign)	Links the discount booking to a campaign
Redemption Date	Date	Date when discount was redeemed

Field Name	Data Type	Description / Notes
Total Discount	Currency	Total discount amount availed by customer
Status	Picklist	Options: Redeemed, Expired, Pending
Channel	Picklist	Options: Online, In-Store

3. Record Types

○ **Discount Booking / Redemption** → Use **Record Types** to differentiate channels or types:

Record Type Name	Purpose
Online Redemption	For discounts redeemed via website or app
In-Store Redemption	For discounts redeemed physically in store

4. Page Layouts

○ Promotion Campaign Page → shows discount bookings history.

○ Discount Booking / Redemption Page → shows related promotion campaign & customer details.

5. Compact Layouts

○ Mobile: Promotion Campaign → shows Name, Discount Type, Status
○ Discount Booking / Redemption → shows Customer Name, Promotion Name, Status.

6. Schema Builder

○ Visual tool → use Salesforce Schema Builder to draw object relationships.
 ▢ Map relationships like:
 Promotion Campaign ↔ Discount Booking / Redemption ↔ Customer
 ▢ Allows easy visualization of objects, fields, and connections.

7. **Lookup vs Master-Detail vs Hierarchical**

    ○ Promotion Campaign ↔ Discount Booking / Redemption → Lookup (bookings don't own campaigns)
    ○ Discount Booking / Redemption ↔ Customer → Lookup (booking linked to customer, but customer record is independent)

8. **Junction Objects**

    ○ Scenario: If one discount booking could apply to multiple promotion campaigns or one campaign could be redeemed by multiple customers, we would create a junction object.
    ○ Current setup: Not needed – each discount booking links to one promotion campaign and one customer.

9. **External Objects**

    ○ Used to access **external data sources** (e.g., loyalty points, third-party sales) without importing into Salesforce.

Phase 4: Process Automation (Admin)

☞ Goal: Automate tasks.

1. **Validation Rules**

    ○ Example: Redemption End Date must be after Start Date.

2. **Workflow Rules** (legacy)

    ○ Auto-send email when a **discount booking** is created (replaced by Flow now).

3. **Process Builder** (legacy)

- Example: Auto-update Booking Status → now handled with Flow Builder.

4. **Approval Process**

   - Discount > ₹5,000 → sent for Manager approval.

5. **Flow Builder**

   - Record-triggered Flow: Calculate Total Discount / Amount automatically.

   - Screen Flow: Custom discount booking form for agents/customers.

6. **Email Alerts**

   - Send customer email after booking/discount approval.

7. **Field Updates**

   - After approval, Booking Status = "Confirmed."

8. **Tasks**

   - Create a task for Agent to follow up or process the discount.

9. **Custom Notifications**

   - Send in-app notification to the Agent after approval.

Phase 5: Apex Programming (Developer)

☞ Goal: Add advanced logic.

1. **Classes & Objects**

   - Create a BookingService class for reusable booking/discount logic.

2. **Apex Triggers**

  ○ On **Discount Booking Insert** → prevent overlapping redemptions for the same promotion/customer.

3. **Trigger Design Pattern**

  ○ Use a handler class instead of writing logic directly in trigger.

4. **SOQL & SOSL**

  ○ Query: Available Cars WHERE status = 'Active.'

5. **Collections: List, Set, Map**

  ○ Store multiple Customer or Promotion IDs in a Set to avoid duplicates.

6. **Control Statements**

  ○ IF redemption dates overlap → throw error.

7. **Batch Apex**

  ○ Night job to mark expired/overdue discount bookings.

8. **Queueable Apex**

  ○ Async calculation of discounts for bulk rentals.

9. **Scheduled Apex**

  ○ Every morning → email Manager list of today's discount redemptions.

10. **Future Methods**

  ● Call external loyalty/discount API asynchronously.

11. **Exception Handling**

  ● Catch errors if booking or redemption overlaps.

12. **Test Classes**

   ● Create test data, insert discount bookings, verify triggers and logic work.

13. **Asynchronous Processing**

   ● Combine Batch + Queueable + Future for async jobs like discount calculations, notifications, and reporting.

Phase 6: User Interface Development

☞ Goal: Make it user-friendly.

1. **Lightning App Builder**

   ○ Create a "Smart Retail CRM" app to manage promotions, customers, and bookings

2. **Record Pages**

   ○ Promotion Campaign page → show list of discount bookings / redemptions.

3. **Tabs**

   ○ Add Promotions & Discount Bookings tabs for easy navigation.

4. **Home Page Layouts**

   ○ Dashboard: Show campaign performance, redemption rates, and customer engagement.

5. **Utility Bar**

   ○ Quick "New Discount Booking" action for agents.

6. **LWC**

   ○ Component: Search Promotions by date

○ Shows results in datatable.

7. **Apex with LWC**

    ○   Imperative Apex call → create discount booking when user submits form.

8. **Events in LWC**

    ○ Child component (search form) → sends event to parent (results).

9. **Wire Adapters**

    ○ Use **@wire** to fetch **available promotions** dynamically.

10. **Imperative Apex Calls**

    o Trigger Apex method when **"Redeem Now" / "Book Now"** is clicked.

11. **Navigation Service**

    ● After booking → navigate to the **Discount Booking / Redemption record page** automatically.

Phase 7: Integration & External Access

☞ Goal: Connect with outside systems.

1. **Named Credentials**

    ○ Store **external API credentials securely** (e.g., loyalty or insurance API).

2. **External Services**

    o Connect with **external verification systems**, like insurance or payment services.

3. **Web Services (REST/SOAP)**

   ○ REST callout:to fetch insurance or promotion status.

4. **Callouts**

   o Triggered automatically when **a discount booking or redemption is created**.

5. **Platform Events**

   ○ Publish event if **a promotion or booking exception occurs**, e.g., expired promotion used.

6. **Change Data Capture**

   ○ Notify **external systems** when a booking or redemption is updated.

7. **Salesforce Connect**

   ○ Connect **external databases** if promotions, customers, or products are managed outside Salesforce.

8. **API Limits**

   ○ Monitor API calls/day.

9. **OAuth & Authentication**

   ○ Enable **customer portal login** using OAuth for secure external access.

10. **Remote Site Settings**

   ● Allow callouts to external domains.

Phase 8: Data Management & Deployment

☞ Goal: Manage data and move changes.

1. **Data Import Wizard**

   ○ Import 50 demo Promotion Campaign records for testing.

2. **Data Loader**

   ○ Import bulk Discount Bookings / Redemptions efficiently.

3. **Duplicate Rules**

   ○ Prevent duplicate Promotion Campaign or Customer entries.

4. **Data Export & Backup**

   ○ Schedule weekly backups of all CRM data.

5. **Change Sets**

   ○ Move configurations from Sandbox → Production.

6. **Unmanaged vs Managed Packages**

   ○ Managed if you want to publish on AppExchange.

7. **ANT Migration Tool**

   ○ Command-line deployment.

8. **VS Code & SFDX**

   ○ Dev-friendly deployments.

Phase 9: Reporting, Dashboards & Security Review

☞ Goal: Monitor business & secure data.

1. **Reports**

   ○ Promotion Redemption / Booking Reports → e.g., number of redemptions per campaign, revenue per promotion

2. **Report Types**

   ○ Custom report: combining Promotion Campaign + Discount Booking / Redemption

3. **Dashboards**

   ○ Campaign Performance Dashboard → shows redemption rates, revenue, and customer engagement.

   ○ Manager Revenue Dashboard → total discounts redeemed, top-performing promotions.

4. **Dynamic Dashboards**

   ○ Each Agent sees only their bookings/redemptions.

5. **Sharing Settings**

   ○ Bookings private, Promotions public for transparency.

6. **Field Level Security**

   ○ Hide sensitive info like Customer ID / contact details from agents.

7. **Session Settings**

   ○ Timeout after 30 mins.

8. **Login IP Ranges**

   ○ Restrict agents to office IP.

9. **Audit Trail**

   ○ Track who made changes to bookings, campaigns, or customer records.

Phase 10: Final Presentation & Demo Day

☞ Goal: Wrap it up like a real project delivery.

1. **Pitch Presentation**

   ○ Problem → Solution → Benefits of Smart Retail Promotions CRM.

2. **Demo Walkthrough**

   ○ Show creating booking, approval, notification, report.

3. **Handoff Documentation**

   ○ Share system design doc, user guide and configuration notes.

4. **LinkedIn/Portfolio Project Showcase**