**Name: K. Durga Lakshmi** **Title: Smart Property Detection CRM Project**

### **Phase 1: Problem Understanding & Industry Analysis**

The goal of this phase is to understand what we are building and why it is required. Requirement gathering was done by talking to stakeholders such as property managers, agents, and tenants. Key requirements included tracking properties with key details, monitoring categories such as residential and commercial, automating property detection and categorization, and generating occupancy and revenue reports.

Stakeholder analysis identified:

* **Admin:** system setup
* **Property Agents:** manage property records
* **Managers:** approve updates and monitor reports
* **Tenants or Customers:** receive notifications and emails
* Business process flow:  
  Property is added → the system detects type/status → categorization is applied → email or notification is sent to the concerned person.

Automation is essential to save time and reduce errors.

### **Phase 2: Org Setup & Configuration**

The goal of this phase is to prepare the Salesforce environment. The project uses a Salesforce Developer Edition Org.

* Company profile set with information, currency, and time zone
* Business hours and holidays defined
* Standard fiscal year settings configured (Jan–Dec)
* User setup created roles such as Agent and Manager
* Profiles configured: limited access to Agents, full access to Managers
* Org-Wide Defaults: Public Read Only for properties, Private for detection records
* Sharing rules and permission sets configured as required
* Development in Sandbox; deployments planned using Change Sets

### **Phase 3: Data Modeling & Relationships**

* Standard objects like Contact used for tenants/customers
* Custom objects: Property and Detection Record
* Property fields: Location, Type, Size, Price, Status
* Detection Record fields: Detected Type, Category, Occupancy
* Page layouts display detection history under each property
* Schema Builder used for relationships
* Lookup relationships used between Property and Detection

### **Phase 4: Process Automation (Admin)**

* Validation rules to ensure correct data entry (e.g., price > 0)
* Flows automated property type categorization
* Approval processes for high-value property updates
* Automatic notifications to tenants and managers when detection details update
* Record-triggered flows and screen flows used for different automation needs

### **Phase 5: Apex Programming (Developer)**

* Apex classes (e.g., DetectionService) handle categorization logic
* Triggers on Property insert automatically generate Detection Record
* Batch Apex checks vacant properties at night and updates records
* Scheduled Apex generates daily occupancy reports for Managers
* Exception handling prevents invalid data
* Test classes ensure required code coverage

### **Phase 6: User Interface Development**

* User Interface developed using Lightning App Builder
* Dedicated Smart Property Detection CRM App created
* Record Pages display detection history under each property
* Dashboards added on Home Page showing occupancy rates and revenue
* Lightning Web Components allow property search by type
* Apex integration with LWC displays categorized results dynamically

### **Phase 7: Integration & External Access**

* Integration with external property valuation APIs using REST callouts
* Platform Events notify managers when occupancy changes
* Salesforce Connect links with external property databases
* Named Credentials ensure secure authentication
* Web services and secure callouts configured for external integrations

### **Phase 8: Data Management & Deployment**

* Import demo property records using Data Import Wizard
* Bulk detection records imported via Data Loader
* Duplicate rules prevent duplicate property entries
* Weekly data backups configured
* Sandbox used for building; Change Sets for deployment
* VS Code with Salesforce DX used for developer-friendly deployments

### **Phase 9: Reporting, Dashboards & Security Review**

* Reports track occupancy, revenue, and property categories
* Dashboards display reports for easy monitoring
* Dynamic Dashboards ensure Agents see only their properties
* Sharing settings: properties public, detection records private
* Field-level security hides sensitive information from Agents
* Audit Trail tracks changes made to records

### **Phase 10: Final Presentation & Demo Day**

* Project pitch shows problem, solution, and benefits
* Demo walkthrough: property creation, detection process, notification delivery
* Handoff documentation includes system design and user guide
* Project added to GitHub and LinkedIn for portfolio showcase

### **Conclusion**

The Smart Property Detection CRM Project successfully demonstrated the Salesforce application in the real estate industry. It automated detection, categorization, and monitoring of properties, visits, and leads. Managers gained real-time insights through dashboards and reports, while property agents benefited from simplified processes.

By combining declarative tools like Flows with programmatic logic such as Apex, the project provided flexibility and scalability. Data quality was ensured with validation rules, and automation reduced manual effort, saving time and minimizing errors. Integration with external APIs and Platform Events expanded system capabilities. The solution is practical and ready for future extensions.

**Future Scope**

* **AI-Powered Insights:** Integrate Salesforce Einstein to predict occupancy and suggest pricing
* **Mobile Application:** Provide a mobile app for field agents
* **Advanced Dashboards:** Use Tableau CRM for deeper analytics
* **Omni-channel Notifications:** Add WhatsApp, SMS, and social channels
* **Integration with IoT:** Connect sensors for real-time occupancy data