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.**