Institute Management System

PHASE 3: Data Modeling & Relationships

1. Standard & Custom Objects:

- Contact is used as the standard object.

Creation of the custom objects:

(Setup → Object Manager → **Create** → **Custom Object**)

Create these objects with these settings (recommended API names shown):

1. **Student** (Student__c)

   o Record Name: *Student ID* — **Auto Number** → Display format STU-{0000}; Starting Number 1001.

   o Check: Allow Reports, Allow Activities, Track Field History (optional).

2. **Faculty** (Faculty__c)

   o Record Name: *Faculty ID* — Auto Number FAC-{0000}, start 1001.

3. **Course** (Course__c)
   - Record Name: *Course Code* — Text (e.g., CSE101).

4. **Enrollment** (Enrollment__c) — **Junction object** between Student & Course
   - Record Name: *Enrollment Number* — Auto Number ENR-{0000}.

5. **Fee Payment** (Fee_Payment__c)
   - Record Name: *Payment Number* — Auto Number PAY-{0000}.

After creating each object, **create a custom tab** for it (Setup → Tabs → New → Custom Object Tab).

2 — Add custom fields (Object Manager → [Object] → Fields & Relationships → New)

Create these fields (pick types exactly):

Student (Student__c)

- Full_Name__c — Text (255) or use standard Name field.

- Email__c — Email.

- Phone__c — Phone.

- DOB__c — Date.

- Enrollment_Status__c — Picklist: *Admitted, Active, Completed, Dropped*.

- Primary_Course__c — Lookup (Course__c) — optional quick link.

Faculty (Faculty__c)

- Full_Name__c — Text (or standard Name).

- Email__c — Email.

- Phone__c — Phone.

- Department__c — Picklist: *Science, Commerce, Arts, Tech, Other*.

Course (Course__c)

- Course_Name__c — Text.

- Duration_Months__c — Number (0, no decimals).

- Credits__c — Number.

- Fees__c — Currency.

- Faculty__c — Lookup (Faculty__c).

Enrollment (Enrollment__c) — junction fields

- Student__c — **Master-Detail (Student__c)** or Lookup (see Relationship section).

- Course__c — **Master-Detail (Course__c)** or Lookup.

- Enrollment_Date__c — Date.

- Status__c — Picklist: *Active, Completed, Dropped*.

- Grade__c — Picklist: *A, B, C, D, F*.

Fee Payment (Fee_Payment__c)

- Student__c — Lookup (Student__c).

- Payment_Date__c — Date.

- Amount__c — Currency.

- Payment_Mode__c — Picklist: *Cash, Card, Online*.

- Status__c — Picklist: *Paid, Pending*.

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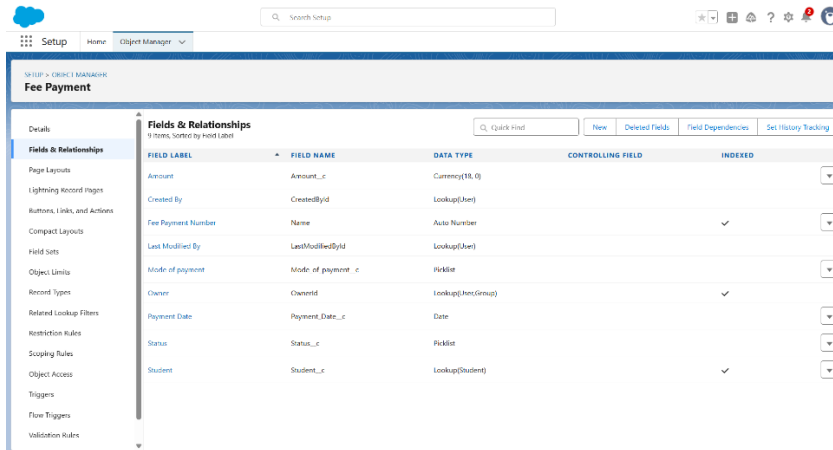
3 — Create Record Types (Setup → Object Manager → [Object] → Record Types → New)

Create record types where behavior differs:

- **Enrollment**:

  o Regular Enrollment — default page layout.

  o Audit Enrollment — different required fields or layouts.
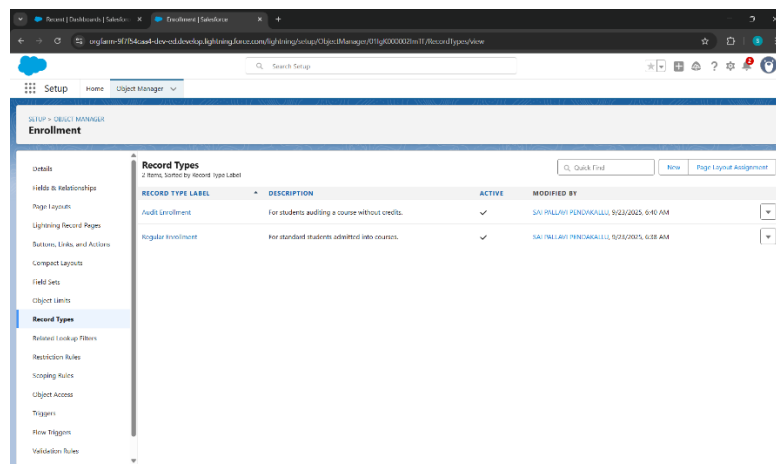
- **Fee Payment**:
  - Full Payment
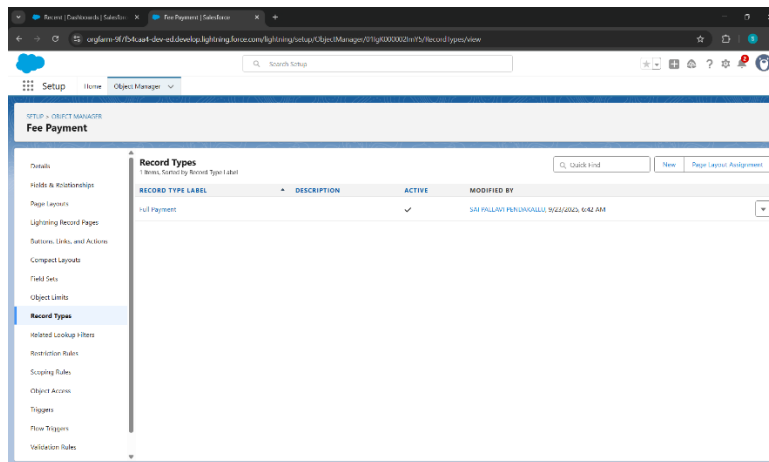
4— Page Layouts & Related Lists (Object Manager → Page Layouts)

Design UX for each object:

- **Student Page Layout**: put key fields top (Full Name, Email, DOB, Enrollment Status). Add related lists: **Enrollments**, **Fee Payments**. Place Student 360 components (if Lightning) — related records, quick actions.
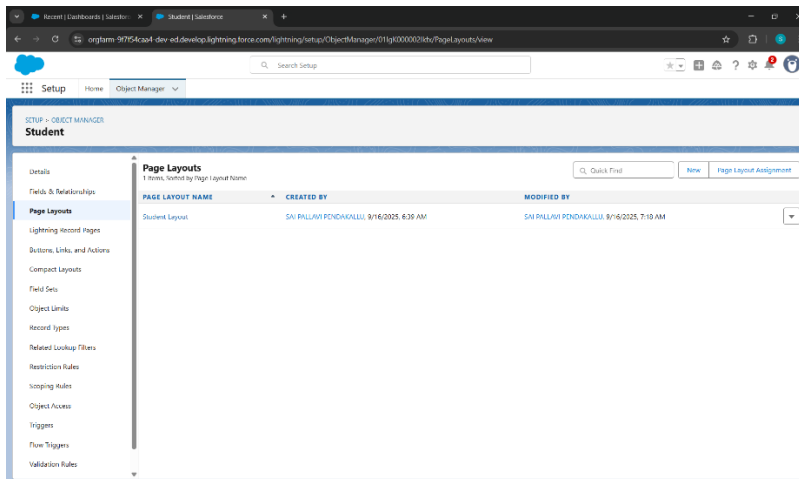
- **Course Page Layout**: Course fields + related list **Enrollments** (show Students). Show Lookup to Faculty.
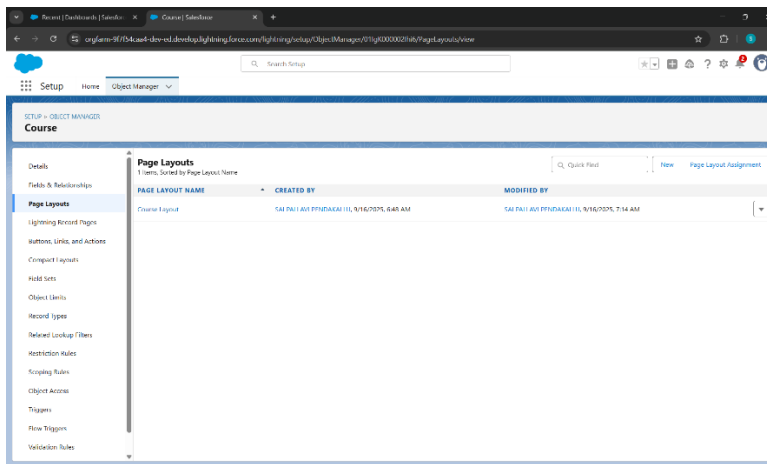
- **Enrollment Page Layout**: show Student & Course in top; Status, Enrollment Date, Grade.
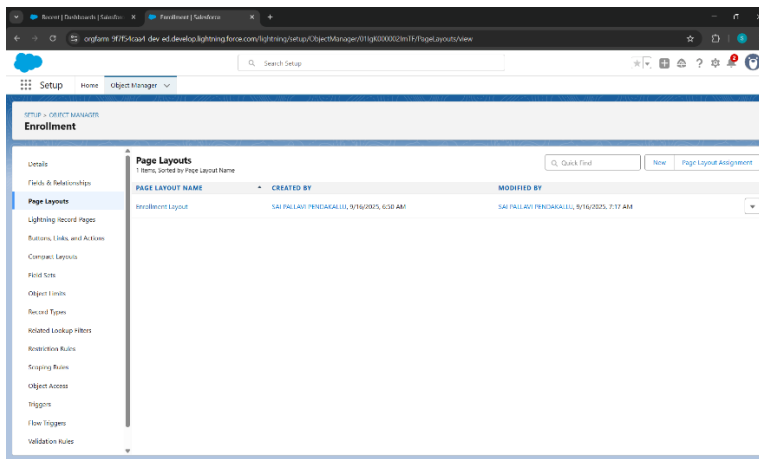
5— Compact Layouts (for mobile) (Object Manager → Compact Layouts)

Create small summaries for mobile:

- **Student Compact Layout**: Full_Name__c, Email__c, Enrollment_Status__c.

- **Course Compact Layout**: Course_Name__c, Duration_Months__c, Fees__c.

- **Fee Payment Compact**: Payment_Date__c, Amount__c, Status__c.
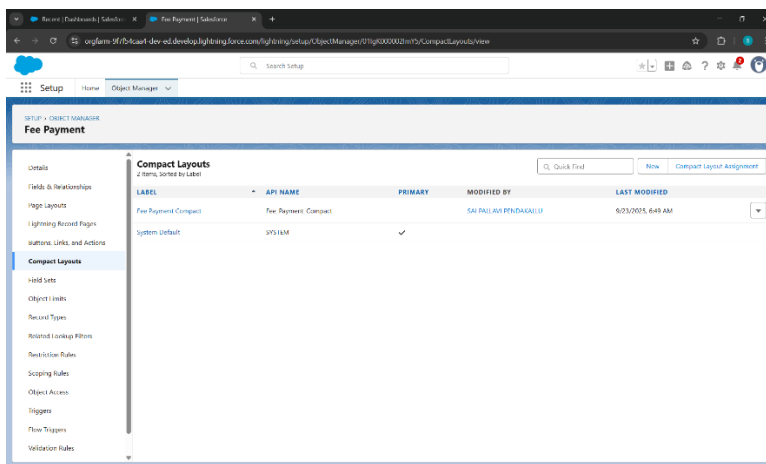
6— Schema Builder (Setup → Schema Builder)

1. Open **Schema Builder**.

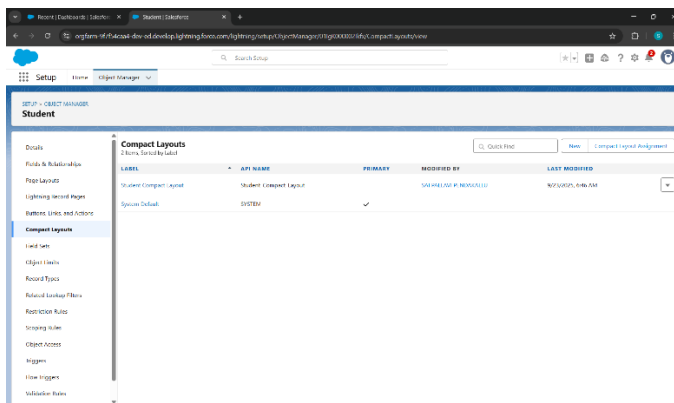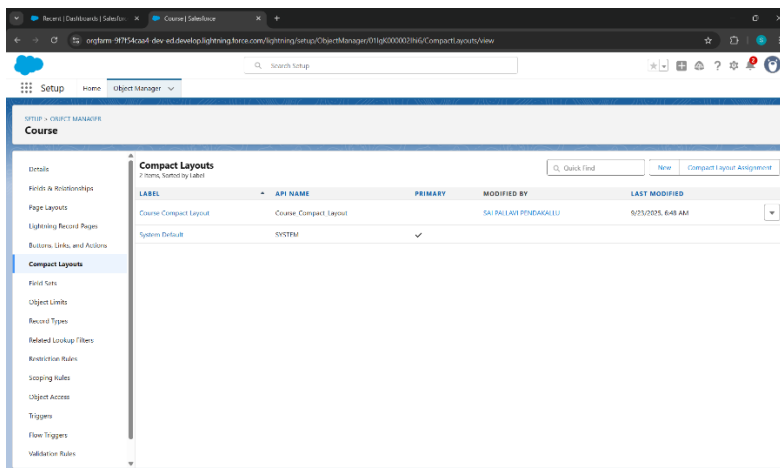2. From left pane, tick your custom objects to show them on canvas.

3. Drag fields or relationships if needed, or simply **visualize** Student ↔ Enrollment ↔ Course and Course ↔ Faculty, Student ↔ Fee Payment.

4. You can create new fields/relationships here by dragging, but I usually use Object Manager for precise control.
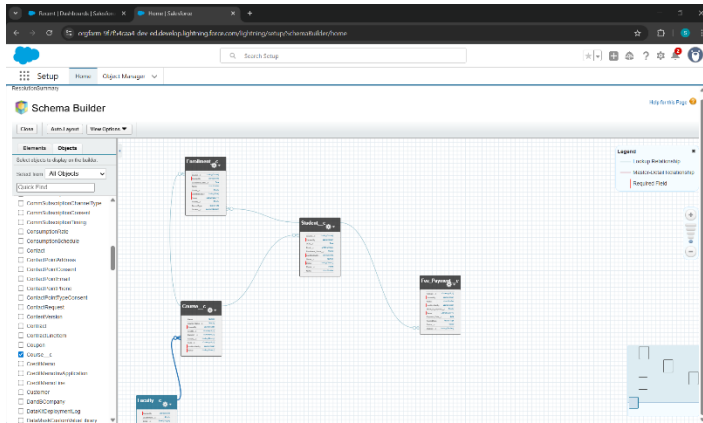
7— Tabs & Lightning App (Setup → App Manager → New Lightning App)

Tabs: (Setup → Tabs) create custom tabs for Students, Faculty, Courses, Enrollments, Fee Payments.

Lightning App:

1. Setup → App Manager → New Lightning App.

2. Name: *Institute Management System*.

3. Branding: choose color/logo.

4. Navigation Items: add the tabs you created + Reports, Dashboards.

5. Utility Bar: add **Notes**, **History**, **Chatter**, **Recent Items** (useful for IMS).

6. Assign to Profiles (Admin, Faculty, Accounts, Student). Save.