🎓 CRM Project – EdTech Student Success & Retention Platform

Phase 1: Problem Understanding & Industry Analysis

Goal: Identify the gaps in student success management and define why Salesforce CRM is needed.

- **Problem Statement:**
  Colleges struggle with high dropout rates because student progress tracking is manual, communication is weak, and career guidance is insufficient. Faculty cannot intervene early, students lack clarity, and admins lack insights.
- **Why Salesforce?**
  Salesforce Education Cloud provides customizable objects, automation tools, dashboards, and integrations (LinkedIn, LMS, SMS gateways) that can track students, detect risks early, and recommend career paths.
- **Stakeholders:**
  - Students → View grades, attendance, activities, risk alerts, career guidance.
  - Faculty → Monitor student performance, flag at-risk students.
  - Career Counselors → Provide skill-building & job market alignment.
  - Admins → Oversee retention, dropout %, placement metrics.
- **KPIs to Improve:**
  - Dropout % reduction.
  - Attendance %.
  - Average GPA trend.
  - Placement success rate.
- **Business Flow Example:**
  Student attends class → Attendance & grades updated → System calculates risk score → If below threshold, alert triggered → Faculty intervenes → Career counsellor provides guidance → Placement dashboard updated.

Phase 2: Org Setup & Configuration

Goal: Set up Salesforce environment for education workflows.

- **Profiles:**
  - Student (view own data only).

- Faculty (view/edit department students).
- Career Advisor (view/edit student career records).
- Admin (full access).

- **Roles:** University → Department → Faculty → Student**.**
- **Permissions & Sharing:**
  - Students → Private access (own data only).
  - Faculty → See only assigned department students.
  - Advisors → Access student career pathways.
  - Admins → Full visibility.
- **Settings:**
  - Fiscal Year → Academic Calendar (July–June).
  - Business Hours → 9 AM – 6 PM (for advisor follow-ups).
  - Login IP Restrictions → University network only for Admins/Faculty.

Phase 3: Data Modeling & Relationships

Goal: Build a student-centric data structure.

- **Custom Objects:**
  - Student__c → Name, Roll No, Year, Dept, Email.
  - Attendance__c → Date, % Present, linked to Student.
  - Grade__c → Subject, Semester, Marks, linked to Student.
  - Activity__c → Club, Sports, Participation Points.
  - Career_Path__c → Recommended Skills, Courses, Job Roles.
- **Relationships:**
  - Student ↔ Attendance (Master-Detail).
  - Student ↔ Grade (Master-Detail).
  - Student ↔ Activity (Lookup).
  - Student ↔ Career Path (Lookup).
- **Schema Builder Use:** Visualize entire data model.

Phase 4: Process Automation (Admin)

Goal: Automate academic tracking and risk detection.

- **Validation Rules:**
  - Grades must be 0–100.
  - Attendance % must be ≤ 100.
- **Flows:**
  - If GPA < 6 or Attendance < 60% → System flags student as "At Risk."
  - Send automated SMS/Email to student + advisor.
- **Approval Processes:**
  - If student requests grade re-evaluation → Route to faculty → Approve/Reject.
- **Tasks & Notifications:**
  - Faculty gets task → "Meet Student."
  - Student notified → "Schedule counselling session."

Phase 5: Apex Development (Developer)

Goal: Add backend logic beyond what Flows can do.

- **Triggers:**
  - On Grade Insert → Auto-calculate cumulative GPA.
  - On Attendance Update → Recalculate overall % automatically**.**
- **Batch Apex:**
  - Weekly job → Scan all students → Update "Risk Score" field.
- **Queueable Apex:**
  - Call LinkedIn API → Get skill recommendations based on student's major.
- **Scheduled Apex:**
  - Every Monday → Email advisors "Weekly At-Risk Students Report."
- **Exception Handling:**
  - Prevent system errors if API fails.

Phase 6: User Interface Development

Goal: Provide dashboards & portals for stakeholders.

- **Lightning Record Pages:**
    - Student 360 View: Attendance, Grades, Activities, Risk, Career Suggestions.
    - Faculty Dashboard: Department students, alerts, interventions.
    - Advisor Dashboard: Career suggestions, follow-up history.
- **Lightning Web Components (LWCs):**
    - Risk Indicator Gauge (Green = Safe, Yellow = At Risk, Red = Critical).
    - LinkedIn Skill Recommendation Widget.
    - Counselling Appointment Scheduler.

Phase 7: Integration & External Access

Goal: Connect Salesforce to external apps.

- LinkedIn API: Fetch trending skills, internships, certifications.
- LMS Integration (Moodle/Canvas): Sync grades & attendance.
- SMS/Email Gateway: Automated notifications.
- Google Calendar/Outlook Integration: Sync faculty-student meetings.

Phase 8: Data Management & Deployment

Goal: Manage student data & move project to production.

- Data Loader: Import existing student & grade data.
- Duplicate Rules: Prevent duplicate Roll Numbers.
- Data Export: Weekly backup for compliance.
- Change Sets: Deploy Flows, Objects, Apex from Sandbox → Production.

Phase 9: Reporting & Dashboards

Goal: Deliver actionable insights to leadership.

- **Reports:**
    - At-Risk Students by Department.

    - Attendance vs GPA correlation report.
    - Placement readiness report (skills completed vs required).
- **Dashboards:**
    - Student Risk Dashboard → Dropout Probability heatmap.
    - Faculty Dashboard → Department performance.
    - Career Dashboard → Placement rates & skills trend.

Phase 10: Final Demo & Presentation

Goal: Present working solution.

- **Demo Walkthrough:**
    - Update grades/attendance → Risk alert triggered.
    - Faculty receives task → "Meet Student."
    - Student portal shows career suggestions → Counsellor schedules meeting.
    - Admin dashboard reflects updated retention insights.
- **Pitch Line:**
  "This Salesforce CRM reduces dropout by 25% and boosts placement readiness through proactive academic monitoring, automated interventions, and AI-driven career guidance."

✅ Solution for the Problem Statement

Build a **Salesforce-based Student Success CRM** that:

1. **Centralizes Student Data**
    - One Student 360 profile with grades, attendance, activities, and risk scores.
    - Removes silos between faculty, admin, and career counsellors.
2. **Automates Early Risk Detection**
    - Flows & Apex calculate GPA and attendance automatically.
    - If GPA < threshold or attendance < 60% → Student flagged "At Risk."
    - Immediate alerts sent to student + advisor via Email/SMS.
3. **Enables Faculty & Advisor Dashboards**
    - Faculty dashboard → Class/department performance + at-risk students.
    - Advisor dashboard → Intervention history + follow-up tasks.
4. **Provides AI-Powered Career Guidance**
    - LinkedIn API integration fetches trending skills & internships.
    - Career dashboards suggest personalized learning paths.
    - Students see recommendations directly in their portal.
5. **Improves Engagement & Communication**
    - Notifications for deadlines, grade updates, counselling sessions.
    - Student portal with transparent academic & career progress.
6. **Delivers Actionable Insights to Management**
    - Reports & dashboards → Retention trends, dropout probability, placement success rate.
    - Helps leadership track institutional performance and act strategically.

How Salesforce CRM Saved a Student from Dropping Out

ABC University has been struggling with high student dropout rates. Faculty track attendance in Excel sheets, grades in separate portals, and advisors use emails for counselling. Students like Ravi Kumar, a second-year engineering student, often feel lost because there is no single place to track progress or receive timely guidance. By the time issues are identified, it's already too late.

To solve this, the university implements a Salesforce-based Student Success CRM.

Now, every student has a Student 360 profile inside Salesforce. Ravi's record shows his attendance, grades, extracurricular activities, and even his career readiness score. When Ravi's GPA drops to 5.5 and his attendance falls to 55%, the system's automation engine immediately flags him as "At Risk." Salesforce automatically sends Ravi a notification:

"⚠️ Your GPA and attendance are below university standards. Please meet your advisor."

At the same time, a task is created for his faculty advisor to schedule a counselling session. No student slips through the cracks anymore.

When Ravi meets his advisor, the Advisor Dashboard shows not only his grades and attendance but also a Career Pathway section powered by Salesforce's LinkedIn integration. Based on Ravi's department and current job market demand, it recommends Python, Data Analytics, and Machine Learning as skills to focus on. The advisor assigns Ravi an online course and updates his profile.

Behind the scenes, Salesforce runs weekly batch jobs that generate a list of all at-risk students and emails it to department heads. Dashboards show trends like:

- 📊 Which departments have the highest dropout risk.
- 🎯 How many students improved after interventions.
- 💼 Placement readiness across departments.

Students like Ravi can now log in to a student portal to see their grades, attendance, alerts, and recommended skills. Advisors and faculty see real-time dashboards, and administrators get strategic insights into retention and placements.

In just one semester, Ravi improves his GPA, attends more classes, and completes his recommended skill course. His "Risk Status" turns green on the dashboard. The university leadership can confidently say:

"With Salesforce CRM, we reduced dropout risks, improved career readiness, and created a proactive student success culture."