1. **What are some examples of middleware technologies commonly used in system integration?**

* Message Oriented Middleware (MOM): Popular for distributing information among different applications and systems, providing asynchronous message delivery.
* Transaction Processing Monitors (TP Monitors): Ensures ACID properties in distributed environments, supporting integration of system components.

1. How does XML contribute to system integration?
2. **What are the fundamental activities involved in a software development process?**

* Conception
* Requirements Analysis
* Specification
* Design

1. **How are databases typically treated in Presentation Integration models?**

* Databases are independent – No coupling
* Databases may have inconsistent information
* Data sources may not be able to change to meet requirements

1. **What is ACID stand for?**

* Atomicity
* Consistency
* Isolation
* Durability

1. **How does the data integration model typically access the databases or data structures of an application?**

- The data integration model typically accesses the databases or data structures directly within an application.

1. **Compare 3 different integration models - presentation, data and functional integration in terms of impact on legacy systems?**
2. Presentation: data may be inconsistent.
3. - Data :Data is accessed directly from all data source
4. - Functional: Data consitenc
5. Presentation: data may be inconsistent.
6. - Data :Data is accessed directly from all data source
7. - Functional: Data consitenc
8. Presentation: data may be inconsistent.
9. - Data :Data is accessed directly from all data source
10. - Functional: Data consitenc

* Presentation: Legacy applications unaffected
* Data: Legacy applications unaffected
* Function: Legacy applications may be affected

1. **How many types of types synchronous communication? What are they?**

* Remote Procedure Calls (RPC)
* SOAP (Simple Object Access Protocol)
* WebSockets
* Message Queuing
* RESTful APIs

1. What are some examples of tools and middleware used in the data integration model?
2. At what level does the functional integration model operate?
3. **What is one of disadvantages of shared database integration?**

* Semantic Dissonance hard to resolve
* Finding a workable schema difficult
* Database may become performance bottleneck
* Database changes impact performance

1. **What factors influence the decision to use the Functional Model for integration?**

* Data consistency

1. **What is one of criteria used for user authentication?**

Login through username, password, PIN, or answers to security questions

1. **What is an example of a conflict in policies regarding data access?**

Users with different roles accessing data they should not have access to

1. **What is the purpose of a Message Queue in a messaging system?**

A software process model provides an abstract representation of the software development process from a specific perspective, aiding in planning, executing, and managing software projects.

1. **What are two type of access control?**

Physical and Logical

* Mandatory Access Control
* Discretionary Access Control

1. **How many kinds of the main styles of integration systems? What are they?**

Four

* File Transfer
* Shared Databases
* Remote Procedure Invocation
* Messaging Systems

1. **What is a naming service?**

* Software that converts a name into a physical address
* Finding other services and objects in the systen

1. What is the integration model?
2. **What are the requirements of system integration?**

* Interconnectivity, Interoperability, Semantic Consistence & Convergent Integration

1. What are some examples of middleware technologies commonly used in system integration?
2. How does XML contribute to system integration?
3. **What is the purpose of a software process model?**

* A software process model provides an abstract representation of the software development process from a specific perspective, aiding in planning, executing, and managing software projects.

1. **What are some examples of Presentation Integration models?**

* Put a PC-based user interface on a existing terminal -based application
* Integration with an application whose only useful and implementable integration is through its presentation
* Executive dashboards
* Operational status displays

1. **How does the data integration model impact legacy applications?**

* Legacy applications unaffected

1. **What does “Coupling” mean for system integration**

Coupling defines the degree of integration

1. **How do you choose the best SDLC model for your project?**

* Evaluate Project Requirements
* Consider Team Size and Expertise
* Assess Compatibility and Support
* Analyze Market Adoption
* - Focus on Customizability and Flexibility

1. **What should take place first authentication or authorization?**

In the context of secure access to a system or application, Authentication should take place before authorization.

1. **What is the difference between authorization and access control?**

* Authorization is a key step in the process of allowing parties to access resources.
* Access controls:to ensure that only authorized and authorized persons can access and perform operations in the integrated system
* You implement authorization using access controls
* Access control decision rules are based on a pre-existing assumption of authentication trust.
* Authorization : The determination of access to resource(s).
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* Access control decision rules are based on a pre-existing assumption of authentication trust.
* Authorization : The determination of access to resource(s).

1. ABC company has two separate systems for managing our Human Resources Department and Payroll department.  
   Every time the CEO asks for information about employees, it takes both departments a significant amount of time to gather CEO needs. CEO would like your team to develop a dashboard that can be used by senior managers to show summary information about their employees and their payroll and benefits information. The dashboards allowed the company to make informed decisions about human resource and payroll issues.

On the other hand, when the human resource staff enters an employee into the system, payroll also has a lot of information that they have to enter into their system.

Then CEO thinks data should only be entered once into either system. Once entered, the other system should be updated automatically. Any update in one system should result in an update in the other system, if applicable. The databases should be consistent within a few seconds once an update has taken place in one of the databases.

***A. Assumption that senior management would like an application that shows the total earnings by part-time and full-time employees. Design an UI page to meet the user's needs.***

***B. The proposal should list 5 security risks that the system needs to address.***

***C. The propose solutions for addressing the 5 security risks mentioned above.***