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***Activity 1***

1. Define integrative programming?

Integrative programming is like putting together a puzzle. It's about making different pieces of software work together smoothly. This helps create a complete and efficient program that can do specific tasks well.

2. Explain the architectures used in application integration?

Application integration architectures are like different ways to help software programs talk and work together smoothly. They come in styles like point-to-point, hub and spoke, message broker, SOA, microservices, event-driven, API-led, data integration, batch integration, and cloud-based methods.

3. Describe interoperability?

Interoperability is like making sure different computer systems can communicate and connect to each other without any trouble, even if they were made by different companies in different fields.

4. What are the challenges in application integration? Describe the solutions to overcome the challenges?

System performance and risk and security assessment are challenging aspects of application integration. We must optimize code, employ monitoring tools, carry out load testing, and scale resources appropriately in order to address these challenges. This guarantees effective handling of user requests. To effectively address vulnerabilities, carry out security audits, enact strict access rules, update software often, encrypt data, educate workers, and set up incident response methods.

5. What is heterogeneity?

Heterogeneity refers to the presence of diverse and different elements within a system or group, characterized by variations in characteristics, components, or structures.