

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.

The screenshot shows the 'Company Information' setup page in Salesforce. The organization name is 'Student Enquiry CRM'. The primary contact is 'Varshini Cheepurthi'. The address is in India, with the fiscal year starting in January. The default language is English, and the default time zone is (GMT+05:30) India Standard Time (Asia/Kolkata). The currency is Indian Rupee (INR). The page also shows various system settings like 'Use Data Space', 'Used File Space', 'API Requests', and 'Streaming API Events'. The organization edition is 'Developer Edition'.

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

The screenshot shows the 'Business Hours' setup page in Salesforce. It includes a table for defining business hours for each day of the week. The time zone is set to (GMT+05:30) India Standard Time (Asia/Kolkata). Below the business hours table, there is a section for 'Holidays' with a table for defining public holidays. The page also shows the 'Active' checkbox and the 'Created By' and 'Last Modified By' fields.

Day	Business Hours
Sunday	24 Hours
Monday	9:00 AM to 7:00 PM
Tuesday	9:00 AM to 7:00 PM
Wednesday	9:00 AM to 7:00 PM
Thursday	9:00 AM to 7:00 PM
Friday	9:00 AM to 7:00 PM
Saturday	24 Hours

Holiday Name	Description	Date and Time
Dussehra		10/2/2025 All Day

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

The screenshot shows the 'Fiscal Year' setup page in Salesforce. The page title is 'Organization Fiscal Year Edit: Student Enquiry CRM'. Below the title, there is a section for 'Fiscal Year Information' with a warning icon and text: 'Your organization can change the fiscal year start month, and specify whether the fiscal year name is set to the starting or ending year. For example, if your fiscal year starts in April 2025 and ends in March 2026, your Fiscal Year setting can be either 2025 or 2026. Changing the fiscal year shifts fiscal periods and impacts opportunities and forecasts across your organization. If your forecast periods are set to quarterly, adjusting the fiscal year start month will erase existing forecast adjustments and quotas. Consider exporting a data backup before implementing this change.' Below this, there is a 'Change Fiscal Year Period' section with a 'Name' field set to 'Student Enquiry CRM', a 'Fiscal Year Start Month' dropdown set to 'January', and a 'Fiscal Year is Based On' section with radio buttons for 'The ending month' (selected) and 'The starting month'. There are 'Save' and 'Cancel' buttons at the bottom of the section.

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

The screenshot shows the 'User Setup' page in Salesforce for a new user named 'Varshini Cheepurubilli'. The page has a top navigation bar with 'Users' and a 'User Profile' link. Below the navigation bar, there is a section for 'User Detail' with fields for Name, Alias, Email, Username, Nickname, Title, Company, Department, Division, Address, Time Zone, Locale, Language, Delegated Approver, and Manager. To the right of these fields, there is a 'Role' section with a dropdown set to 'Salesforce' and a 'Profile' section with a dropdown set to 'System Administrator'. Below these, there is a list of checkboxes for various user roles: 'Active' (checked), 'Marketing User', 'Offline User', 'Knowledge User', 'Flow User', 'Service Cloud User', 'Site.com Contributor User', 'Site.com Publisher User', 'WDC User', 'Mobile Push Registrations', 'Data.com User Type', 'Accessibility Mode (Classic Only)', and 'Debug Mode'. There are 'Edit', 'Sharing', 'Change Password', and 'View Summary' buttons at the top of the 'User Detail' section. At the bottom right, there is an 'Activate Windows' watermark.

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:

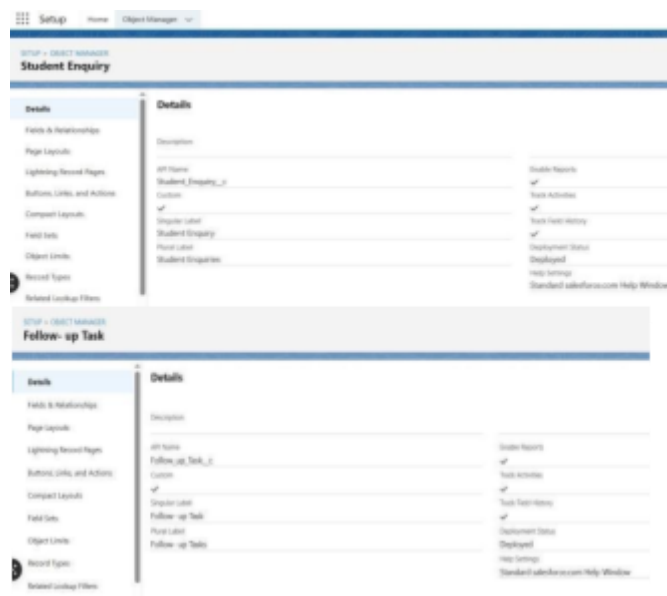
Standard objects like Contacts and Accounts can be used for student and institution info.

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:

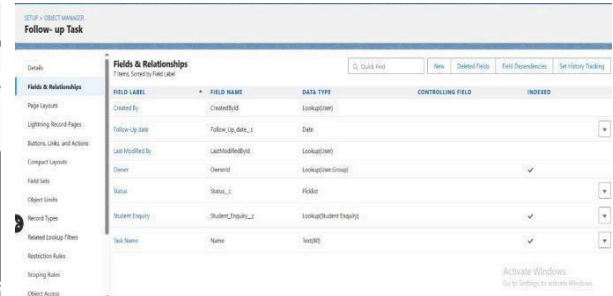
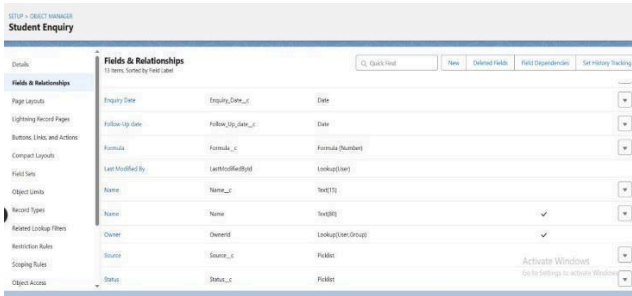
Fields store information for each record.

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

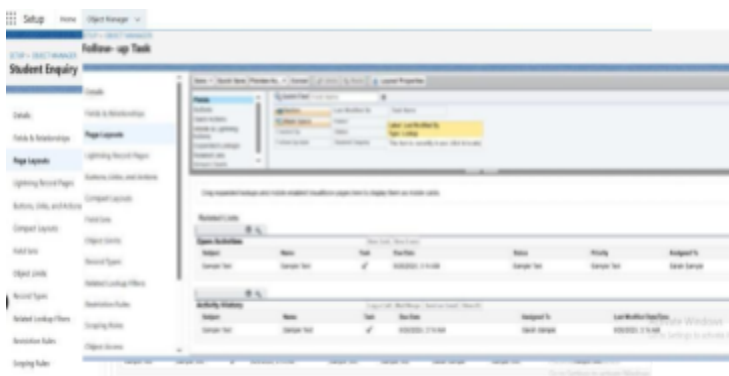
Description:

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



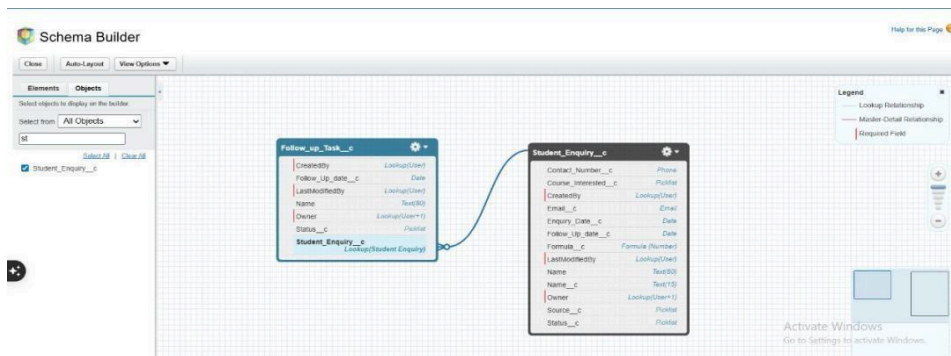
5. Schema Builder

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

The screenshot shows the 'Object Manager' interface for 'Student Enquiry'. It displays a 'Validation Rule Detail' for a rule named 'FollowUpDate_Not_Past'. The rule is active and uses the formula 'ISBLANK(TEXT(Status__c))'. The error message is 'Please Select a status before saving enquiry'. The error location is set to 'Email'. The rule was created and modified by 'Varshini Cheepurubilli' on '9/26/2025, 3:53 AM'. There are 'Edit' and 'Close' buttons at the top and bottom of the detail section.

Validation Rule Detail	
Rule Name	FollowUpDate_Not_Past
Error Condition Formula	ISBLANK(TEXT(Status__c))
Error Message	Please Select a status before saving enquiry
Description	
Created By	Varshini Cheepurubilli 9/26/2025, 3:53 AM

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

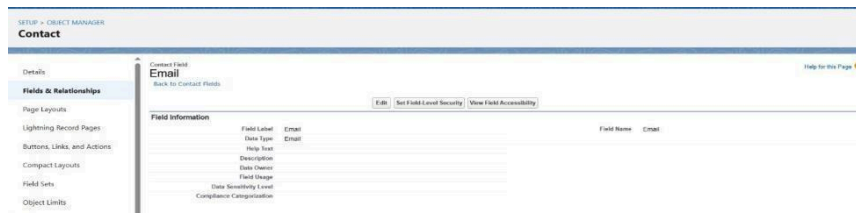
Alert for Follow Up

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);
    }
}
```

Apex Programming (Developer)

Apex classes allow you to write reusable logic that can be called from triggers, Lightning components, or Flows. For example, StudentEnquiryHandler class manages follow-ups and conversions.

Added new Apex Controller class to expose data to LWC:

```
public with sharing class StudentEnquiryController {
    @AuraEnabled(cacheable=true)
    public static List<Student_Enquiry__c> getPendingEnquiries() {
        return [
            SELECT Id, Name, Email_c, Statusc, Follow_Up_Date_c
```

```
FROM Student_Enquiry__c
WHERE Status__c = 'New'
ORDER BY Follow_Up_Date__c ASC
];
}
```

@AuraEnabled

```
public static void convertEnquiry(Id enquiryId) {
    Student_Enquiry_c enquiry = [SELECT Id, Statusc FROM Student_Enquiry_c WHERE Id = :enquiryId];
    enquiry.Status__c = 'Converted';
    update enquiry;
}
}
```

Phase 6: User Interface Development (UI)

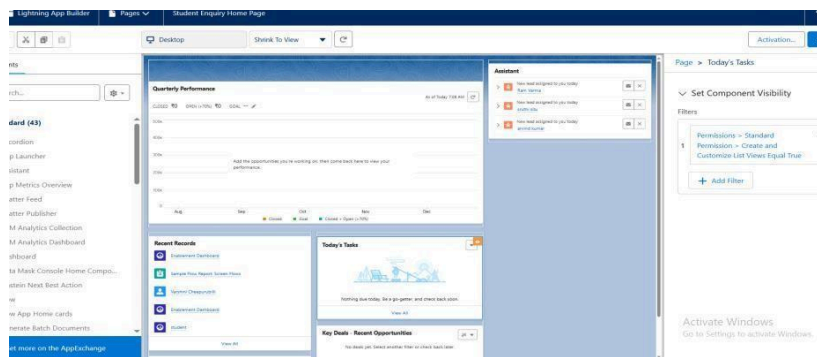
Lightning App Builder / Record Pages: Customized record pages for Student Enquiry and Student objects.

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

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): Added new LWC 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.

New LWC code added:

studentEnquiryDashboard.html:

```
<template>
  <lightning-card title="Pending Student Enquiries">
    <template if:true={enquiries.data}>
      <lightning-datatable
        key-field="Id"
        data={enquiries.data}
        columns={columns}>
      </lightning-datatable>
    </template>
    <template if:true={enquiries.error}>
      <c-error-panel errors={enquiries.error}></c-error-panel>
    </template>
  </lightning-card>
</template>
```


studentEnquiryDashboard.js:

```
import { LightningElement, wire } from 'lwc';
import getPendingEnquiries from '@salesforce/apex/StudentEnquiryController.getPendingEnquiries';
import convertEnquiry from '@salesforce/apex/StudentEnquiryController.convertEnquiry';

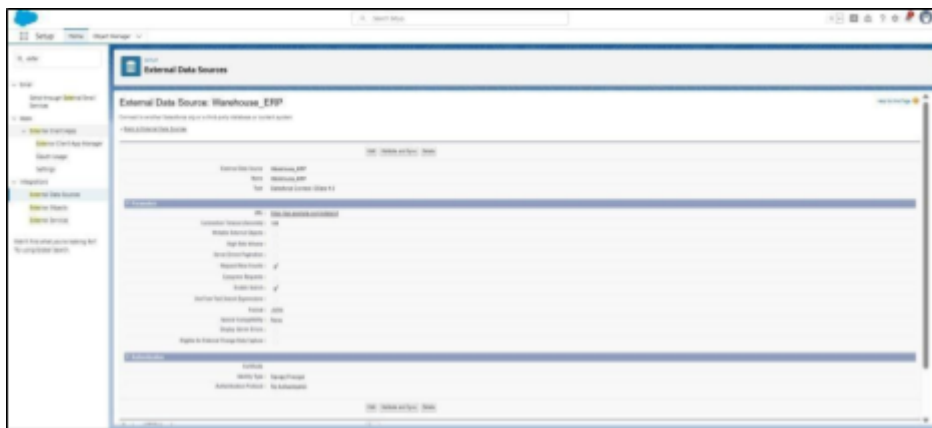
export default class StudentEnquiryDashboard extends LightningElement {
  columns = [
    { label: 'Name', fieldName: 'Name' },
    { label: 'Email', fieldName: 'Email__c', type: 'email' },
    { label: 'Follow-Up Date', fieldName: 'Follow_Up_Date__c', type: 'date' }
  ];

  @wire(getPendingEnquiries) enquiries;

  handleConvert(event) {
    const id = event.target.dataset.id;
    convertEnquiry({ enquiryId: id })
      .then(() => {
        // refresh wire to show updated data
        return refreshApex(this.enquiries);
      });
  }
}
```

This LWC follows Lightning Web Security (LWS) guidelines by avoiding direct DOM access and using @salesforce modules.

Phase 7: Integration & External Access

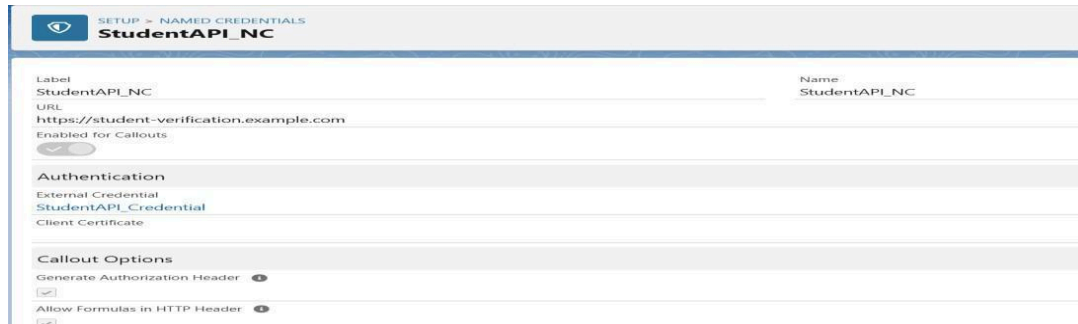


Named Credentials / Remote Site Settings: Configured to allow secure API calls to external services if needed.

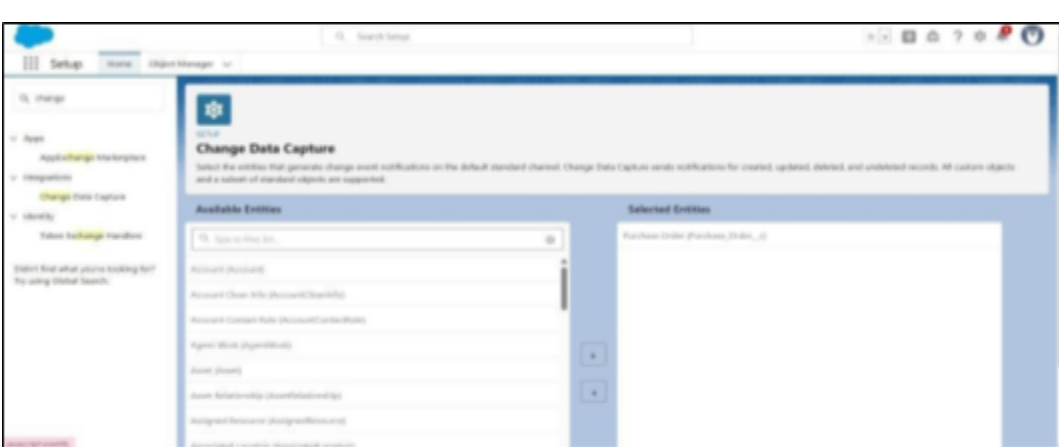
External Services & Web Services (REST/SOAP): Enables integration with other applications like email systems or ERP.

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

Named Credentials



The screenshot shows the 'SETUP > NAMED CREDENTIALS' page for a credential named 'StudentAPI_NC'. The 'Label' field is 'StudentAPI_NC' and the 'Name' field is 'StudentAPI_NC'. The 'URL' is 'https://student-verification.example.com'. The 'Enabled for Callouts' toggle is turned on. Under the 'Authentication' section, 'External Credential' is selected, with 'StudentAPI_Credential' listed below it. Under the 'Callout Options' section, both 'Generate Authorization Header' and 'Allow Formulas in HTTP Header' are checked.



Change Data Capture

Phase 8: Data Management & Deployment

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

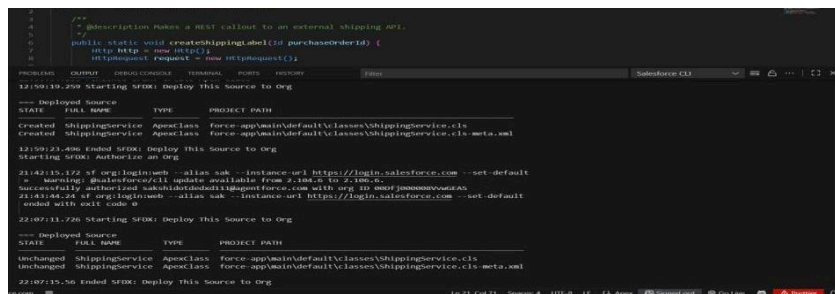
Duplicate Rules: Prevented duplicate student or enquiry records.

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

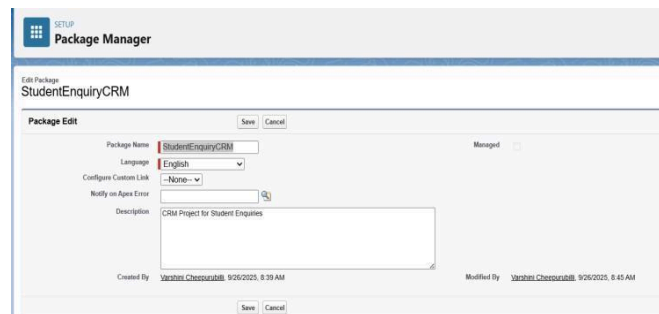
Change Sets / VS Code / SFDX: Deployed objects, flows, and triggers from sandbox to production safely.



Duplicate Rules



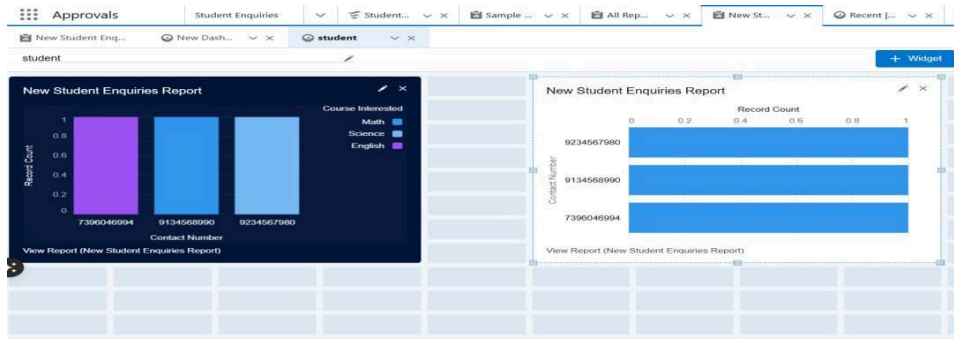
change sets



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.

Details

Display Label Student Enquiries

API Name Student_Enquiries

Description Description

Created By Varshini Cheepurubilli, 9/26/25, 1:26 PM

Store in Cate... other

Deployment ... Deployed

Modified By Varshini Cheepurubilli, 9/26/25, 1:33 PM

Fields

Source Object	Included Fields
Student Enquiries	17
Follow- up Tasks	10
Duplicate Record Items	0

Object Relationships

Student Enquiries (A)

with or without related records from Follow- up Tasks (B)

with or without related records from Duplicate Record Items (C)

Activate Windows
Go to Settings to activate Windows.

Sharing 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 “Converted”	Student record created, checkbox marked	Passed
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.

