

22 Lecture - CS504

Important Subjective

Q: What is software architecture? **A:** Software architecture refers to the high-level design and organization of a software application, defining its components and interactions. **Q: What are the key goals of software architecture?** **A:** The primary goals of software architecture are scalability, maintainability, reliability, and performance. **Q: What is microservices architecture?** **A:** Microservices architecture is an architectural style where a system is divided into smaller, independent services, each running in its own process. **Q: How does microservices architecture differ from monolithic architecture?** **A:** Monolithic architecture involves a single, self-contained application, while microservices architecture breaks the system into independent services. **Q: What are the advantages of using microservices architecture?** **A:** Advantages include better scalability, flexibility, easier maintenance, and the ability to deploy and update individual services independently. **Q: Define system architecture.** **A:** System architecture refers to the high-level design and organization of an entire system, including hardware and software components. **Q: What is the role of system architecture in a project?** **A:** System architecture defines the structure and interactions of all components, ensuring seamless integration and meeting project requirements. **Q: What is component-based architecture?** **A:** Component-based architecture involves breaking down a system into reusable and interchangeable components, promoting modularity and reusability. **Q: How does component-based architecture facilitate software development?** **A:** Component-based architecture allows developers to focus on individual components, leading to faster development and easier maintenance. **Q: What are the key considerations in designing a system architecture?** **A:** Key considerations include scalability, performance, security, modularity, and the ability to accommodate future changes and enhancements.