

Assignment No 1B

Title : Distributed Application using java RMI

Problem Statement : To develop any distributed application through implementing client-server communication program based on java RMI

Objective : To use java RMI

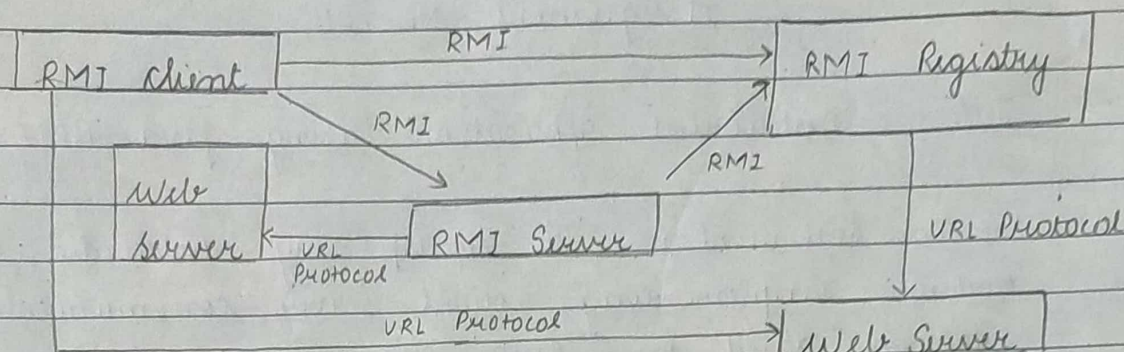
Tools / Environment : java programming environment, jdk 1.8
rmiregistry

Theory :

1. RMI provides communication between java applications that are deployed on different servers and connected remotely using objects called stub and skeleton.
2. This communication architecture makes a distributed application seem like group of objects communicating across remote connection.
3. Three objects are encapsulated by exposing an interface, which helps access private state and behaviour of an object through its methods.

RMI Registry

1. It is a remote object registry, Bootstrap naming service that is used by RMI server on the same host to bind remote objects to names. Clients on local and remote host then look up the remote objects & make remote method invocation.



RMI Distributed Application

Terminologies of RMI

1. Remote object : Object in a specific JVM whose methods are exposed so they could be invoked by another program deployed on diff. JVM.
2. Remote Interface : Java Interface that defines methods that exist in remote object.
3. Stub : Java program object that acts as an entry point for client object to route any outgoing requests.
4. Skeletons : Object that behaves like a gateway on the server side.

Conclusion : RMI allows to build Java apps that are distributed among several machines. Allow a Java object that executes on one machine to invoke a method of Java object that executes on another machine.