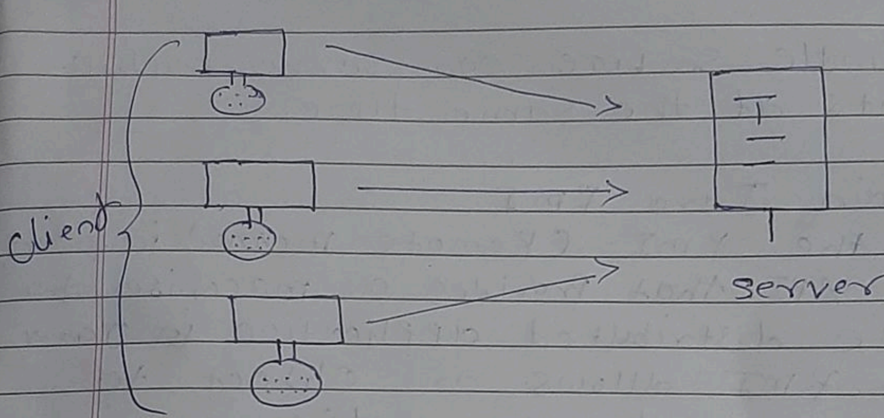
Assignment 2

Q.1 explain Client & server model

- the web is services that Allow computers to share and exchange data such as: Emailing, online gaming, FTP
- the web is referred to client-server communication



Client - client can be a machine or a program.

~~Forred~~ -

For example - laptop, desktop mobile

- A client Program is a program that allow the web user to make result
- A Client Program is a Program
- A client ~~weth~~ wether it is a machine or program is an appliance and way to make result through the web

Server - we can run multiple serveces on one single machine

- A server ir computer program Not A Device
- high Performance computer are called servers becuse they run Server - Programs.
- Server Provides functionality & service other programs called Client

- A Single Servere can serve multiple clients dt the same time.

Q. 2 explain Java RMI -

① the RMI (Remote method invocation) is an API that Provides a maconism to create distributed application in Java the RMI allows an object to invoke methods on a object running in others Jvm

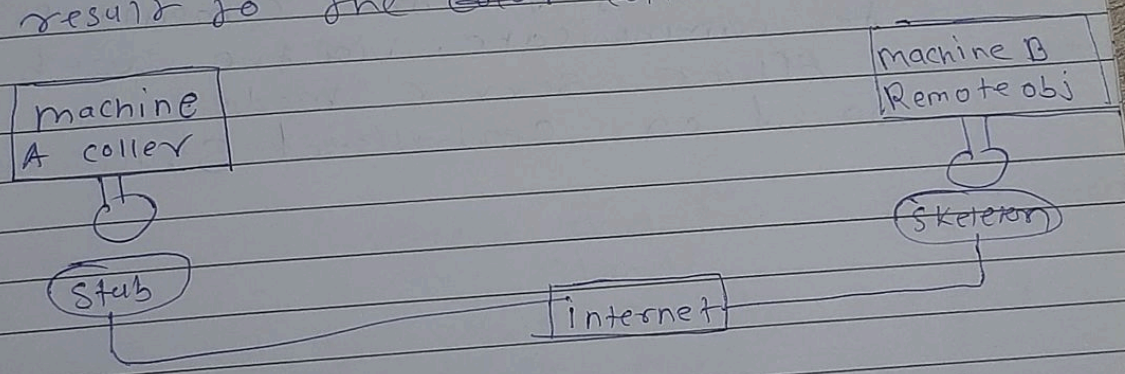
② RMI use Stub & Skenton Object for communication win. remote obj

Stub - the stub in an object acts as gatway for Client side. All the outgoing request routed trough it.

③ ir does the following task
i) ir initakes a connection with remote virtual machine (Jvm)
ii) It writes and transmits the Parameters to the remote virtual machine & wait for the Result.

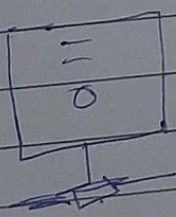
iii) It Reads the return values or exception & finally return the value to the caller

Skelton - the skelton is an object. d/s gateway for the server side object All the incoming requests are routed through it it does following task.
i) it read the method on the actual ~~remote object~~.
ii) it read the Parameter for the ~~remote~~ method
iii) it invoke the Parameter for the remote method obj and it write & ~~transmits~~ the result to the ~~Caller~~ caller



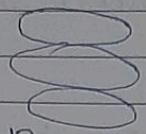
~~There~~ there are several type of servers

① Web Servers like Apache Se web Server



Serve HTTP requests

ii) Database Servers



Rundms

- A server can contain web resourse Host web application stores user & program data etc
- it is used to store Hundreds or thousands of client. soon as. recives per request and as respond written a message.
- A client. server. model is just one way for the computers to communicate. via the web
- Client server. model is based on centralized structure.

Q.3 explain microsoft document (Dcom)

→ microsoft or Distributed component object model is ir remote protocal designed by microsoft to Invoke RPCs, it consists of set extension langorey on microsoft Remote ~~Protocol~~ Produce call extensions

High-level application protocol
DOC
RPC

D com protocol stack :- Higher-level application use Dcom client to object obtain objects refrences ormace. D RPC calls on the Object. the ~~Dom~~ Dcom uses the Remote Produce cell protocol extension to communicating with the object

Dcom is langney and Platform independent Dcom ir binary stands. Dcom Provide the ability to use Dcom and reuse components dynamicaly, without recompiling on platform and langnge netere Principle.

However Dcom do not have any absolute way of addresing an objee. Inside every thing is done trough do object.

object Adapter (Server)
① Bridges the gap betn CORBA object and the programming language interfaces of the slave classes
② Creates remote object refres for the corba obj
③ Dispatches each RMI to the appropriate servant class via skeleton, and activates obj
④ Assign & Unique name to it & self & each obj

Skeleton (Server)
- An IDL compiler ~~gen~~ generates skeleton classes in the server language
- Dispatch RMI's to the appropriate servant class.

Stub -
- Generated by IDL compiler in the client language
- A proxy class is create for obj oriented language
- Stub Procedures are created for procedural language

- Implementation Repository -

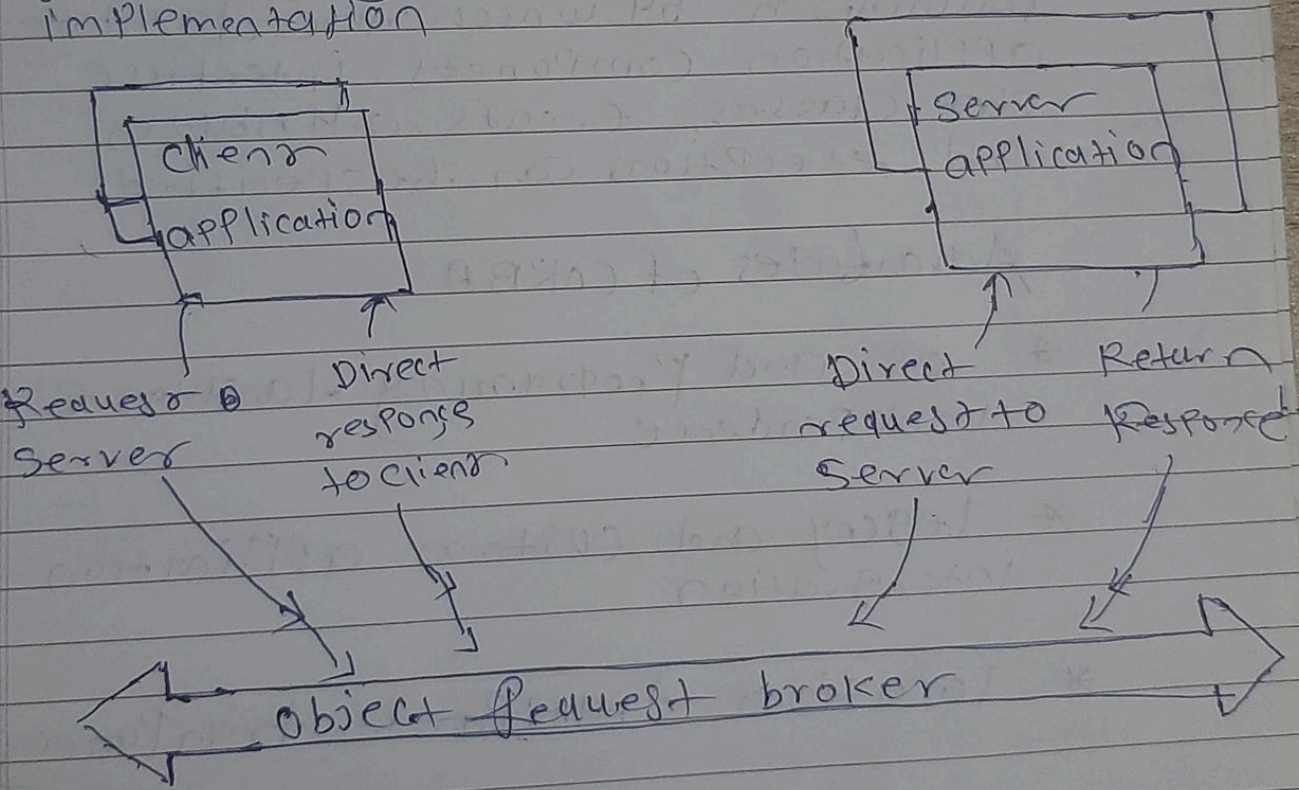
Activates registed server on demand and locat servers that currently running

Interface repository

- it provide info about registered ideal interface to client & server that require optional for static invocation required is optional dynamic invocation

Q.4 explain CORBA Architecture.

- A collection of system label server for handling low level application services for Handling system client and object implementation



working flow of CORBA.

(1) ORB core - it acts as the object bus orther bridge, Providerding the

① it carries out the request Reply Protocol betn client & server
② it provide operation that enable process to be started and stopped
③ it provides operations to ~~convert~~ Convert betn remote obj reference and string

ii) IDL - CORBA IDL Contracts to specify the application boundaries and to estabilsh interface with clients. the IDL, provides a machinism by which the distributed application componets, interface ~~the~~ classes, events, attributes and exceptions can be specified.

Advantages of CORBA

* OS and Programing-language independence

* legcny and custom application intergration

* location ~~transparency~~ tranparecy