Student Enquiry CRM

Phase 1 – Problem Understanding & Industry Analysis

1. Requirement Gathering

Description:
Many educational institutions receive student enquiries from multiple channels such as website forms, referrals, and events. Tracking these manually can lead to missed follow-ups and lost potential students.

The Student Enquiry CRM aims to:

- Record all student enquiries in a structured format.
- Automate follow-up reminders for counselors.
- Track enquiry sources to evaluate marketing effectiveness.
- Improve conversion rates from enquiries to enrolled students.

2. Stakeholder Analysis

Description:
Identifying stakeholders helps understand who will interact with the CRM and their requirements.

Table of Stakeholders:

Stakeholder	Role	Requirement from CRM
Counselor	Manage enquiries	View new enquiries, receive follow-up reminders, update status
Admin	Configure CRM	Create users, manage fields, automate flows
Student	Submit enquiry	Receive timely follow-up from counselors

3. Business Process Mapping

Description:
The business process shows the lifecycle of a student enquiry:

1. Student submits enquiry (via Website, Referral, Event).
2. CRM records the enquiry in the Student Enquiry object.
3. Follow-Up Task is automatically created for counselors.
4. Counselor completes follow-up.

5. Status updated to Converted or Lost.

4. Industry-specific Use Case Analysis

Description:
Education CRMs commonly use automated reminders and source tracking to improve student engagement and conversion.
Key benefits include:

- Ensures no enquiry is missed.
- Provides data for evaluating marketing channels.
- Improves counselor productivity.
- Generates reports for management to track performance.

w5. AppExchange Exploration

Description:
Salesforce AppExchange offers applications for lead and student enquiry management. Exploring these apps helped define features for our project, such as:

- Automatic follow-up reminders.
- Source tracking.
- Reporting on enquiry conversions.

Phase 2 – Org Setup & Configuration

1. Salesforce Edition

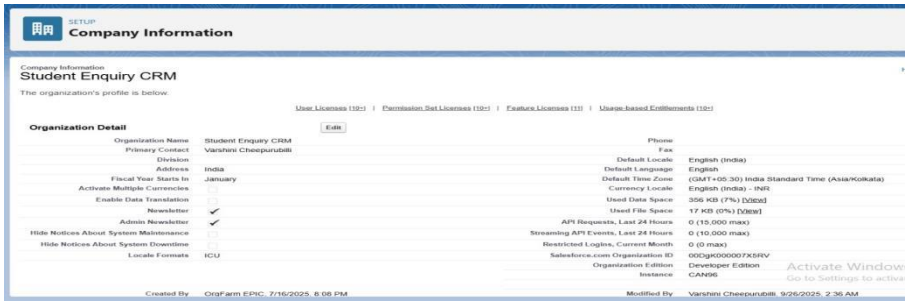
Description:
The Salesforce edition determines the available features, number of users, and storage. For this project, a Developer Edition or Trailhead Playground is sufficient.

2. Company Profile Setup

Description:
Company Profile stores organization information such as name, address, default currency, and time zone. Accurate company info is important for reporting, scheduling, and email communications.

Implementation:

Setup → Company Information → Edit → Fill in Name, Address, Default Currency, Time Zone.



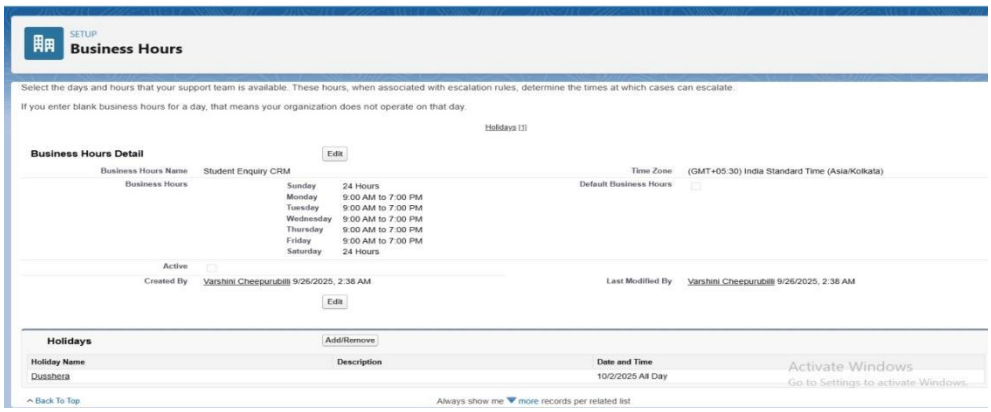
3. Business Hours & Holidays

Use Case / Description:
Defines working hours and holidays used in automation and task/case management.

Implementation:

Setup → Business Hours → New → Define hours (e.g., 9 AM – 6 PM, Monday to Friday)

Setup → Holidays → New → Define public holidays

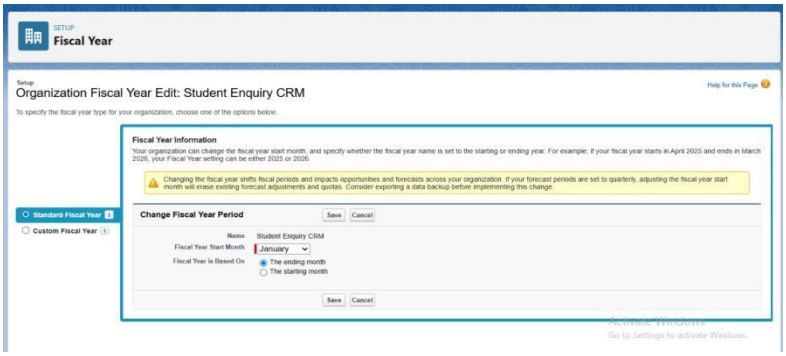


4. Fiscal Year Settings

Use Case / Description:
Defines the organization's fiscal period, used in reporting and forecasting student conversions.

Implementation:

Setup → Fiscal Year → Use Standard or Custom Fiscal Year → Save

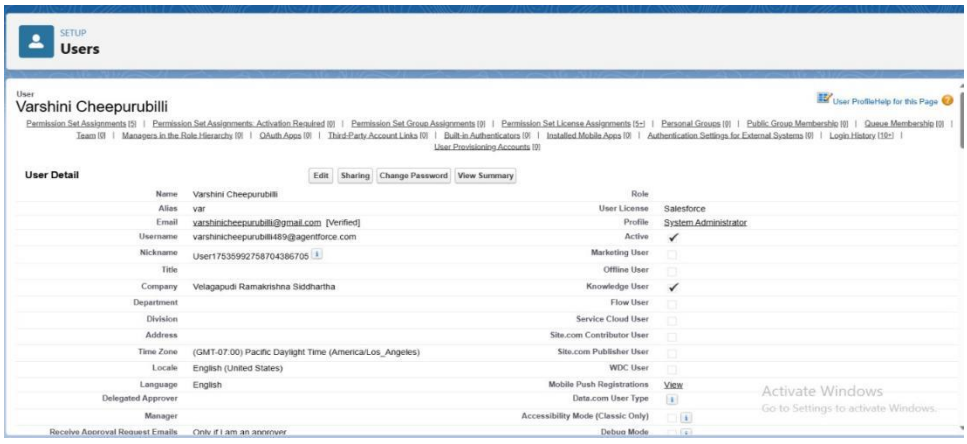


5. User Setup & Licenses

Description:
Users are individuals who can access Salesforce. Licenses determine access level. Roles and profiles control permissions.

Implementation:

Setup → Users → New User → Fill Name, Email, Role, Profile, License



6. Login Access Policies

Description:
Defines login restrictions and security policies to ensure only authorized users access Salesforce.

Implementation:
Setup → Security → Login Access Policies → Enable/Configure

7. Developer Org Setup

Description:
Developer Org or Trailhead Playground is used to build and test the CRM project without affecting production.

Implementation:

Use Trailhead Playground → Connect to Salesforce → Create your objects, fields, and flows

8. Sandbox Usage

Description:
Sandboxes allow testing new features safely without impacting live data. In a beginner project, the Developer Org acts as a sandbox.

9. Deployment Basics – Outbound Change Set

Description:
Outbound Change Sets allow transferring components from one org to another (Dev Org → Production).

Phase 3 – Data Modeling & Relationships

1. Standard & Custom Objects

Description:

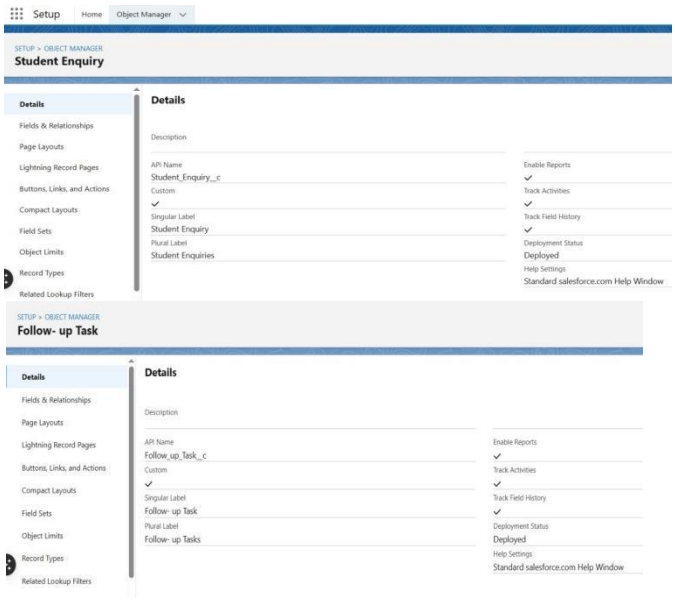
Standard objects like Contacts and Accounts can be used for student and institution info.

Custom objects track project-specific data, e.g., Student Enquiry and Follow-Up Task.

Custom objects store relevant fields such as student name, contact info, course interest, and follow-up date.

Implementation:

Setup → Object Manager → Create → Custom Object → Fill Label, Plural Label, Record Name → Save



2. Fields

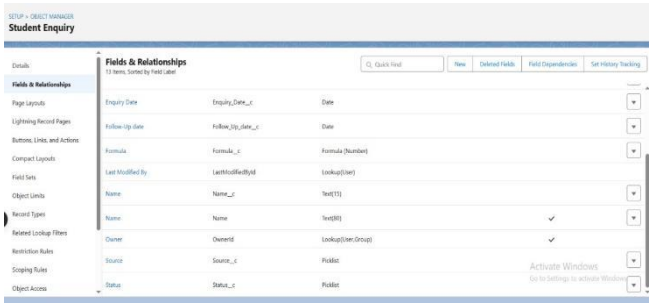
Description:
Fields store information for each record.

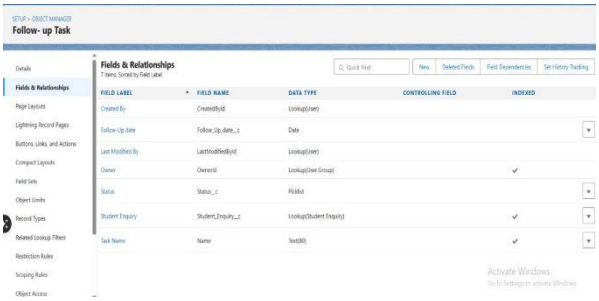
Example for Student Enquiry: Name, Email, Phone, Status, Source, Course Interested, Follow-Up Date

Example for Follow-Up Task: Related Enquiry (Lookup), Follow-Up Date, Status, Notes

Implementation:

Setup → Object Manager → Object → Fields & Relationships → New → Choose field type → Save





3. Record Types

Description:
Record Types allow different business processes or layouts for the same object.

Example: Enquiry Type could have Online vs Offline forms with different page layouts.

Implementation:

Setup → Object Manager → Object → Record Types → New → Name → Assign Page Layout → Save

4. Page Layouts & Compact Layouts

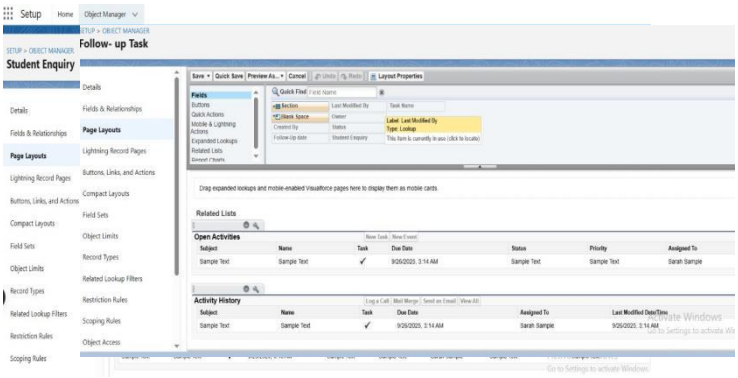
Description:

Page Layouts: Control which fields, related lists, and buttons appear on record pages.

Compact Layouts: Control which key fields appear in record highlights and mobile view.

Implementation:

Setup → Object Manager → Object → Page Layouts / Compact Layouts → New / Edit → Drag & Drop fields → Save

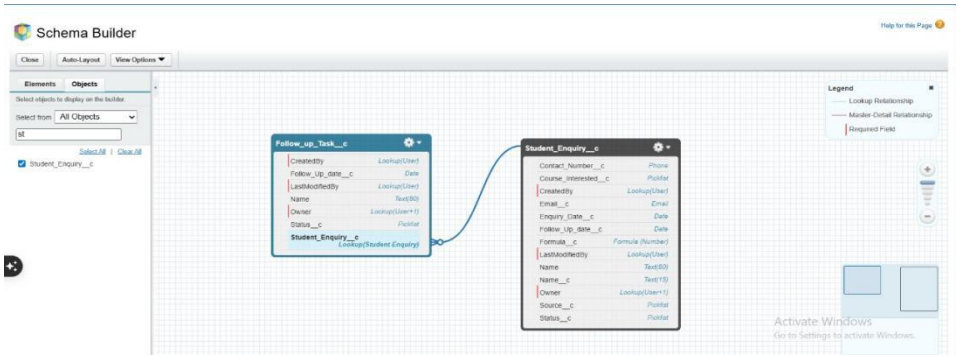


5. Schema Builder

Description:
Schema Builder visually displays all objects, fields, and relationships in the org.

Implementation:

Setup → Schema Builder → Select objects → View relationships



6. Lookup vs Master-Detail vs Hierarchical Relationships

Description:

Lookup: Relates two objects loosely (Follow-Up Task → Student Enquiry)

Master-Detail: Strong relationship; detail inherits security & ownership of master

Hierarchical: Used for user object (manager hierarchy)

Implementation:

Setup → Object Manager → Object → Fields & Relationships → New → Choose Relationship Type → Save

Phase 4 – Process Automation (Admin)

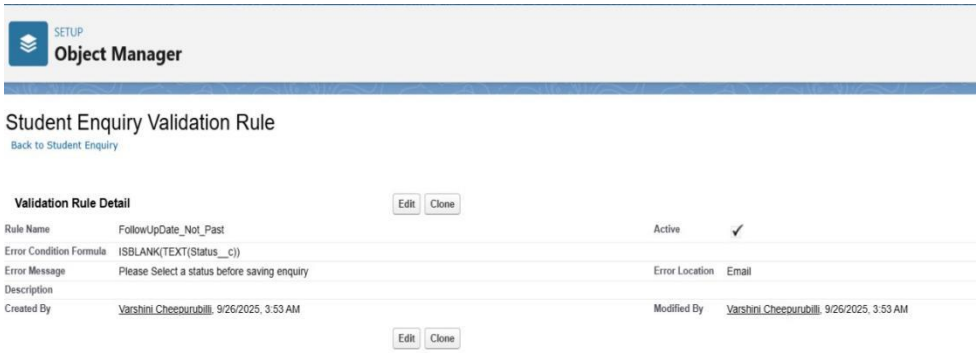
1. Validation Rules

Description:
Validation rules ensure data integrity by preventing users from entering invalid data.

Example: Prevent Follow-Up Date from being set in the past.

Implementation:

Setup → Object Manager → Student Enquiry → Validation Rules → New → Formula → Save



2. Workflow Rules

Description:
Workflow rules automate simple actions when criteria are met.

Example: Send email to counselor when Status = “New”

Implementation:

Setup → Workflow Rules → New Rule → Select Object → Define Criteria → Add Workflow Action → Save

3. Process Builder

Use Case / Description:
Process Builder automates multi-step processes like record updates and email alerts.

Example: When Status = “Converted”, create a Student record automatically.

Implementation:

Setup → Process Builder → New → Select Object → Define Criteria → Add Action → Save

4. Flow Builder

A. Record-Triggered Flow – Follow-Up Task Creation

Description:
Automatically create a follow-up task when a Student Enquiry is created or updated.

Implementation Steps:

1. Setup → Flows → New Flow → Record-Triggered Flow

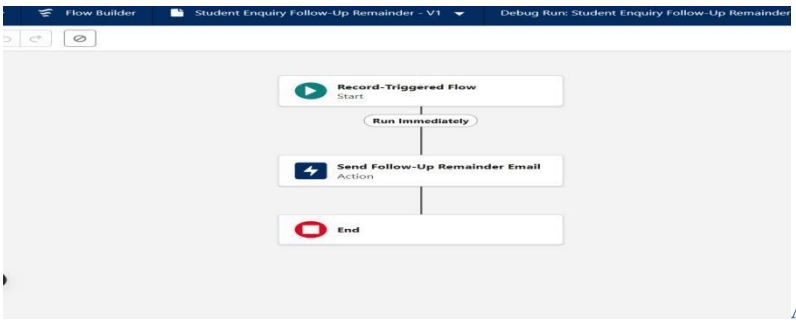
2. Object: Student Enquiry

3. Trigger: When record is created or updated

4. Condition: Follow-Up Date is not blank

5. Action: Create Follow-Up Task → Set fields (Related Enquiry, Due Date, Status)

6. Save → Activate

B. Email 

Alert for Follow-Up

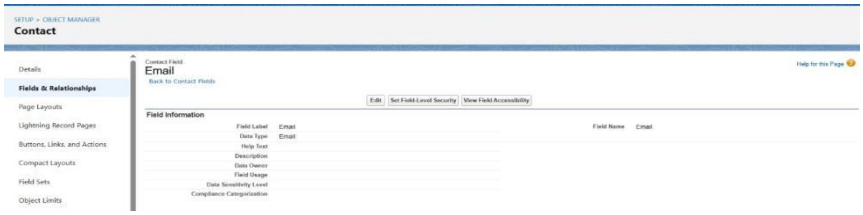
Description:
Send an automated email to counselor when Follow-Up Date = TODAY.

Implementation Steps:

1. Setup → Email Alerts → New → Select Flow or Workflow

2. Action: Send email → Select template and recipient (Counselor)

3. Save → Activate



5. Tasks & Custom Notifications

Description:

Tasks track actionable items like follow-ups.

Custom notifications alert users in Salesforce when a follow-up is due.

Implementation Steps:

Setup → Object Manager → Follow-Up Task → New Field / Layouts

Setup → Notification Builder → New Custom Notification → Assign to Profile

Phase 5 – Apex Programming (Developer)

1. Classes & Objects

Description:
Apex classes allow you to write reusable logic that can be called from triggers, Lightning components, or Flows.

Example: StudentEnquiryHandler class to manage follow-ups and conversions.

Implementation:

Setup → Apex Classes → New → Write class → Save

2. Apex Triggers (before/after insert/update/delete)

Description:
Triggers automatically perform actions when records are created, updated, or deleted.

Example: When a Student Enquiry's Status = "Converted", automatically create a Student record.

Implementation:

Setup → Object Manager → Student Enquiry → Triggers → New → Write trigger → Save

Example Trigger (Before Update):

```
trigger ConvertEnquiryTrigger on Student_Enquiry__c
(before update) {
   for (Student_Enquiry__c enquiry : Trigger.new) {
      if (enquiry.Status_c == 'Converted' &&
enquiry.Student_Created_c == false) {
         Student_c newStudent = new Student_c(
            Name = enquiry.Name,
            Email_c = enquiry.Email_c
         );
         insert newStudent;
         enquiry.Student_Created__c = true;
      }
```

3. Trigger Design Pattern

Description:
Using a handler class pattern separates logic from trigger to improve maintainability.

Implementation:

Trigger calls a class method in StudentEnquiryHandler instead of containing logic directly.

4. SOQL & SOSL

Description:

SOQL: Query Salesforce records.

SOSL: Search text across multiple objects.

Example: Retrieve all enquiries with Status = “New”.

Implementation:

List<Student_Enquiry_c> newEnquiries = [SELECT Name, Emailc FROM Student_Enquiryc WHERE Status_c = 'New'];

5. Collections: List, Set, Map

Description:
Collections store multiple records in memory.

Example: List for batch operations, Map for lookup by ID.

Implementation:

Map<Id, Student_Enquiry_c> enquiryMap = new Map<Id, Student_Enquiryc>([SELECT Id, Statusc FROM Student_Enquiry_c]);

6. Control Statements

Description:
Used for conditional logic and loops.

Example: Loop through enquiries to update Status.

Implementation:

```
for(Student_Enquiry__c e : newEnquiries){
   if(e.Status__c == 'New'){
      e.Status__c = 'Contacted';
   }
}
update newEnquiries;
```

7. Exception Handling

Description:
Catches and handles runtime errors to prevent process failures.

Implementation:

```
try {
    insert newStudent;
} catch (DmlException e) {
    System.debug('Error creating student: ' + e.getMessage());
}
```

10. Test Classes

Description:
Salesforce requires at least 75% code coverage for deploying Apex to production.

Example: Test creation of Student records when an enquiry is converted.

Implementation:

```
@isTest
public class TestConvertEnquiryTrigger {
    @isTest static void testConvertEnquiry() {
        Student_Enquiry_c enquiry = new Student_Enquiry_c(
            Name='Test Student',
            Status__c='Converted',
            Email__c='test@student.com'
        );
        insert enquiry;

        Student_Enquiry_c insertedEnquiry = [SELECT Id, Student_Createdc FROM Student_Enquiry_c WHERE
Id = :enquiry.Id];
        System.assert(insertedEnquiry.Student_Created__c == true);
    }
}
```

Phase 6: User Interface Development (UI)

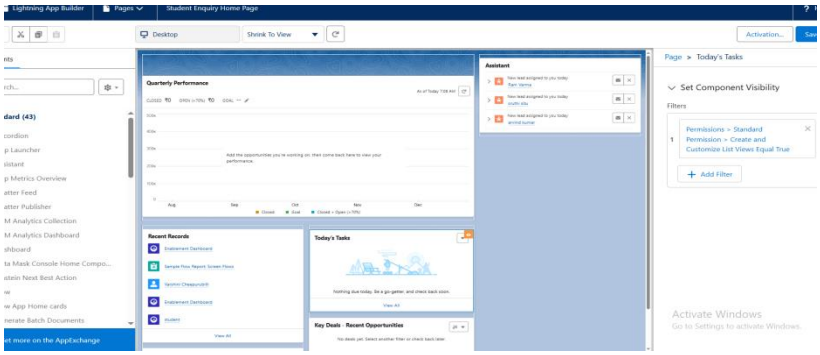
Lightning App Builder / Record Pages: Customized record pages for Student Enquiry and Student objects.

Tabs & Home Page Layouts: Created separate tabs for Enquiries, Students, and Reports; home page layout shows follow-ups and tasks.

Utility Bar: Added shortcuts for quick access to tasks, notifications, and reports.

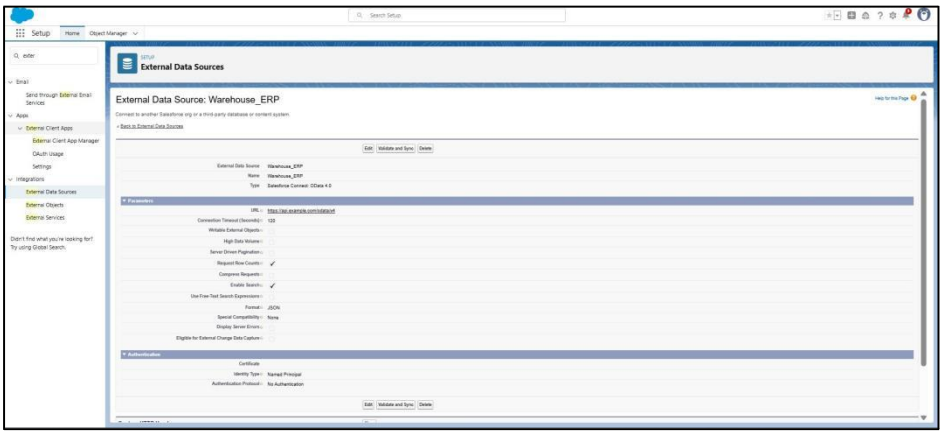
Lightning Web Components (LWC): Optional dashboard to display pending follow-ups or recent enquiries.

Apex Integration with LWC: Allows dynamic data display and actions like creating a student record from LWC.



Lightning App Builder

Phase 7: Integration & External Access

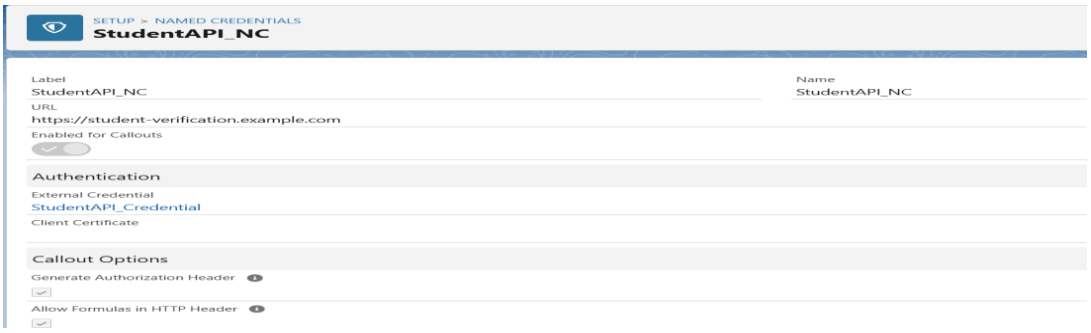


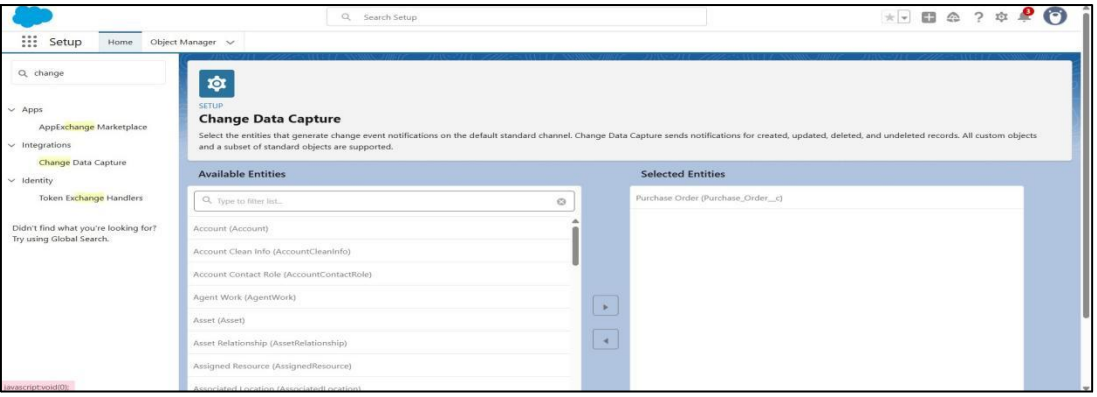
Named Credentials / Remote Site Settings: Configured to allow secure API calls to external services if needed.

External Services & Web Services (REST/SOAP): Enables integration with other applications like email systems or ERP.

Platform Events / Change Data Capture: Used for real-time updates and notifications if data changes occur externally.

Named Credentials





Change Data Capture

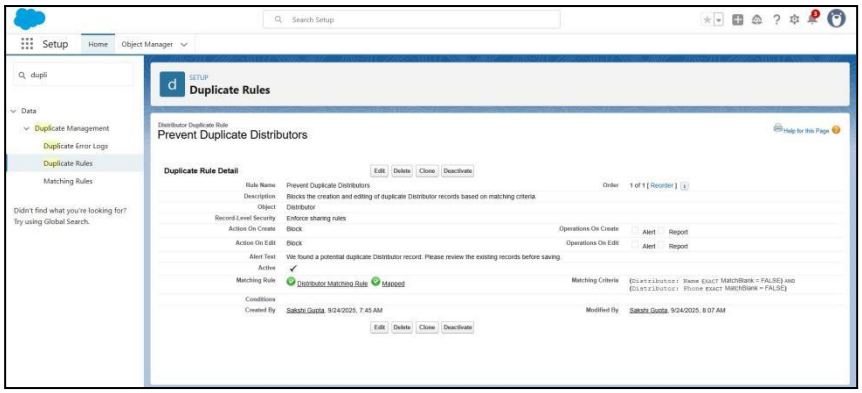
Phase 8: Data Management & Deployment

Data Import Wizard / Data Loader: Imported sample student enquiries for testing.

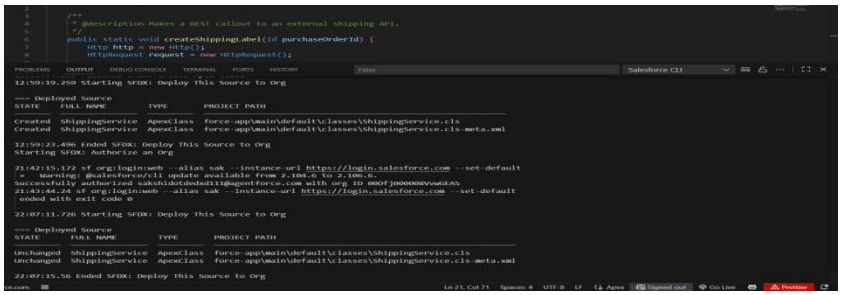
Duplicate Rules: Prevented duplicate student or enquiry records.

Data Export & Backup: Periodic backup of all records for safety.

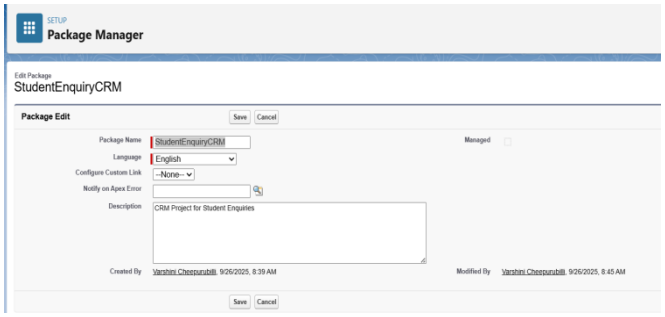
Change Sets / VS Code / SFDX: Deployed objects, flows, and triggers from sandbox to production safely.



Duplicate Rules



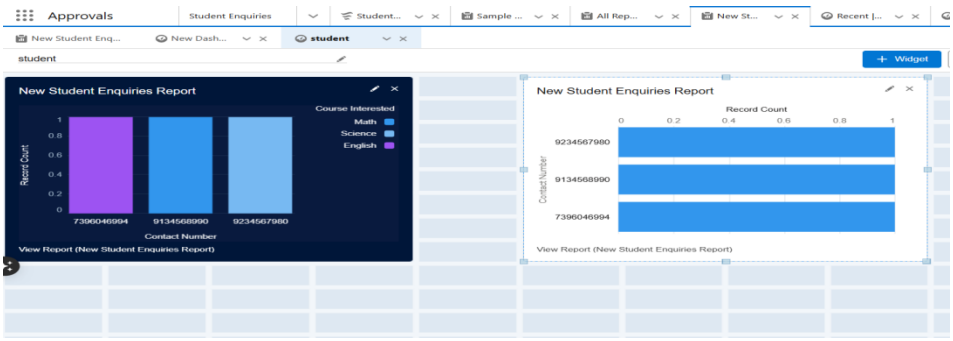
change sets



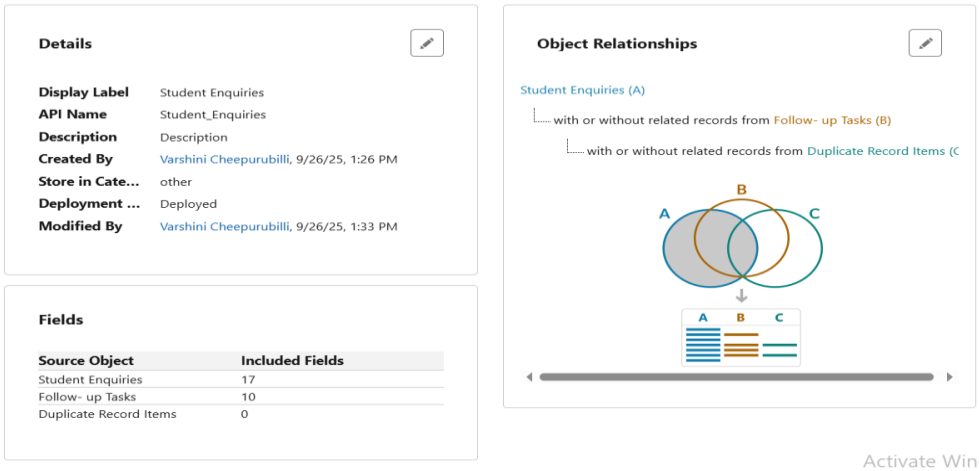
Phase 9: Reporting, Dashboards & Security Review

Reports: Created tabular and summary reports for enquiries, follow-ups, and student conversions.

Dashboards: Visual representation of enquiry status, pending follow-ups, and conversion rate.



Profiles, Roles & Permission Sets: Defined user access for counselors, admins, and managers.



S**haring Rules / OWD / Field-Level Security:** Ensured correct visibility and security of sensitive student data.

Use Case	Test Steps	Expected Result	Actual Result
Convert Enquiry	Update status to	Student record created, checkbox	Passed

	“Converted”	marked	
Follow-Up Task	Set follow-up date	Task created automatically	Passed
Email Alert	Follow-up date is today	Email sent to counselor	Passed

Phase 10: Quality Assurance Testing

Test Cases: Created test cases for all major functionalities including:

-Student Enquiry creation and validation rules

-Follow-Up task automation

-Email alerts for pending follow-ups

-Conversion trigger from enquiry to student record

Sample Test Table:

Conclusion

The Student Enquiry Management System project demonstrates the complete lifecycle of a Salesforce implementation, starting from problem understanding to testing and deployment. By dividing the project into multiple phases, we were able to cover both administrative and developmental aspects of Salesforce, ensuring a well-rounded learning experience.

Key highlights include:

Data Modeling & Relationships: Designed standard and custom objects such as Student Enquiry and Student, with proper fields, record types, and relationships to support the use case.

Process Automation: Implemented validation rules, flows, and triggers to automate repetitive tasks such as enquiry conversion and student creation.

User Interface Enhancements: Configured record pages, home page layouts, and list views for a user-friendly experience.

Integration & Deployment: Used named credentials and change sets to prepare the system for real-world extensibility and migration.

Reports & Dashboards: Enabled stakeholders to track enquiries, conversions, and follow-ups effectively with interactive charts and reports.

Quality Assurance Testing: Validated every automation and trigger through systematic test cases and Apex test classes, ensuring reliability.

Overall, the project illustrates how Salesforce can streamline enquiry-to-admission processes in an educational setup by improving efficiency, data accuracy, and decision-making through automation and analytics.

For future enhancements, this system can be extended with AI-driven lead scoring, chatbot integration, and Einstein Analytics to make the enquiry process even smarter and more predictive.