

Lecture 6- Back-end Development Practice Questions

1. What is the primary role of the backend in the Hostel Booking App, and how does it interact with the front end?
2. Recall the key components of a Node.js-based backend in the context of the Hostel Booking System.
3. List the HTTP methods commonly used in RESTful API development and explain their purposes.
4. Explain the concept of API endpoints and their significance in the Hostel Booking App's backend.
5. Describe the database structure required for storing user registration data in the Hostel Booking System's backend.
6. Explain the importance of data validation and sanitisation in backend development for user security.
7. Create a sample RESTful API endpoint for searching hostels in the Hostel Booking System. Include the HTTP method and URL structure.
8. Develop a database schema for storing hostel information, user data, and bookings in the backend of the Hostel Booking App.
9. Write a Node.js function that authenticates a user based on a provided JWT token in the backend.
10. Analyze the benefits and challenges of using a NoSQL database (e.g., MongoDB) in the backend of the Hostel Booking System compared to a traditional relational database.
11. Evaluate potential security vulnerabilities in the backend of the Hostel Booking App and propose mitigation strategies.
12. Compare and contrast the responsibilities of the front-end and back-end in managing user authentication and authorisation.
13. Assess the scalability challenges the Hostel Booking System's backend might face as the user base grows. Provide strategies to address these challenges.
14. Evaluate the trade-offs between implementing synchronous and asynchronous processing in the backend of the Hostel Booking App, considering performance and user experience.
15. Critically analyze the choice of technology stack (e.g., Node.js, Express.js) for the backend development of the Hostel Booking System, explaining why these technologies were chosen.
16. Design a high-level architecture diagram for the backend of the Hostel Booking App, illustrating the interaction between components.
17. Develop a RESTful API specification for creating and managing user bookings in the Hostel Booking System's backend, including request parameters and responses.
18. Create a comprehensive plan for securing the backend of the Hostel Booking App, including authentication, authorization, and data encryption.