<u>Project Report</u>

Project title: A CRM Application To Engineering Works

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A Crm Application To Engineering Works

Project overview :

To create a CRM application in Salesforce tailored for engineering works, you will need to define custom objects and relationships to manage various aspects of your business. Below are the key objects you can create along with their fields and relationships:

Project Objectives:

1. **Engineering Projects Description:**

   Tracks details of engineering projects.Fields: ,Project Name (Text) ,Project Code (Auto-Number) Client Name (Lookup to Account),Start Date (Date),End Date (Date) Budget (Currency),Status (Picklist: Planned, In Progress, Completed, On Hold),Project Manager (Lookup to User)

2. **Work Orders Description:**

   Represents specific tasks or deliverables within a project.Fields:Work Order Name (Text)Work Order Number (Auto-Number)Associated Project (Lookup to Engineering Projects Assigned Team/Engineer (Lookup to Contact)Due Date (Date)Priority (Picklist: Low, Medium, High) Status (Picklist: Open, In Progress, Completed, Cancelled) Cost Estimate (Currency)

3. **Resources Description:**

   Tracks resources like materials, equipment, or personnel required for projects. Fields: Resource Name (Text) Resource Type (Picklist: Material, Equipment, Personnel) Quantity Available (Number) Unit Cost (Currency) Associated Work Order (Lookup to Work Orders)

4. **Time Sheets Description:**

Logs the time spent by engineers on various tasks or projects. Fields: Time Sheet Name (Auto-Number) Associated Work Order (Lookup to Work Orders) Engineer (Lookup to Contact) Date (Date) Hours Worked (Number) Description of Work (Text Area)

5. **Issue Tracking Description:**

Tracks issues encountered during project execution. Fields: Issue Name (Text) Issue ID (Auto-Number) Associated Project (Lookup to Engineering Projects) Raised By (Lookup to Contact) Priority (Picklist: Low, Medium, High) Description (Text Area) Status (Picklist: Open, Resolved, Closed) Resolution Date (Date)

6. **Client Feedback Description:**

 Stores feedback from clients for projects or services provided. Fields: Feedback ID (Auto-Number) Client Name (Lookup to Account) Associated Project (Lookup to Engineering Projects) Feedback Date (Date) Rating (Picklist: 1-5) Comments (Text Area)

7. **Invoice Management Description:**

Manages invoices generated for projects or work orders. Fields: Invoice Number (Auto-Number) Client Name (Lookup to Account) Associated Project/Work Order (Lookup to Engineering Projects or Work Orders) Invoice Date (Date) Amount (Currency) Payment Status (Picklist: Paid, Unpaid, Overdue)

Relationships:

 Engineering Projects ↔ Work Orders: One-to-Many Work Orders ↔ Resources: One-to-Many Work Orders ↔ Time Sheets: One-to-Many Engineering Projects ↔ Issue Tracking: One-to-Many Engineering Projects ↔ Client Feedback: One-to-Many Would you like help setting up any automation (e.g., workflows, validation rules) or UI designs for these objects?

Salesforce Key Features and Concepts Utilized:

Custom Objects & Fields:

Custom objects such as Lease Agreements, Lease Payments, Lease Renewals, and Property Information are created to manage lease-related data.

Custom fields are defined to capture specific lease details such as payment frequency, renewal options, lease start and end dates, and payment terms.

Workflow Rules and Process Builder:

Workflow Rules automate business processes such as lease approval, reminders for renewals, and payment reminders.

Process Builder is used to create complex workflows, like automatically updating lease status or generating alerts based on predefined conditions (e.g., lease expiry approaching).

Salesforce Lightning Pages and Components:

Salesforce's Lightning Experience is used to design custom user interfaces for lease managers, making it easy to interact with leases, track payments, and initiate renewals or terminations.

Lightning Components provide reusable elements that can be easily integrated into pages and apps.

Salesforce Flow:

Salesforce Flow is used for automating complex processes such as generating lease renewal notifications, automating document approval processes, and sending reminders based on custom criteria.

Reports & Dashboards:

Reports and Dashboards are used to generate real-time data insights, such as upcoming lease renewals, payment schedules, and lease performance.

Custom reports and dashboards help stakeholders monitor and track key metrics, enabling proactive management of lease portfolios.

Salesforce Files and Document Management:

Salesforce Files is used for storing, managing, and sharing lease-related documents, such as agreements, amendments, and payment receipts.

Version control and document sharing settings ensure that only authorized users can access and modify these documents. **Integration with External Systems (API):**

Salesforce APIs (REST or SOAP) are used to integrate with external systems like financial software, ERP systems, or property management platforms, ensuring seamless data synchronization between systems.

Security & Sharing Rules:

Salesforce's role-based security allows for controlled access to sensitive lease data, ensuring that users can only view and modify data based on their roles within the organization.

Detailed Steps to Solution Design:

CRM Application for Engineering Works in Salesforce

Designing a CRM solution in Salesforce involves a structured approach. Below is a step-by-step guide to create an effective and scalable solution:

1. Gather Requirements

Key Actions: Conduct meetings with stakeholders (project managers, engineers, and clients). Identify the specific use cases, challenges, and desired outcomes.

Document requirements such as: Project tracking Resource management Time tracking Issue resolution Client feedback management

Deliverables: Requirement specification document. User personas and use cases.

2. Analyze and Map Requirements to Salesforce Features

Key Actions: Evaluate which Salesforce standard objects (e.g., Accounts, Contacts, Opportunities) can fulfill requirements. Determine gaps that require custom objects or fields.

Deliverables: A feature matrix mapping requirements to Salesforce functionalities (Standard vs. Custom).

3. Define Data Model

Key Actions: Identify objects and relationships (refer to the objects outlined earlier). Create an Entity Relationship Diagram (ERD). Define object fields, field types, and picklist values.

Tools: Salesforce Schema Builder or tools like Lucidchart/Draw.io.

Deliverables: ERD with all standard and custom objects. Field definitions and relationships.

4. Configure Salesforce Environment

Key Actions:

Set Up Custom Objects: Navigate to Setup > Object Manager > Create > Custom Object. Define labels, plural names, and optional features (e.g., reports, search, etc.).

Create Fields: Add custom fields with appropriate data types. Include validation rules to enforce data quality.

Establish Relationships: Use lookup and master-detail relationships to connect objects.

Deliverables: Configured Salesforce objects, fields, and relationships.

5. Design Automation

Key Actions: Use Flows to automate tasks like: Project status updates based on work orders. Notifications for overdue tasks or issues. Set up validation rules to maintain data integrity. Create workflows or approval processes for invoices or resource requests.

Deliverables: Flow diagrams and implemented automation processes.

6. Develop User Interface

Key Actions: Design and create Lightning App Pages for intuitive navigation. Configure record pages for each object using the Lightning App Builder. Use Dynamic Forms to display fields conditionally. Create relevant list views, tabs, and search layouts.

Deliverables: Customized UI for easy data entry and viewing.

7. Build Reports and Dashboards:

Key Actions: Create reports for: Project progress. Resource utilization. Client feedback analysis. Invoice status tracking. Design dashboards with visual components like charts and gauges. Deliverables: Reports and dashboards tailored to user roles.

8. Test the Solution:

Key Actions: Perform unit testing for each custom object, automation, and UI component. Conduct end-to-end testing with test users. Ensure data accuracy, automation triggers, and UI usability.

Deliverables: Test cases and results. Resolved bugs and issues.

9. Deploy the Solution:

Key Actions: Migrate configurations from the sandbox to the production environment using Change Sets or Salesforce CLI. Perform final testing in production.

Deliverables: Live CRM application in Salesforce.

10. Provide Training and Documentation

Key Actions: Conduct training sessions for end users. Create user guides and quick reference sheets for: Data entry. Running reports. Using automation features.

Deliverables: Training materials and recorded sessions.

11. Monitor and Optimize

Key Actions: Collect feedback from users. Monitor system performance and user adoption. Iterate on improvements by adding features or optimizing workflows.

Deliverables: Enhanced system performance and satisfaction. This structured approach ensures a robust CRM tailored to the needs of engineering works. Let me know if you'd like detailed assistance on any of these steps!

Test and Validation:

Unit Testing:

Test individual components, such as Apex classes, workflow rules, and validation rules, to ensure they function correctly.

Integration Testing: Test the integration with external systems to ensure smooth data exchange, especially for payment processing and financial systems.

User Acceptance Testing (UAT):

Involve end-users (lease managers, finance, legal teams) to test the system's usability and verify that it meets the business requirements.

Gather feedback and address any issues or improvements identified during UAT.

Performance Testing:

Test the system's scalability and performance under load, particularly when generating large reports or handling complex workflows.

Key Scenarios Addressed by Salesforce in Implementation:

Automated Lease Approvals: Automate the lease approval process, routing lease documents to the appropriate managers or stakeholders based on predefined approval hierarchies. **Lease Renewal Notifications:**

Automatically notify managers and clients about upcoming lease expirations or renewal opportunities, reducing manual tracking efforts.

Payment Tracking and Billing:

Track lease payments and generate schedules based on the lease terms. Integration with financial systems ensures accurate payment processing.

Document Management and Sharing:

Securely store lease agreements and related documents in Salesforce Files, ensuring easy access and version control for stakeholders.

Compliance & Auditing:

Ensure that lease terms comply with regulatory standards. Maintain an audit trail of all changes to lease records for legal and compliance purposes.

Reporting and Analytics:

Generate real-time reports on lease portfolios, payment statuses, and other key metrics, enabling better decision-making.

Conclusion:

Conclusion for CRM Application for Engineering Works in Salesforce

The implementation of a CRM Application for Engineering Works in Salesforce is a transformative initiative that streamlines operational efficiency, enhances client relationships, and improves project management. By integrating key functionalities such as project tracking, resource management, time logging, issue resolution, and client feedback into a unified platform, this solution addresses the specific needs of engineering firms.