Ex : No : 8	Simple Calculator Using RMI
28-10-21	

Aim:

To write java program to Create a simple Calculator that demonstrate the use of RMI

Procedure :

Step 1 : Create the remote interface

Step 2 : Provide the implementation of the remote interface.

Step 3 : Compile the implementation Class and Create the stub and skeleton objects using the rmic tool.

Step 4 : Start the registry service by miregistry tool.

Step 5 : Create and start the remote application

Step 6 : Create and start the Client application.

/* Ex- 8. Create a simple calculator application that demonstrates the use of RMI. You are not required to create GUI. */

To Implement RMI example:

- create the remote interface as "Adder.java"
- Provide the implementation of the remote interface as "AdderRemote.java"
- Create server application "RMIServer"
- Create client application "RMIClient"

To execute RMI:

1. compile all the java files

   - javac Adder.java
   - javac AdderRemote.java
   - javac RMIServer.java
   - javac RMIClient.java

2. create stub and skeleton object by rmic tool

   - rmic AdderRemote

3. start rmi registry in one command prompt

   - rmiregistry 5000

4. start the server in another command prompt

   - java RMIServer

5. start the client application in another command prompt
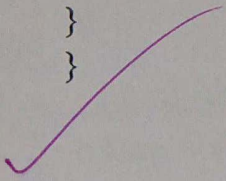
   - java RMIClient

The output will be displayed in the client side

/* Ex- 8. Create a simple calculator application that demonstrates the use of RMI. You are not required to create GUI. */
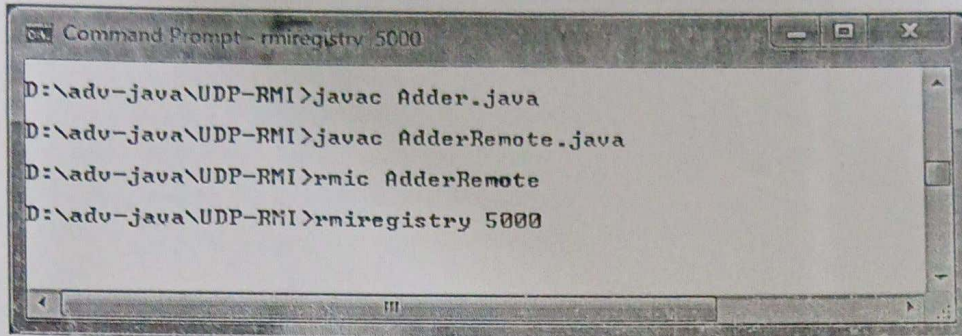
```java
//creating remote interface (Adder.java)
import java.rmi.*;
public interface Adder extends Remote
{
public int add(int x,int y)throws RemoteException;
}
```

```java
//implementation of the remote interface (AdderRemote.java)
import java.rmi.*;
import java.rmi.server.*;
public class AdderRemote extends UnicastRemoteObject implements Adder
{
AdderRemote()throws RemoteException
{
super();
}
public int add(int x,int y)
{return x+y;
}
}
```
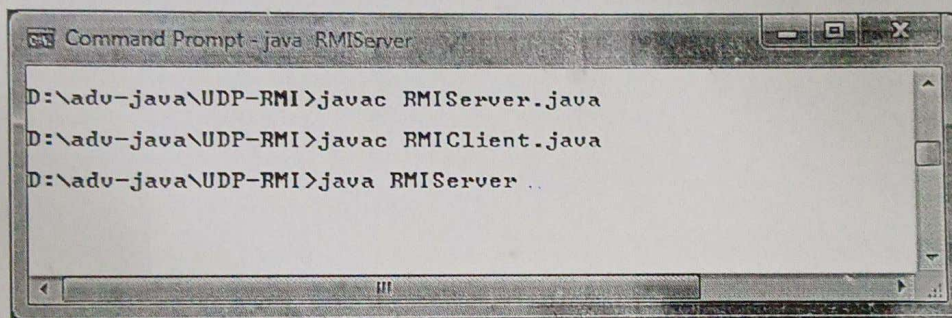
```java
//Creating server application  (RMIServer.java)
import java.rmi.*;
import java.rmi.registry.*;
public class RMIServer
{
public static void main(String args[])
{
try
{
Adder stub=new AdderRemote();
Naming.rebind("rmi://localhost:5000/sonoo",stub);
}
catch(Exception e)
{
System.out.println(e);
}
}
}
```

```java
//Creating Client Application (RMIClient.java)
import java.rmi.*;
public class RMIClient
{
public static void main(String args[])
{
try
{
Adder stub=(Adder)Naming.lookup("rmi://localhost:5000/sonoo");
System.out.println(stub.add(34,4));
}
catch(Exception e)
{}
}
}
```
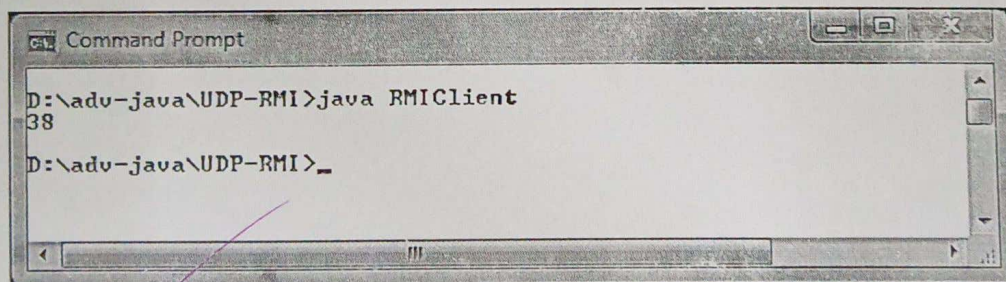
```
Command Prompt - rmiregistry 5000                                    _  □  X

D:\adv-java\UDP-RMI>javac Adder.java

D:\adv-java\UDP-RMI>javac AdderRemote.java

D:\adv-java\UDP-RMI>rmic AdderRemote

D:\adv-java\UDP-RMI>rmiregistry 5000
```

Server screen:

```
Command Prompt - java RMIServer                                      _  □  X

D:\adv-java\UDP-RMI>javac RMIServer.java

D:\adv-java\UDP-RMI>javac RMIClient.java

D:\adv-java\UDP-RMI>java RMIServer ..
```

Client screen:

```
Command Prompt                                                       _  □  X

D:\adv-java\UDP-RMI>java RMIClient
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D:\adv-java\UDP-RMI>_
```