Project Synopsis/Project Concept Document

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Project Title	Exam Time Table Generator
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Description

Our team has been assigned the task to automate the process of Exam Time Table generation followed by its respective Seating arrangement and Invigilation roster for Mid-Semester and End-Semester using an optimized algorithm and a user interface for the Examination Cell of IIITH. We are to design this algorithm by extracting Course Codes, Students enrolled in each course, current classes schedule, room seating data, faculty and their email-ids and the courses they teach from the database through APIs and generating the most suitable examination timetable for the students based on certain conditions that we should minimize the number of students having consecutive slots, evenly distribute examinations over the specified slots for examination and generate statistics on how many exams are being held on a specific day, specific slot, number of students writing in that slot and roll numbers of students who have consecutive exam slots. The final timetable, seating and invigilation duty is to be generated as an Excel and PDF document.

Profile of Users

Users of this system as described above would only be the Examination Cell of IIIT Hyderabad and the Academic Office should also be given access. The Exam Cell staff would be able to navigate through our user interface with ease as the process of timetable generation is automated.

Usage Model

The Exam Cell Staff will have to initially login to access the system's main page through CAS authentication and fill in certain inputs to generate the timetable for the upcoming examination. The inputs would include –
1. Select Exam Type – Mid-Semester, End-Semester
2. Dates of the Examinations (Select the dates from calendar)
3. Select Time Slots, Number of Slots per day
4. Select Courses for which exam is to be held

On clicking the Generate Timetable(button), the timetable is shown on the webpage from where it can be edited as well and then saved to download in Excel or be downloaded as

PDF. On the basis of the chosen timetable, Seating Plan is then generated followed by Invigilation Duty Roster. Automatic reminder mails to faculty and staff on duty would be sent a day before their duty.