

40 Lecture - CS506

Important Subjective

Certainly, here are 10 short-answer subjective questions related to Model 2 Architecture (MVC) along with their answers:

****Question 1:**** What is the core principle behind Model 2 Architecture (MVC)?

****Answer:**** Model 2 Architecture separates an application into three components: Model (data and logic), View (presentation), and Controller (interaction and flow). This separation improves code organization and maintainability.

****Question 2:**** How does the Model component contribute to the MVC pattern?

****Answer:**** The Model represents data and business logic. It handles data processing, storage, and retrieval, ensuring separation from the user interface and promoting data integrity.

****Question 3:**** Explain the role of the View in Model 2 Architecture.

****Answer:**** The View is responsible for rendering data and presenting it to users. It formats the data into a visually understandable format, forming the user interface.

****Question 4:**** What functions does the Controller serve in Model 2 Architecture?

****Answer:**** The Controller manages user interactions and application flow. It receives input from users, processes it, interacts with the Model, and updates the View accordingly.

****Question 5:**** How does Model 2 Architecture promote code modularity?

****Answer:** Model 2 Architecture divides responsibilities into distinct components (Model, View, Controller). This separation allows for focused development, easier testing, and reduces code entanglement.**

****Question 6:** Provide an example scenario where the Model in Model 2 Architecture could be used effectively.**

****Answer:** For instance, in an e-commerce application, the Model would manage product information, inventory, and transactions.**

****Question 7:** Explain the significance of the Controller component in Model 2 Architecture.**

****Answer:** The Controller ensures that user inputs are appropriately processed, interacts with the Model to retrieve or modify data, and coordinates with the View for rendering.**

****Question 8:** How does Model 2 Architecture aid in maintaining large-scale applications?**

****Answer:** Model 2 Architecture enables parallel development and collaboration among teams. Developers can focus on specific components without affecting others, leading to efficient development and maintenance.**

****Question 9:** Illustrate how Model 2 Architecture enhances user experience.**

****Answer:** By separating concerns, Model 2 Architecture ensures that UI changes (View) don't disrupt data handling (Model), providing a consistent and smooth user experience.**

****Question 10:** In what ways does Model 2 Architecture contribute to software longevity?**

****Answer:** Model 2 Architecture's separation of concerns and modular design simplifies updates and maintenance. Changes in one component don't ripple through the entire application, extending its lifespan.**