Phase 3: Data Modeling and Relationships

Phase 3 focuses on Data Modeling and Relationships within the Salesforce platform. In this phase, various standard and custom objects are created, fields are defined, and relationships are established to build the Smart Student Enrollment and Learning Portal. Additionally, page layouts are designed to provide a user-friendly interface for managing records.

**Custom Objects and Their Fields**

**Course Object**

- Course Name (Text, Required)  
- Cid (Text, External ID, Required)  
- Duration in Days (Number)  
- Course Fees (Number, Required)  
- Teacher (Lookup → Teacher Object)  
- Batch Name (Master-Detail → Batch Object)  
- Fees (Master-Detail → Fees Object)

**Batch Object**

- Batch Name (Text, Required)  
- Batch ID (Text, Required)  
- Start Date (Date)  
- End Date (Date)  
- Cid (Text, Required)  
- Course (Lookup → Course Object)  
- Teacher (Lookup → Teacher Object)  
- Student (Lookup → Student Object)

**Fees Object**

- Course Name (Text, Required)  
- Course Fees (Number, Required)  
- Amount Paid (Number)  
- Date (Date, Required)  
- Student ID (Text, Required / Could be Lookup → Student Object)  
- Amount Remaining (Formula: Course Fees - Amount Paid)

**Student Object**

- Student Name (Text, Required)  
- Student ID (Text, Required)  
- Student Email (Email)  
- Date of Birth (Date, Required)  
- Age (Formula → calculated from Date of Birth)  
- Contact Number (Text)  
- Address (Text)  
- Course (Lookup → Course Object)  
- Batch (Lookup → Batch Object)

**Teacher Object**

- Faculty Name (Text, Required)  
- Faculty ID (Text, Required)  
- Department (Text)  
- Designation (Text)  
- Faculty Email (Email, Required/Unique)

**Enrollment Object**

- Enrollment Name (Text, Required)  
- Batch (Lookup → Batch Object, Required)  
- Student (Lookup → Student Object, Required)  
- Enrollment Date (Date)  
- Status (Picklist: Enrolled, Completed, Dropped, Waitlist)

**Relationships Between Objects**

- Course ↔ Teacher: Lookup Relationship  
- Course ↔ Batch: Master-Detail Relationship  
- Course ↔ Fees: Master-Detail Relationship  
- Batch ↔ Teacher: Lookup Relationship  
- Batch ↔ Student: Lookup Relationship  
- Fees ↔ Student: Lookup (or Text-based association)  
- Student ↔ Course: Lookup Relationship  
- Enrollment (Junction Object): Connects Students and Batches with Master-Detail Relationships

**Page Layouts**

**Course Object – Page Layout**

Sections:   
- Course Info: Course Name, Cid, Duration in Days, Course Fees  
- Course Related Info: Teacher, Batch, Fees  
  
Key Customization: Fields grouped logically, required fields enforced, and relationships clearly visible.

**Batch Object – Page Layout**

Section: Information  
- Batch Name, Batch ID, Start Date, End Date, Cid  
- Course (Lookup), Teacher (Lookup), Student (Lookup)  
  
Key Customization: Single-section layout, mandatory fields for integrity, and lookup fields for cross-object relationships.

**Teacher Object – Page Layout**

Section: Faculty Details  
- Faculty Name, Faculty ID, Department, Designation, Faculty Email  
  
Key Customization: Single clean section, mandatory fields for unique identification, and academic structuring with Department and Designation.

**Fees Object – Page Layout**

Sections:  
1. Fees Information: Course Name, Course Fees, Amount Paid, Date  
2. Associate Student: Student ID (Text or Lookup)  
  
Key Customization: Two sections for clarity, required fields for financial integrity, and ability to track payment status.

**Student Object – Page Layout**

Sections:  
1. Student Information: Student Name, Student ID, Student Email, Date of Birth, Contact Number, Address  
2. Enrollment Details: Course (Lookup), Batch (Lookup)  
  
Key Customization: Two-section layout, formula-based age calculation, and lookup relationships to Course and Batch.

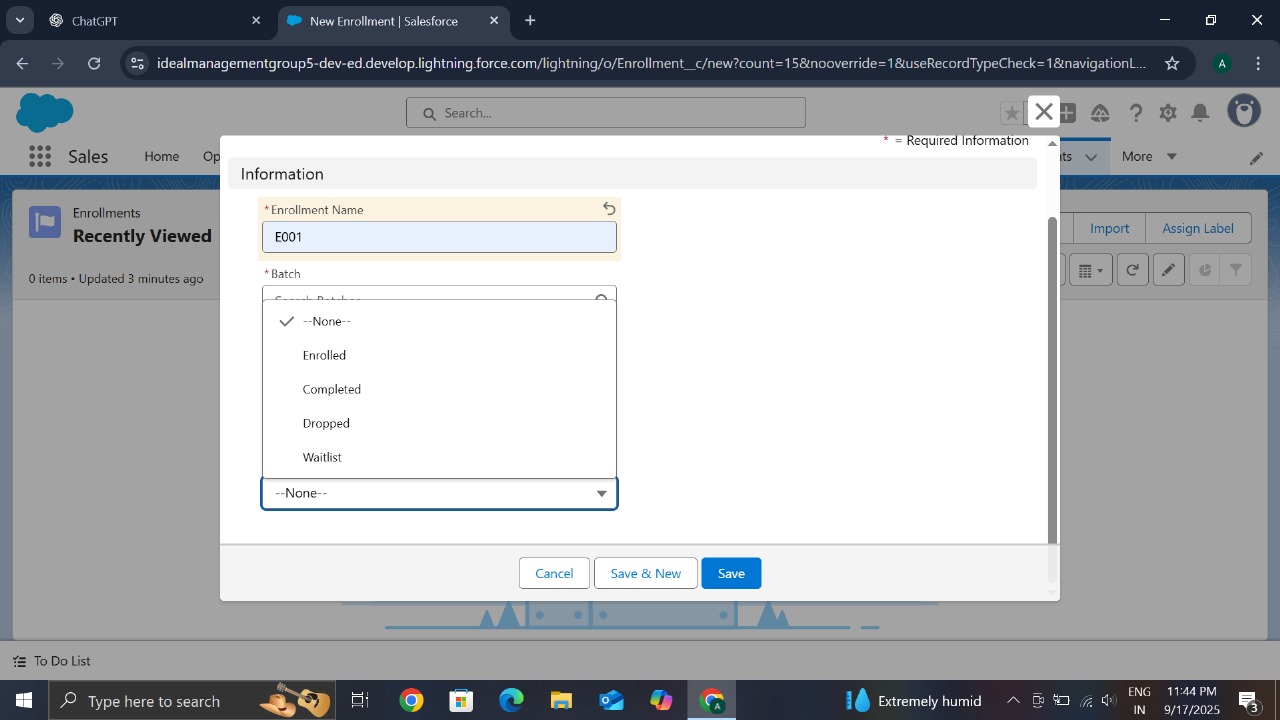
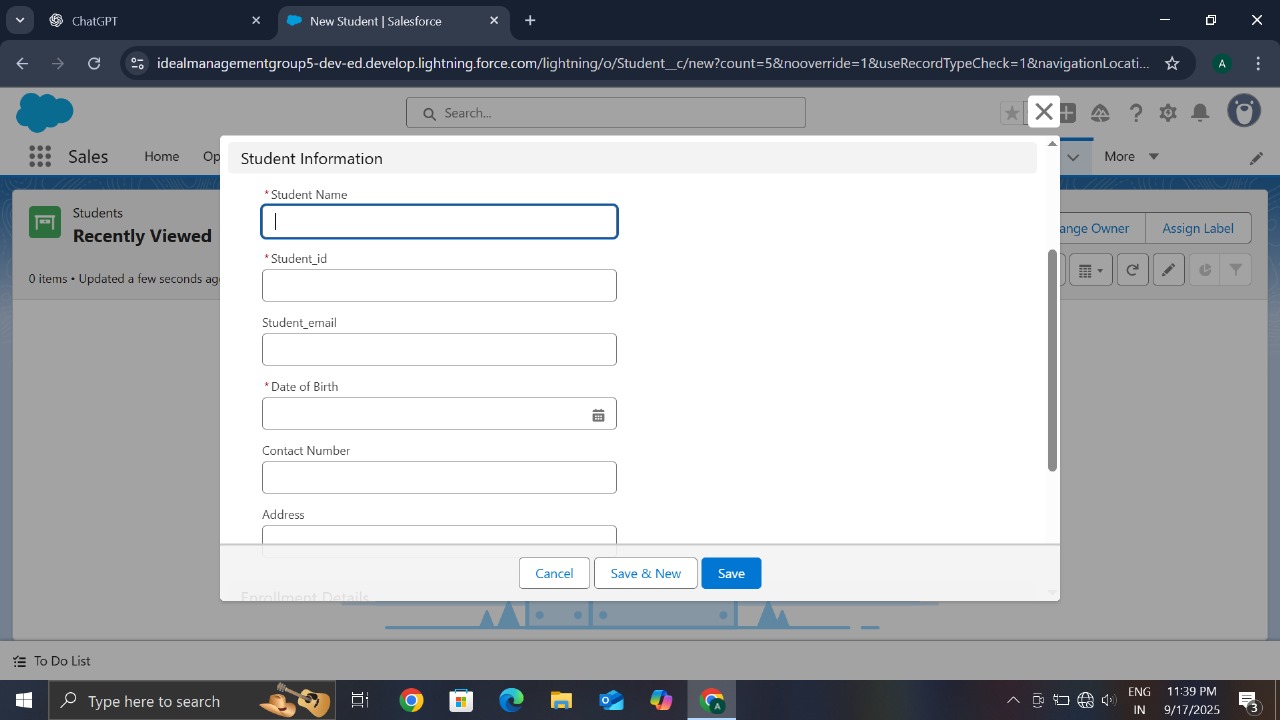
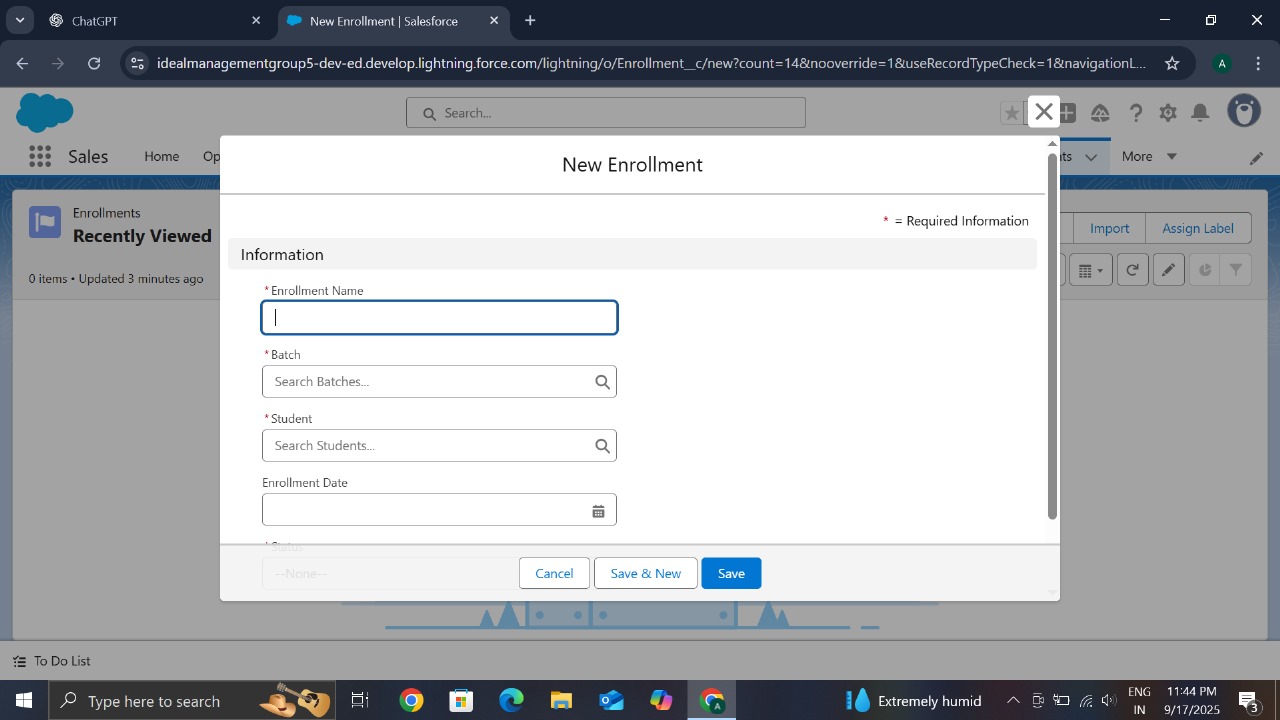
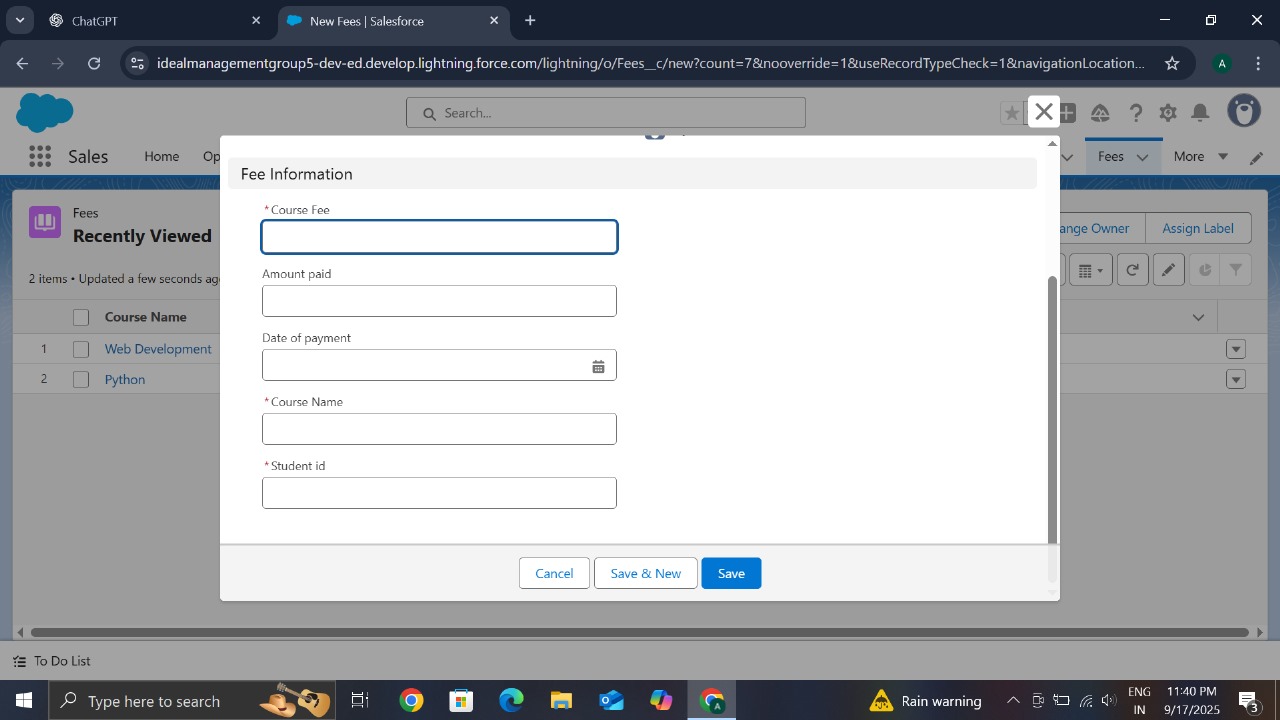
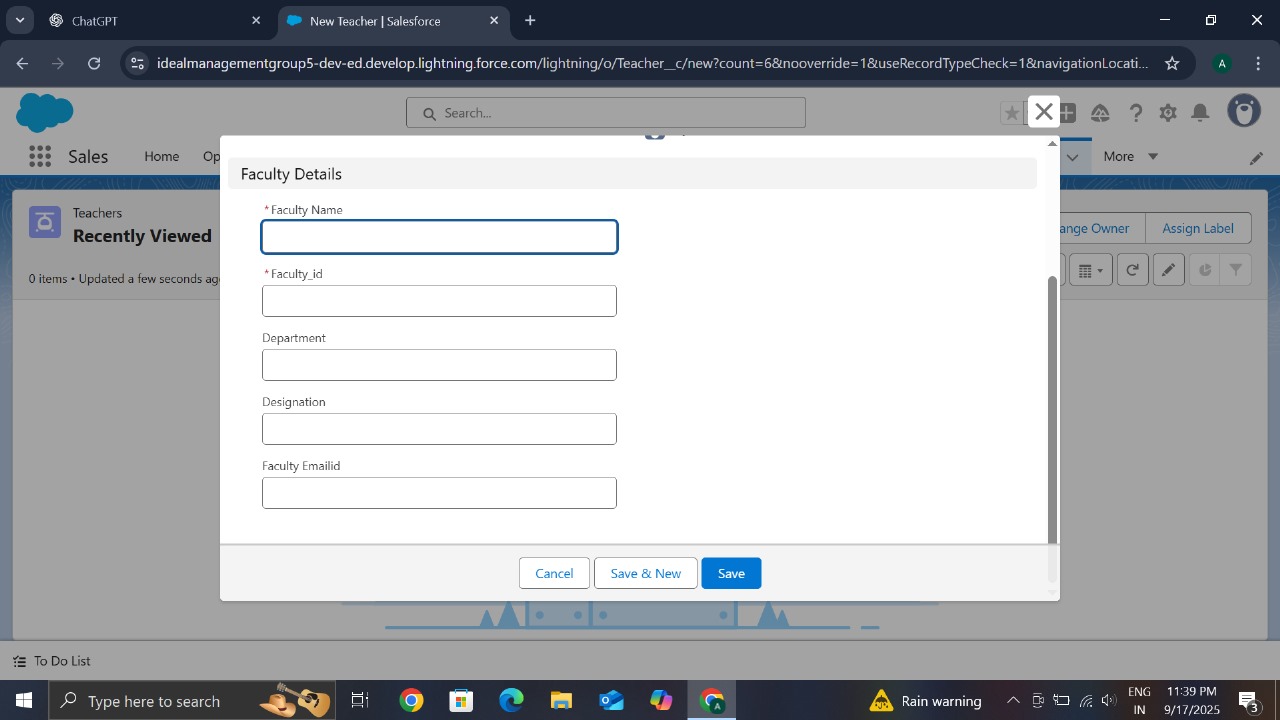
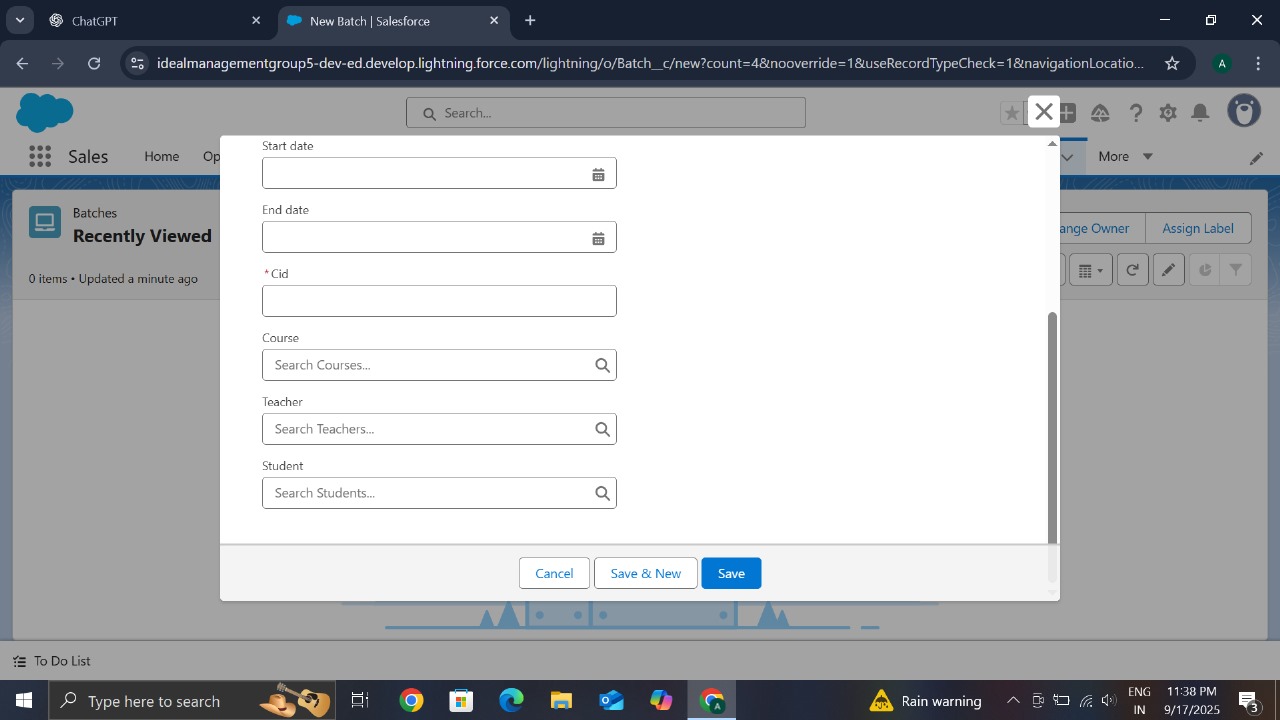
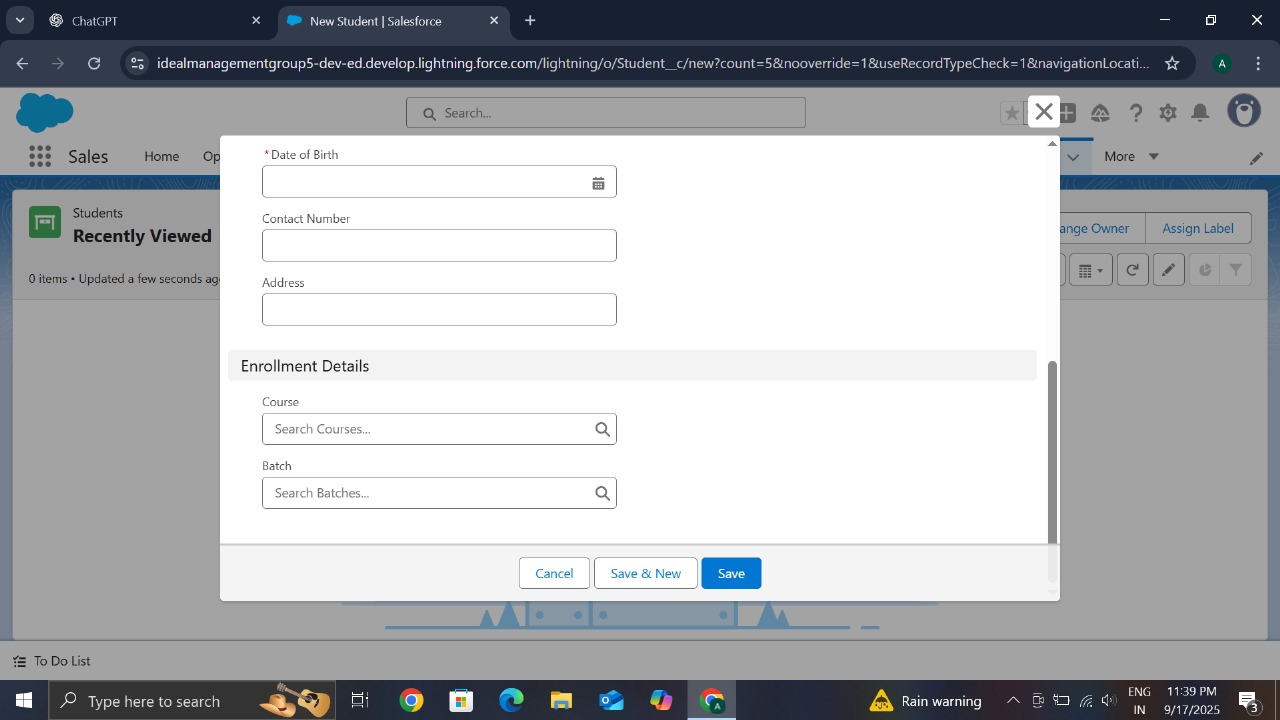
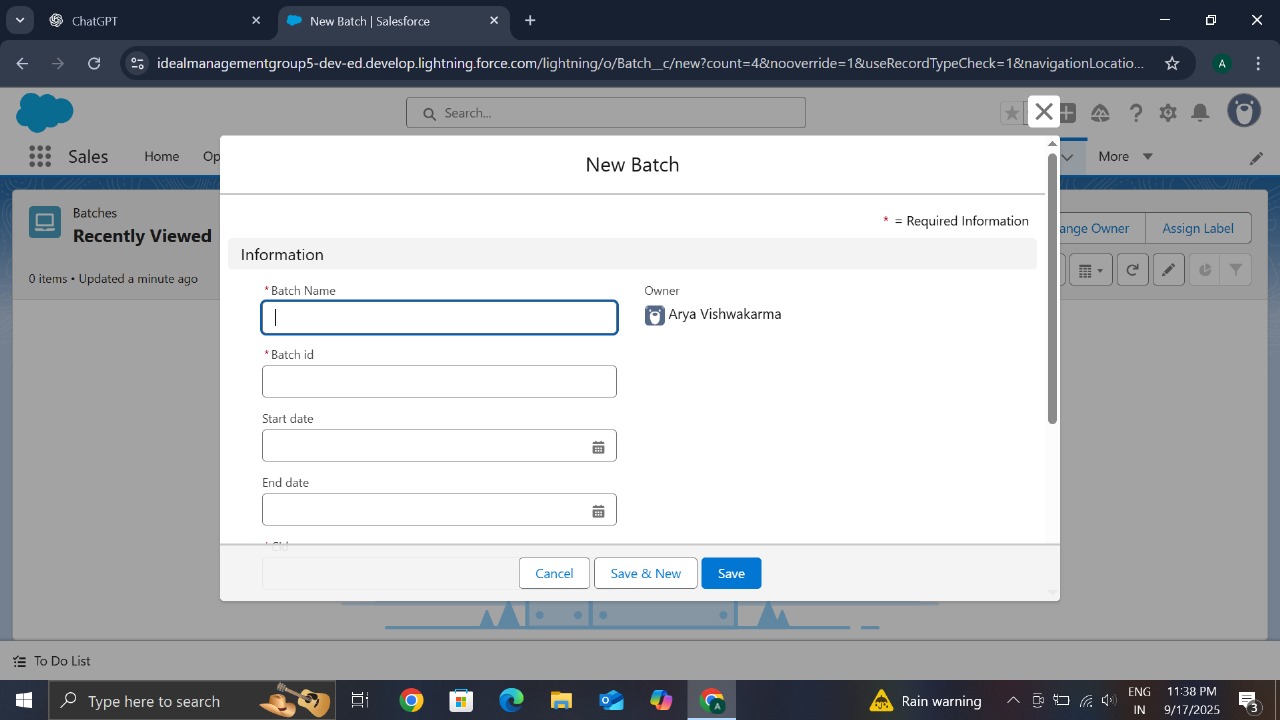
**Enrollment Object – Page Layout**

Section: Information  
- Enrollment Name, Batch (Lookup), Student (Lookup), Enrollment Date, Status (Picklist)  
  
Key Customization: Single-section layout, mandatory fields, junction object relationships to Batch and Student, and picklist for real-time status tracking.

**Conclusion**

Phase 3 successfully defined the data model for the Smart Student Enrollment and Learning Portal. By creating six custom objects, establishing relationships, and designing page layouts, a strong foundation has been built for managing student enrollments, courses, fees, teachers, and batches. This structured data model ensures seamless integration, efficient navigation, and accurate record management across the system.

**Page layout Screensshots.**

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