**Smart Campus Management System – Full Explanation**

**Phase 1:** **Problem Understanding & Industry Analysis**

**Goal:** **Understand what we are building and why**.

1. **Requirement Gathering:**

* Talk to stakeholders (Campus Admin, Faculty, Students, Resource Manager).

Example requirements:

* Automatically capture student admission data.
* Assign academic advisors based on department.
* Manage faculty schedules and course registrations.
* Track resource availability (labs, classrooms, library books).
* Send notifications about schedules and approvals.
* Real-time dashboards for academic performance and resource usage.

1. **Stakeholder Analysis:**

* **Campus Admin** → System setup and overall management.
* **Faculty** → Manage schedules, approve leave, and view students.
* **Students** → View schedule, apply for leave, track attendance.
* **Resource Manager** → Manage labs, classrooms, and equipment availability.

1. **Business Process Mapping:**

Flow example:

1. Student applies for course →
2. Advisor assigns course →
3. Faculty schedules class →
4. Lab resources are assigned →
5. Student receives confirmation (SMS/Email).
6. **Industry-specific Use Case Analysis:**
   1. Course schedules change frequently.
   2. Resource availability is critical for labs & libraries.
   3. Need approval workflows for exceptions (e.g., course overload).
7. **AppExchange Exploration:**

* Searched “Education CRM” apps.
* Found generic solutions, but we build a custom one to meet our use cases and learn deeply.