Offline Interview Assignment

Develop backend APIs with one automated test case for a college appointment system that allows students to book appointments with professors. The system should enable professors to specify their availability, manage bookings, and allow students to authenticate, view available slots, and book appointments.

Requirements

Develop only the APIs and 1 E2E automated test case needed to enable the following user flow:

1. Student A1 authenticates to access the system.
2. Professor P1 authenticates to access the system.
3. Professor P1 specifies which time slots he is free for appointments.
4. Student A1 views available time slots for Professor P1.
5. Student A1 books an appointment with Professor P1 for time T1.
6. Student A2 authenticates to access the system.
7. Student A2 books an appointment with Professor P1 for time T2.
8. Professor P1 cancels the appointment with Student A1.
9. Student A1 checks their appointments and realizes they do not have any pending appointments.

Database Requirements

- Use a database to store data related to users (students and professors), their availability, and appointment details.
- Ensure that the database schema supports necessary relationships (e.g., between users and appointments) and maintains data integrity.

Deliverables

1. Source Code: Submit your code for the API implementation in a Git repository or as a zip file.
2. Automated Test Cases: Write end-to-end (E2E) automated tests to validate the user flow described above.
3. Video Demonstration:
    - A video showing the automated test case running, clearly indicating which steps have passed.
    - A second video explaining the main codebase, database structure, and automated test case.

- A third video demonstrating the user flow manually through Postman, showcasing the input and output of each API.

4.

Submission Instructions

- Send all three videos to krishna@unque.me

Evaluation Criteria

Your submission will be evaluated based on:

- Functionality: Do the APIs work as intended? Are they able to handle all specified scenarios?
- Code Quality: Is your code clean, well-organized, and properly documented? Are best practices followed?
- Clarity of Videos: Are your demonstration and explanation videos clear and informative?

Important Note

Please ensure that you complete this assignment independently. Do not use AI tools like GPT or seek assistance from others, as we have mechanisms in place to detect such usage. Submissions found to be assisted by external tools or individuals will not be accepted.

Additional Notes

- Ensure thorough testing of your APIs before submission.
- Use any language for coding, any test framework for automation that you feel is right
- If any of this is new to you, here are the full URLs for the recommended videos on API development, automation for APIs, and using Postman:
    1. API Development: APIs for Beginners 2023 - How to use an API (Full Course / Tutorial)
    2. Automation for API Tutorial: https://www.youtube.com/watch?v=YQrhUfFqsB0
    3. Using Postman: Using Postman to Explore APIs
- Submit within a week once you see this document
- Feel free to reach out if you have any questions or need clarification on any part of this assignment.

Good luck, and we look forward to seeing your work!