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ENIGMA Challenge: Problem Statement – Online Tutoring Web Application

In the inaugural ENIGMA challenge, participants are invited to develop a sophisticated web application for **One-to-One** online tutoring. The platform is designed to streamline the management of classes conducted through Google Meet, with a focus on user-friendly functionalities and seamless interaction between the stakeholders.

FUNCTIONAL REQUIREMENTS:

REQ_001_Login:

- The application shall enable students to view and join their class details effortlessly.
- The application shall facilitate tutors in accessing their class information and initiating classes.

REQ_002_Class Scheduler:

- Allow scheduling of classes based on uploaded timetables in various formats (for example, .doc, .pdf, .xls, .csv, etc.)
- Provide an interface for students and tutors to specify their preferred time slots and facilitate the scheduling process.
- Automatically send the class calendar to students and tutors, updating the database with the scheduled classes.

REQ_003_Attendance Capturing:

- Implement a feature to capture and record attendance for each class session.
- Ensure that attendance data is securely stored in the database for future reference.

REQ_004_Data Management:

- Implement a robust database system to store all events, including class schedules and attendance records, ensuring a foundation for future report generation.

REQ_005_Alert System:

- Notify students about class start times.
- Send timely alerts to tutors regarding upcoming classes.
- Provide progress reports on classes held, details of invoices, and attendance records to the parents.

REQ_006_Document Upload:

- Create an interface for uploading assignments and tutoring materials.
- Notify students once documents are uploaded and ensure capturing of this information in the database.

REQ_007_NLP Chatbot:

- Implement NLP capabilities for students to request class timetables, cancel classes, and inquire about class schedules.
- Enable NLP for tutors to request class timetables, cancel classes, and obtain class schedules.

REQ_008_Report Generation:

- Develop functionality for generating comprehensive reports, including attendance records, progress reports, and other relevant metrics.
- Ensure that the reports are accessible to all stakeholders as needed.

Evaluation Criteria:

Participants will be evaluated based on the efficiency, innovation, and user experience of their online tutoring web application. The judging panel will consider the successful implementation of login functionalities, the effectiveness of the class scheduling system, robust data management, reliability of the alert system, seamless document upload, attendance capturing capabilities, and the integration of NLP chatbot functionalities. Additionally, the ability to generate comprehensive reports will be a crucial factor in the evaluation.

NOTE:

1. Participants are encouraged to think creatively and design a solution that not only meets the specified requirements but also enhances the overall online tutoring experience.
2. Since majority of the requirements and the problem statement is revealed earlier, participants can come prepared for the event and are allowed to use any assistance from ChatGPT, Google or YouTube videos. However, you will be given few more requirements to implement during the event day. Those who complete all the requirements efficiently have the greater chance of winning the challenge.

Good Luck.....May the best solution emerge triumphant in the ENIGMA challenge.