

# 24 Lecture - CS504

## Important Subjective

**Q: What are architectural models in software engineering?** **A:** Architectural models represent visual abstractions of a software system's structure and behavior, aiding in understanding and communication.

**Q: What is the purpose of using architectural models in software development?** **A:** The primary purpose is to provide a clear and concise representation of the system, facilitating effective communication among stakeholders.

**Q: How does the structural model differ from the behavioral model in architectural modeling?** **A:** The structural model focuses on the organization and relationships of system components, while the behavioral model depicts their interactions and dynamic behavior.

**Q: What does the deployment model in architectural modeling emphasize?** **A:** The deployment model focuses on the distribution of software components across hardware nodes, addressing concerns related to performance and scalability.

**Q: How do architectural models benefit software development teams?** **A:** Architectural models promote a shared understanding of the system's design, aiding in decision-making and ensuring design consistency.

**Q: Which architectural model represents the flow of data and control between system components?** **A:** The behavioral model illustrates the dynamic interactions and behavior of system components during runtime.

**Q: What is the key objective of the functional model in architectural modeling?** **A:** The functional model emphasizes the system's functionalities and use cases, capturing high-level requirements and user interactions.

**Q: How does the deployment model contribute to addressing non-functional requirements?** **A:** The deployment model helps in understanding the system's physical arrangement, supporting the analysis and optimization of non-functional aspects.

**Q: Which architectural model provides insights into the system's performance and scalability?** **A:** The deployment model illustrates the distribution of software components across hardware nodes, assisting in evaluating system performance.

**Q: How do architectural models aid in addressing design trade-offs during software development?** **A:** Architectural models enable visualizing different design alternatives and their implications, helping in making informed decisions based on trade-offs.