## 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 decisionmaking 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 nonfunctional 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.