Campus Event Management Platform - Design Document

This document provides the design for a Campus Event Management Platform. The system will allow college staff (Admins) to create and manage events, while students can register, attend, and provide feedback. The goal is to implement a prototype that is simple yet practical, covering event creation, student participation, attendance tracking, and reporting.

Assumptions

1. Each college can host multiple events. 2. Students can register for multiple events. 3. Event IDs are unique within a college. 4. Attendance can only be marked once per student per event. 5. Feedback is optional but encouraged after an event.

Data to Track

- Event creation details (title, type, date, college). - Student registration for events. - Attendance marking for registered students. - Feedback (rating 1–5) from students.

Database Schema

Table	Fields
College	college_id (PK), name
Event	event_id (PK), college_id (FK), title, type, date
Student	student_id (PK), name, email, college_id (FK)
Registration	reg_id (PK), student_id (FK), event_id (FK), timestamp
Attendance	att_id (PK), student_id (FK), event_id (FK), status
Feedback	feedback_id (PK), student_id (FK), event_id (FK), rating

API Design

1. POST /events → Create a new event 2. GET /events → List all events 3. POST /register → Register a student to an event 4. POST /attendance → Mark attendance for a student 5. POST /feedback → Submit feedback (rating 1–5) 6. GET /reports/events → Get total registrations per event 7. GET /reports/students → Get participation count per student 8. GET /reports/top-students → Get top 3 active students

Workflows

1. Admin creates an event → Event stored in database. 2. Student registers for the event → Registration entry created. 3. Student attends the event → Attendance marked. 4. Student submits feedback → Feedback stored. 5. Admin generates reports → Queries summarize data (registrations, attendance %, feedback).

Assumptions & Edge Cases

- Duplicate registrations should not be allowed. - Events may be cancelled; registrations should be handled accordingly. - Missing feedback is acceptable and should not break reports. - Attendance cannot be marked for unregistered students.

This design balances simplicity and functionality. It ensures event management, participation tracking, and reporting are clear and achievable within a prototype implementation.