

Practice Questions for Lecture 3: MVC Design Principles

1. Principles of the MVC Architectural Pattern

- a) Explain the fundamental principles of the MVC (Model-View-Controller) architectural pattern.
- b) Provide examples from the Hostel Booking System illustrating how each component (Model, View, Controller) contributes to the separation of concerns and modularity.

2. Implementing MVC in Web Applications

- a) Discuss how the MVC pattern is implemented in the front-end of the Hostel Booking System using a JavaScript framework (e.g., React).
- b) Provide a code snippet that demonstrates the interaction between the Model, View, and Controller in a specific feature of the application.

3. Role of Model, View, and Controller in Hostel Booking System:

- a) Break down the responsibilities of the Model, View, and Controller components in the Hostel Booking System.
- b) Illustrate with specific features, explaining how each component handles its designated role in maintaining data, presenting the user interface, and managing user interactions.

4. Benefits and Challenges of MVC in Hostel Booking System

- a) Enumerate three benefits and two challenges associated with employing the MVC architecture in the Hostel Booking System.
- b) Provide insights into how these benefits enhance maintainability, scalability, and code organization, while addressing challenges effectively.