# Salesforce Project: Smart Property Portal – Real Estate Customer Engagement & Lead Conversion

## Phase 5: Apex Programming (Developer)

Goal: Add advanced logic for property management, lead conversion, and deal automation.

### 1. Apex Classes & Services

- Create PropertyService class to handle property availability checks.  
- Create LeadConversionService to automate custom conversion logic.

### 2. Apex Triggers

- Trigger on Property\_\_c:  
 • Prevent duplicate properties with same Location + Name.  
 • Auto-update Property Status to 'Sold' once related Opportunity is Closed Won.  
  
- Trigger on Lead:  
 • Auto-populate Interested Property into Opportunity during Lead Conversion.

### 3. SOQL & SOSL Usage

- Query available properties: SELECT Id, Name, Status FROM Property\_\_c WHERE Status = 'Available'.  
- SOSL for quick search on properties by name, location.

### 4. Batch, Queueable & Scheduled Apex

- Batch Apex: Update expired property listings every night.  
- Queueable Apex: Run async processes like mass updating site visit reminders.  
- Scheduled Apex: Daily email summary to managers with list of site visits & hot leads.

### 5. Future Methods & Callouts

- Use Future methods for integrating with external property valuation APIs.  
- Callout example: Fetch live property price data from external API.

### 6. Exception Handling & Test Classes

- Handle errors gracefully (e.g., invalid property updates).  
- Write unit tests for triggers, classes (minimum 75% code coverage).

Outcome of Phase 5: Salesforce is enhanced with custom logic to manage property lifecycle, automate lead conversion, and integrate with external systems when required.

## Phase 6: User Interface Development

Goal: Build a user-friendly interface for agents, managers, and customers.

### 1. Lightning App Builder

- Create 'Smart Property Portal' Lightning App.  
- Add key tabs: Properties, Site Visits, Leads, Opportunities, Campaigns.

### 2. Record Pages & Tabs

- Property Record Page: Show property details, related site visits, and related opportunities.  
- Site Visit Record Page: Show linked property & customer.  
- Add tabs for Properties, Leads, Campaigns in the app navigation.

### 3. Utility Bar & Quick Actions

- Add utility bar actions: 'New Property', 'Schedule Site Visit'.  
- Quick Actions on Lead: 'Convert to Opportunity with Property'.

### 4. Lightning Web Components (LWC)

- Property Search Component:  
 • Search by price, location, type.  
 • Display results in a datatable.  
  
- Site Visit Scheduler:  
 • Calendar picker for date.  
 • Auto-assigns agent.  
  
- Deal Conversion Wizard:  
 • Guided flow for Lead → Opportunity → Deal.

### 5. Branding & Mobile Experience

- Apply custom branding (logos, colors) for portal.  
- Ensure mobile layouts are optimized (Compact Layouts).

Outcome of Phase 6: Agents and managers get an intuitive Salesforce interface, while customers interact with a simple property portal.

## Phase 7: Integration & External Access

Goal: Connect Salesforce with external systems and allow customers to engage via portal.

### 1. Web-to-Lead & Web-to-Case

- Capture customer inquiries directly from property portal/website forms.  
- Leads auto-created in Salesforce.

### 2. Named Credentials & REST API Integration

- Store secure credentials for external property APIs.  
- Example: Fetch real-time property valuations from government or private API.

### 3. Messaging Integration

- Integrate with WhatsApp or SMS providers for sending property updates.  
- Send auto-reminders for site visits.

### 4. Experience Cloud Portal

- Build 'Smart Property Portal' site for customers.  
- Features:  
 • Browse property listings.  
 • Register & login.  
 • Submit inquiries, track status.  
 • Schedule site visits.

### 5. Event-Driven Integrations

- Use Platform Events to notify external systems when property is sold.  
- Use Change Data Capture to sync updates with external CRM/ERP.

### 6. Security & Access

- Setup Guest User profile for portal browsing.  
- Use Sharing Sets for community users to access their own records.  
- Enforce IP restrictions and login policies for internal users.

Outcome of Phase 7: Customers can interact via portal, leads flow seamlessly into Salesforce, and integrations provide real-time property data and communication.