Timetable Buddy: Lecture & Classroom Booking System

2.1 Project Title

Timetable Buddy: A Smart Lecture Seat Reservation System

2.2 Problem Statement

In most educational institutions, students attend lectures without any structured tracking of seat usage or classroom occupancy. This often leads to overcrowding in some sessions, underutilization in others, and zero visibility for administrators. Traditional timetable systems do not allow students to plan, reserve, or manage their lecture attendance digitally. A modern system is needed that mirrors real-world booking platforms (like BookMyShow) but is adapted for institutional timetabling and seat management.

2.3 Project Objectives / Goals

- Enable students to view lectures (as events) and reserve classroom seats in advance.
- Allow teachers to manage lecture schedules and assign classrooms.
- Offer role-based access for students, teachers, and admins.
- Automatically track classroom occupancy to avoid clashes or overbooking.
- Generate reports for classroom utilization and student participation.

2.4 Scope of the Project

In Scope:

- Web-based portal with login system for students, teachers, and admins.
- Viewing and booking of lectures based on timetable.
- Admin panel for managing classrooms, users, and lecture scheduling.
- Teacher dashboard to add/manage lectures.

Out of Scope:

- Integration with biometric attendance systems.
- Mobile app version.
- Payment gateway (since it's not a ticketing platform for money).
- Complex timetable conflict resolution (basic conflict warnings only).

2.5 Target Users / Stakeholders

- Students – who book seats and attend lectures.
- Teachers – who manage and schedule lectures.
- Academic Admins – who manage classrooms, track booking stats.
- Institutions – to monitor room usage and avoid overcrowding.

2.6 Project Justification

The proposed system enhances classroom management by bringing clarity to lecture schedules and attendance. It helps avoid overcrowded classrooms and unused resources by allowing students to reserve seats ahead of time. Inspired by familiar platforms like BookMyShow, it adopts a modern approach to an age-old educational problem using web technologies. It is technically feasible with Django and SQLite/PostgreSQL and beneficial for both students and administration.

2.7 Tools and Technologies (Tentative)

Layer	Technology
Frontend	Django Templates + HTML, CSS, JavaScript
Backend	Django (Python-based Full Stack Framework)
Database	SQLite (initial), PostgreSQL (optional for production)
Authentication	Django's built-in auth system
Deployment	PythonAnywhere / Render / Heroku (TBD)

2.8 Timeline and Milestones (Tentative)

Week(s)	Milestone
1	Project selection and domain finalization
2–3	Requirement gathering and model/database design
4–5	UI Design (lecture list, seat selection)
6–7	Student and teacher modules (view, book, manage)

8–9	Admin panel and classroom management
10	Booking confirmation, final testing, bug fixes
11–12	Final presentation and report submission

Team Members

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