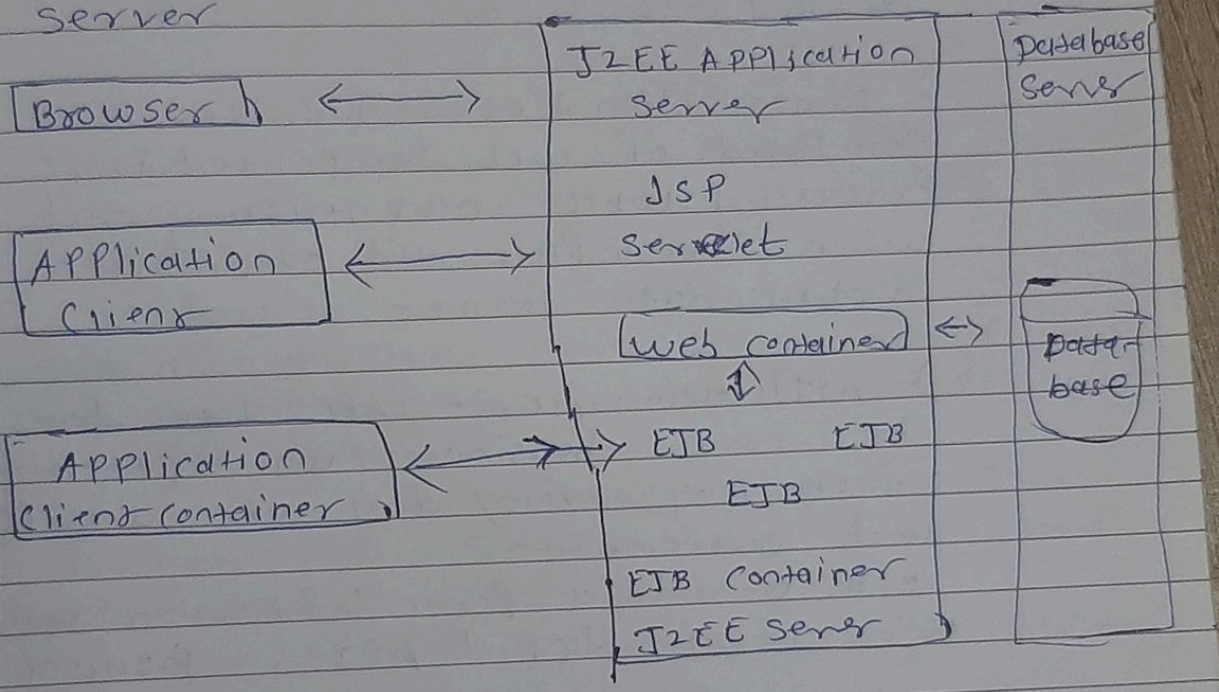
Assignment - 2

Q.1 what is the role if J2EE in distributed commputing?

→ J2EE Provides a programing model based upon web and bussiness componend that are managed by the J2EE application server



* J2EE architecture *-

i) the application server cosist of many APIs and low level services available to the component the low-level Servers Provides security, transaction, connection and instance polling and conanary Services.

② the J2EE Provides the interface to conect with various back-end legncy and info system J2EE also Provides excellent client connectivity ~~repo~~ ability ranging form DOA to web browser to rich client the J2EE arehitecture is Physically divided into 3 tier

i) Presentation tier - this tier is composed of web componted logic Processing which may typically deal with workflow and automation retrive data form

ii) Application tier - APPn tier deals with the core bussiness logic processing which may typically deal with workflow and automation
Retrive data form information system with well defined API's provided

iii) integration tier - this tier deals with connections and communication to back end enterprise information system (EIS) database appn and legency appn or main-frame appn

Q.2 explain the use of xml in distributed computing?

→ xml is the extensiable markup language which Allow multiple languages to come together and make the information base xml Provides the basic for a wide varitey languages eumople include mathamatical markup language, electronic business xml (ebxml) and voice markup language (vxml) consist of both markup & contest markup referel to the tes describe marcup.

format to another some specialized use as xml are Java Speech markup language xml are and Synchronized multimedia integration language

each xml language has its own grammer and specific set ~~to~~ of rules governing the in the language structure of documents written that language.

An xml-based work enables high levels of componet and interportability in the distributed system.

Q.3 what is services oridnted archi-tecture? explain its charachristic

->

the SOA essentiolly a collection of Services the Servicos communication with each other the. SOA Have fou-owing key charactristics -

① SOA services Have self ~~dist~~ des-cribing interaces in Platform indepen-dent WSDL in the standred used to describe the services

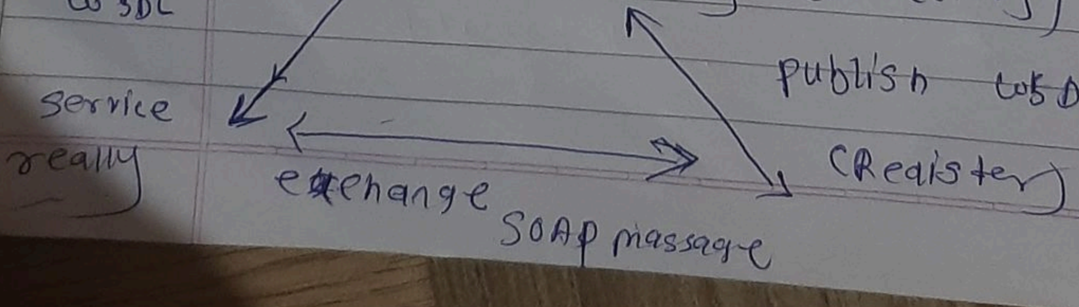
② SOA Services communicate with Massage formaly defind via xml Schema called XSD)

③ Number of app? can lookup the Services really & invoke the Services UDDI in the Standard used for Services redisty

④ each Servies (SOA) has a quality of Services (QOS) associated with to Some of the key element. Security requirment such as ~~automation~~ authentication & authorisation

⑤ lose coupling Re-use of existing tecnology SOA for services based distributed system

⑥ SOA supports composition (assembling) ~~Reusablity~~



gemrany. the. basic SOA describe the relⁿ.betⁿ treland of services provider reachy, services, requester

Q.4 What is stateless & ~~Stru~~ stateful services? explain with example.

→

Stakeless → stateless services are the type of network protocol in which client ~~user~~ send a request the server and server response back. acroding to current state.

ii) in stateless services the are no tight depending betⁿ server and client

iii) the stateless protocol desion simplify the server design

iv) is handels transation very fast

e.g − DNS, HTTP, UDP

State full − i) in statefull protocol in client send a request to the server then expects some kind of responess if the not get any respones then is resend the request

2) in statefull services ~~the~~ there tight dependency betⁿ server and client

(3) is design makes the design of server very complete & heavy

(4) is handle transation very slowly

e.g − FTTP, Telent.

Q.5 What are RPC?

→ - It is defind a request response based syncronous communication when the client send a request the client wait until a response is send back from the server before continuing any operation

- the RPC - based web service are tightly coupled & are implemented with remote objects or client app on a heteroeneous without having to understand the networks details RPC is used to call other process on the remote system like a local system & process call also sometime known as function call subroutine call

RPC use the client - server model request program is client - and services providing on RPC is like a local produce call, on RPC a synchrous operation causing the requesting program be suspended until results of the remote procedures are returned

However use the light weight process or threds that share the same address space enable multiple RPC.

Q.6 What are the feature of SOAP.

→

① SOAP is communication Protocol and it is used for communication between applications

② SOAP is a format for sending message

③ SOAP communicates through internet

④ ~~SOAP~~

Independence

- SOAP allows for any programing model

- SOAP is platform independent and large independent that SOAP can used any languages

- SOAP is based on xml

⑤ extensibility.

- Security and WS-routing are coman the extensions under the development. SOAP is simple and extensible

⑥ Neutrality

- SOAP can used any transport Protocol such as HTTP, ~~SMTP~~, SMTP, TCP, or JSM. SOAP allows you to get around Firewalls.

SOAP as lightweight Protocol -

- it Primiy application to pass message and data back and application to pass massage and data ~~forth~~ between disa- Parte system in distributed ~~envir~~ environment enabling mote method invocation Th properties, they are

1. Send and recive HTTP transport Protocol packets
2. Process xml message, the can be controlsled with the lomy weight protocol or ORPC protocol such as.
3. SOAP is W3C recommendation