

Assignment 3

5) What is the role of J2EE in distributed computing?

→ i) J2EE provides a programming model based upon web and business component that are managed by the J2EE application server

ii) The application server consists of many API's and low level services available to the component. These low level service provide security, transaction.

connections and instance pooling & concurrency services

iii) The J2EE provides the interfaces to connect with volume various backend legacy & info system. J2EE also provides excellent client connectivity capability ranging from PDA to web browser to rich client.

iv) The J2EE architecture is physically divided into three tiers:-

a) Presentation tier: This tier is composed of web components which handle HTTP response, session management device independent content display.

b) Application tier: Application tier deals with the core business logic processing which may typically deal with workflow.

c) Interaction tier: This tier deals with connectivity & communicating to back end enterprise information system (EIS) database application & legacy application.



⑥ Explain the use of XML in distributed computing.

→ XML is the extensible markup language.

① The simplicity of XML in combination with the web has opened up new possibilities for moving data & for building new application architecture centered around common internet protocol.

The changes include:

- ① A reduced dependence on proprietary defⁿ formats for applications.
- ② A new way to do B2B data exchange using XML instead of the formats defined by traditional EDI systems.
- ③ A change in focus from object-oriented to service oriented.
- ⑤ The emergence of Web services as technology for discovering

⑦ What are features of SOAP?

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- ① SOAP is a communication protocol & is used for communication b/w applications.
 - ② SOAP is a format for sending messages.
 - ③ SOAP platform independent & language.
 - ④ SOAP is based on XML security.

5) Soap can be used over any transport protocol.

6) What is service oriented architecture? Explain the key characteristics.

→ 1) The SOA is essentially a collection of services. The services communicate with each other.

2) The SOA has following characteristics -

a) It supports loose coupling everywhere in the project.

b) SOA supports interoperability.

c) It increases the quality of service.

d) It supports vendor diversity.

e) It promotes discovery & federation.

f) It is location-transparent.

g) It is still maturing & achievable idea.

7) What are RPCs?

→ i) It is defined as a request/response based synchronous communication when the client sends a request, the client waits until a response is sent back from the server before continuing any operation.

ii) The RPC-based web services are tightly coupled & are implemented with remote objects of the client application.

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ii) The client have capability to provide parameters in method calls to the web service provider.

(11) What is stateless & statefull services? explain with example.

→ stateless: (1) stateless service are the type of network protocols in which client send a request to the server and server response back to according to current state.

(2) In stateless service there are no tight dependancy betⁿ server and client.

(3) The stateless protocol design simplify the server design.

(4) It handles transaction very fast.
eg:- DNS, Http,

statefull: (1) It design make the design of server very complex.

(2) It handle transaction very slowly.
eg:- ftp, Telnet