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Assignment 1B.

Distributed application using Java RMI

* Program statement :

Power calculation : Design a distributed application which consist of a client server communication using TCP, UDP and RMI techniques in Java. Multiple clients can simultaneously connect to the server and send messages of the format -> (a,b) where a and b are integers and server returns the value a^b (a raised to b) ------

* Objectives :

To learn to implement any distributed applications based on RMI

* Theory :

RMI : RMI is an API which allows an object to invoke a method of an object that exists in another address space, which could be on the same or remote machine

Through RMI, object running in a JVM present on a computer (Client side) can invoke method on a object present in another JVM.

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AMI Client - server communication is handled by two intermediate objects.

1) Stub Object (Client side)
It builds an information block and sends this information to the server.
The block consists of :

a) An identification of remote object to be used.
b) Method name which is to be invoked.
c) Parameters to the remote JVM.

2) Skelution Object (server side)

It passes the request from stub object to remote object.

a) It calls the parameter recieved from the stub (Objects to the method.

b) It forwards the parameters required from stub to the method.

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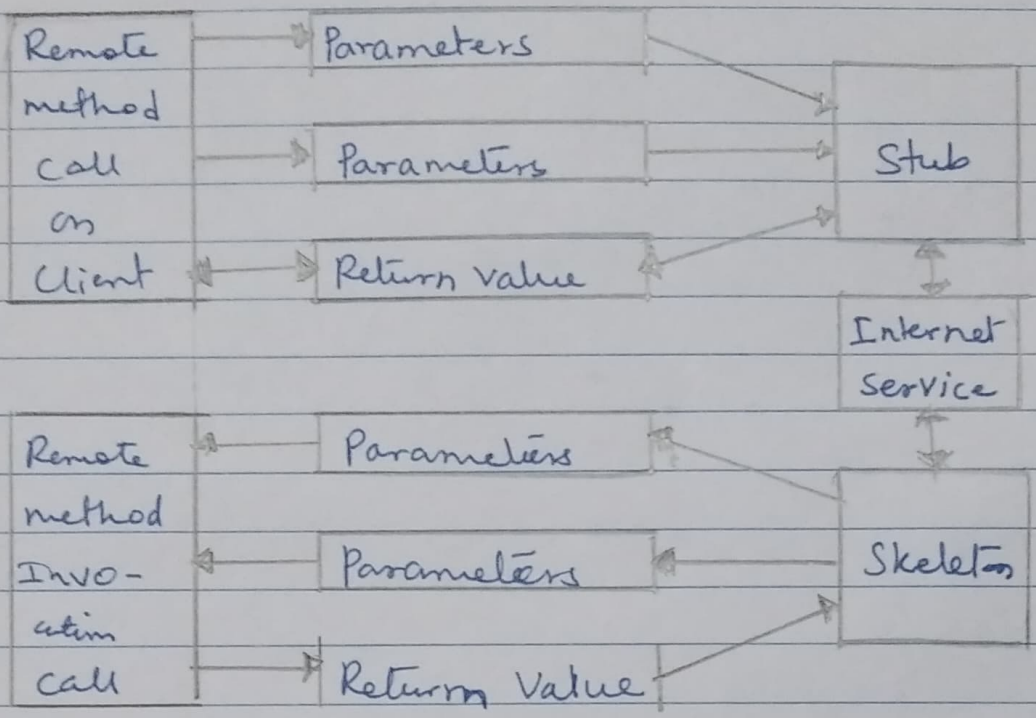

* Conclusion :

We have successfully implemented distributed application through implementation client-server communication based on JAVA RMI.