Assignment 3

Q1] what is the Role of J2EE is distributed computing

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

ii) The application server consists of many APIs and two level services available to two component these low level serviceses provides security transaction connection & instant pading & concurrency serviceses.

iii) The J2EE provides two interfaces to connect with varius barkedes two interfaces to connect with varius banxend legacy & info system. J2EE also provides ecellent client connectivity capability ranging from PDA to web browser to rich client

iv) the J2EE architecture is physicaly devided into three tiers.

(a) presentation tier: this tier is composed of web components which handle HTTP response, session management, device independent content dilivery.

(b) Application tier: Application tier deals with two cores business logic processing which may typically deals with workflow & automation.

(c) interaction tier: this tier deals with connection & communication to (bank and enterprise information system (EIS) database application & legacy application and mainfrome application.

2) explain the use of xml in destributed computa

→ xML is the exitensible markup language.

i) The simplicity of xml in combination with web has opened up new possibilities for moving data & for building new posibilities for moving data & for building new aplication architecture centered around common internet protocols. The changes include:

① A reduced dependene propritery data fermants for application.

② A New way to do B2B data exchange using XNL insted of of two formatesdefined by beaditional EDI System.

③ A shift from relying on tightly coupled system such as cobra, RMI & Dcom to a more loosely coupled internet based framework centered around XNL & Soap.

④ A change in focus from object oriented to service - oriented.

⑤ the emergence of web Services as tecnology for discovering & connecting to internet based services.

3] what is services oriented architecture? Explain its key characteristics?

→ i) the SOA is essentially a collection of services. these services communication with each other.

ii) the SOA has following characteristics.

a) it suports lose coupling everywhere in the project.

b) SOA Suport interoperability.

c) it increse two quality of service
d) it supports vendor diversity
e) it promotes discovery & federation
f) it is location transparerent.
g) it is still materinge architecable idea.

2) what is stateless & stateful services & Explain with example

→ i) stateless servicess : ① the type of network protocols in which client ~~second~~ sends a request to the server & server responds back according to current state.
② in stateless service there are no tight dependencie between client & server.
③ The stateless protocol design simplify the server design
④ it handles transaction very fast.
eg. DNS, HTTP, UPP.

ii) ~~st~~ statefull servicess :
① in this type, it a client sends

5) what is stateless and stateful servicess explain coith example.

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ii) Statefull services:

① In this type of client sends a request to the server then it expects some kind of response, if it does not get any response then it resends the reques.

② In stateful service there is tight depending between server and client

③ it's design makes two design of the server very complex & hard

④ it handles transaction very slowly.

eg. FTP, Telnet.

6) explain any one web Teenology in detail used for emplementing web servicess

→ 1) SOAP (Simple object access protocol) is message protocol that enables the distributed elements of an application to communicate SOAP can be carried over a veryety of standard protocol, including the web related HTTP

2) SOAP was developed as an intermediate language for application that have diferent programming language Enabling these

3) SOAP is a lightwait protocol I used to create Web API usually with XML it supports a wide range of communication protocols a cross two internet, HTTP, SMTP & TCP

4) soap message are xml document that are comprised of elvolope Header and body.

5) soap request is genarated by client using xml document next, a Soap, Client sends the message as a service invocation as a requested server side application a response containing the

requested parameter return value and data for the client is returned first to the Soap handler & then to the requesting client.

7) what are RPCs

→ 1) it is defined as a request response based sychronous communication when the client sends a request, the client wait until a response it sent back from the server before counting any operation.

2) the RPCs based tools services are highly coupled & are implementing with remote object of the client application.

3) the client has capacibility to provide prometers in methood cays to the web servicess provider. then client invokes the web services by sending parameters to the provider. that executes the requested methords then send back the return value additionaly using a RPC based communication model both the service provider & requester can resister & discover services.

8) what are the features of SOAP

→ i) SOAP is a communication protocol & is used for communication between applications.

ii) SOAP is a format for sending massages

iii) SOAP platform independent & language indipendent.

iv) Soap is based on XML-
security & ws-routing are among the extinsions under development SOAP is simple & extensible

v) SOAP can be used over any transport protocol such as HTTP, SMTP, TCP & JMS. Soap always yout to get around firewalls.