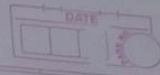


## Assignment 2.



### ① client/server

This is the early stage technology which separates the roles of computers as client and server. This technology is still ~~power~~ powerful & popular among the network technologies to establish connection communication between two or more machines.

② In this model, the first tier handles the presentation and business logic of the user application (client) and the second tier handles the application (client).

③ In general, the server is a database server that is mainly responsible for the organization and retrieval of data.

④ The client-server model has been widely used in Enterprise Resource planning (ERP), billing, and Inventory application systems, banking etc.

### ⑤ CORBA:

① It is an industry wide, open standard initiative. It is developed by Object Management Group. It is developed to enable distributed computing that supports a wide range of application environments.



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 (2) It provides an object-oriented solution that does not enforce any proprietary protocols or any particular programming languages.

(3) By adapting CORBA, the applications can reside and run on any hardware platform located anywhere on the network and can be written in any language.

(4) Interface Definition Language (IDL) is a specific interface language designed to talk about the services provided by a CORBA remote object.

(5) CORBA defines a collection of system-level services for handling low-level services application services like life-cycle, persistence, transactions, naming, security.

3) Java RMI:

i) Java RMI invented RMI API's for communicating methods on any machine remotely. This is pure Java solution for handling distributed communication.

ii) Through RMI object running on a client computer can invoke methods on an object present on server.



### iii) Working of RMI

There are two special objects designed to establish communication between clients server.

#### a) stub object (client side)

- It creates information block and information to server, the block consists of.

1. An identifier of the remote object to be use of

2. Method name to be invoked.

3. Parameters to the remote JVM.

#### b) skeleton object (server side)

The skeleton object passes two request from two stub object to two remote object.

It works as,

1. It cause the desired method on the real object present on the server

2. It forwards the parameters received from the stub object to the method.

### Microsoft DCOM

1) It is a remote protocol designed by Microsoft to invoke. It consist of a set of extensions layered on true Microsoft Remote procedure call extensions.



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ii) CDcom protocol stack: Higher level applications use the DCOM client to obtain object reference or make ORPC calls on the object. The DCOM client uses the Remote procedure call protocol extensions to communicate with two object servers.

iii) The object server constitutes an object resolver service and or more object resolver exporters.

iv) DCOM is language and platform independent. DCOM is a binary standard. DCOM provides the ability to use and reuse components dynamically, without recompiling on platforms and language neutral principle.

v) However DCOM do not have any absolute way of addressing an object instance.