Loan Management System – Full Explanation

Phase 1: Problem Understanding & Industry Analysis

Goal: Understand what we're building and why.

1. **Requirement Gathering**

   o Track all loans with current status (Pending, Approved, Rejected, Closed).

   o Allow customers to apply for loans.

   o Prevent duplicate loan applications for the same customer.

   o Generate EMI schedules and repayment reports.

2. **Stakeholder Analysis**

   o **Admin**: Manages system setup.

   o **Loan Officers**: Evaluate applications, update loan records.

   o **Manager**: Approves high-value loans, monitors portfolio.

   o **Customer Service**: Assists with EMI queries, complaints.

   o **Customer**: Applies for loans and tracks repayment.

3. **Business Process Mapping**

   o Customer applies for loan → Loan Officer verifies documents → Risk assessment → Manager approval (if high value) → Loan disbursement → EMI tracking → Closure.

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

   o Loans involve risk checks, repayment schedules, and regulatory compliance.

   o System must calculate EMIs, track overdue payments, and send reminders.

5. **AppExchange Exploration**

   o Explore apps like "Loan Origination" or "Banking CRM" → but we'll build custom.

Phase 2: Org Setup & Configuration

Goal: Prepare Salesforce environment.

- Use **Developer Edition Org**.

- Add **Company Profile**: Loan company info, working hours, holidays.

- Fiscal Year Settings → standard Jan–Dec for financial reporting.

- Users: Loan Officer, Manager, Customer Service.

- Profiles & Roles: Manager above Officers → ensures data visibility.

- OWD: Loan Applications = Private, Customers = Public Read Only.

- Permission Sets for Reports/Analytics.

- Sandbox setup for testing & deployment.

Phase 3: Data Modeling & Relationships

Goal: Build data structure.

- **Objects:**

  - Standard: Contact (Customer).

  - Custom: Loan Application, EMI Schedule, Payment.

- **Fields:**

  - Loan Application: Loan Type, Amount, Tenure, Interest Rate, Status.

  - EMI: Due Date, Amount, Paid Status.

- **Relationships:**

  - Loan Application ↔ Customer → Lookup.

  - Loan ↔ EMI → Master-Detail (EMIs belong to Loan).

- Record Types: Personal Loan, Home Loan, Auto Loan.

- Page Layouts: Loan Application page shows EMI schedule & customer info.

- Compact Layout: Mobile view → Loan Amount, Tenure, Status.

Phase 4: Process Automation (Admin)

Goal: Automate tasks.

- Validation: Loan Amount > 0, EMI Due Date > Disbursement Date.

- Flow: Auto-calculate EMI schedule when loan approved.

- Approval Process: Loans > ₹10 Lakhs → Manager approval.

- Email Alerts: Notify customer when loan approved.

- Custom Notifications: EMI Reminder to customers.

- Tasks: Create tasks for officers for pending document verification.

Phase 5: Apex Programming (Developer)

Goal: Add advanced logic.

- **Apex Classes**: LoanService class → EMI calculator.

- **Triggers**: Prevent duplicate active loan for same customer.

- **SOQL Queries**: Fetch pending EMIs, active loans.

- **Batch Apex**: Mark overdue EMIs every night.

- **Queueable Apex**: Send bulk SMS reminders.

- **Scheduled Apex**: Weekly loan portfolio summary to manager.

- **Exception Handling**: Catch errors in repayment updates.

- **Test Classes**: Ensure logic works properly.

Phase 6: User Interface Development

Goal: Make it user-friendly.

- Lightning App → "FinTrust Loan CRM."

- Tabs: Loans, Customers, EMIs.

- Home Page → Loan disbursal statistics, pending approvals.

- LWC Components:

    o Loan Application Form.

    o EMI Calculator (Interest Rate, Tenure → EMI Value).

- Events in LWC: Customer submits form → triggers loan record creation.

- Navigation → Redirect to Loan Record after creation.

Phase 7: Integration & External Access

Goal: Connect with external systems.

- Named Credentials: Store credit bureau API keys.

- REST Callouts: Fetch credit score from external API.

- Platform Events: Loan approved → notify accounting system.

- Change Data Capture: Update external payment gateway when EMI paid.

- OAuth Authentication: Customer login via portal.

Phase 8: Data Management & Deployment

Goal: Manage data & move changes.

- Data Import Wizard: Import 100 sample Customers.

- Data Loader: Bulk loan applications.

- Duplicate Rules: Prevent same PAN/SSN used multiple times.

- Data Backup: Weekly loan and EMI data.

- Deployment via Change Sets / VS Code SFDX.

Phase 9: Reporting, Dashboards & Security Review

Goal: Monitor business & secure data.

- Reports:
  - Loan Portfolio by Type.
  - EMI Collection Status.
  - Overdue Loans.

- Dashboards:
  - Manager Dashboard → Revenue, Portfolio Risk.
  - Loan Officer Dashboard → Pending Applications, EMI Reminders.

- Dynamic Dashboards: Each officer sees their own applications.

- Security: Field-level (hide credit score from agents).

- Audit Trail: Track changes in loan status.

- IP Restriction & Session Timeouts for agents.

Phase 10: Final Presentation & Demo Day

Goal: Wrap it up like a real project delivery.

1. Pitch: Problem → Solution → Benefits.

2. Demo: Apply for loan, approval, EMI schedule, reminders, reports.

3. Documentation: System design + User Guide.

4. Showcase: Add to LinkedIn / Portfolio.