🚀 Hackathon Problem Statement: ACES Centralized Platform

📌 Problem Statement:

The **Association of Computer Engineering Students (ACES)** at our college currently lacks a **centralized digital platform** to efficiently manage its members, events, and communication. Event planning, student directory management, real-time announcements, and budget tracking are currently unstructured and inefficient.

Your task is to **develop a web-based platform** that will help ACES:

- ✅ **Manage committee members and student directory**
- ✅ **Plan, track, and manage department events**
- ✅ **Send real-time announcements and notifications**
- ✅ **Track budgets and expenses for events**

🎯 Key Features & Functionalities

🔹 1.Member & Student Directory

- Add, update, and remove **ACES committee members** with their roles and photos.
- Maintain a **student directory** for all Computer Department students.
- Implement search and filter options based on **year, skills, or name**.

🔹 2. Event Management & Registration

- Create, update, and track department events (Hackathons, Seminars, Tech Talks).
- Provide an **event registration system** for students.
- Implement **QR-based check-in** for event attendance tracking.

🔹 3. Real-time Announcements & Notifications

- Develop a **real-time announcement system** for ACES updates.
- Enable instant notifications for event updates and deadlines.
- Implement a centralized dashboard for quick access to announcements.

🔹 4.Budget & Expense Tracking

- Design a **budget planning module** for ACES events.
- Implement a **real-time expense tracker** with data visualization.
- Generate **budget reports and insights** to track expenses.

🛠 Technology Stack

Participants can use any of the following tech stacks:

- **Frontend:** React.js / Angular / HTML, CSS, Bootstrap
- **Backend:** Java (Spring Boot) / Python (Django) / Node.js (Express.js)
- **Database:** MySQL / PostgreSQL / MongoDB
- **Authentication:** JWT (JSON Web Tokens) / OAuth
- **Real-time Features:** WebSockets / Firebase

🏆 Hackathon Challenge Details

- 👷 **Team Size:** 4 Members
- ⏳ **Duration:** 5 Hours
- 🎯 **Goal:** Build a **functional prototype** with core features.

📌 Evaluation Criteria (5 Stages)

The projects will be evaluated in five stages, each contributing to the final score.

🔹 **Stage 1: Project Completion (20%)**

✅ Are all the core features implemented as per the problem statement?

✅ Does the platform function correctly without major bugs?

🔹 **Stage 2: User Interface & Experience (20%)**

✅ Is the UI well-designed, responsive, and easy to navigate?

✅ Does the platform provide a smooth user experience?

🔹 **Stage 3: Code Quality & Performance (20%)**

✅ Is the code well-structured, clean, and maintainable?

✅ Does the platform run efficiently without performance issues?

🔹 **Stage 4: Innovation & Additional Features (20%)**

✅ Have the participants introduced unique or creative enhancements?

✅ Are there any extra features beyond the given requirements?

🔹 **Stage 5: Presentation & Explanation (20%)**

✅ Can the team clearly explain their project, features, and logic?

✅ Is the demonstration well-structured and convincing?

Teams scoring the highest across all five stages will be declared the winners. 🚀🔥

🎯 Expected Outcome

By the end of the hackathon, each team should have:

✅ A **working prototype** of the ACES Centralized Platform.
✅ A **functional student & committee directory** with event management.
✅ A **real-time announcement and notification system**.
✅ A **budget tracking system** with expense reports.

📢 **Bonus Challenge:**
Teams that integrate **AI-powered event recommendations, analytics, or social media sharing** will receive extra points!

🚀 **Are you ready to build the future of ACES? Let's innovate and code!** 💻🔥