**StringCompare.java – Remote Interface**

java

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import java.rmi.Remote;

import java.rmi.RemoteException;

public interface StringCompare extends Remote {

String getLarger(String str1, String str2) throws RemoteException;

}

**2️⃣ StringCompareImpl.java – Server-Side Implementation**

java

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import java.rmi.server.UnicastRemoteObject;

import java.rmi.RemoteException;

public class StringCompareImpl extends UnicastRemoteObject implements StringCompare {

public StringCompareImpl() throws RemoteException {

super();

}

public String getLarger(String str1, String str2) throws RemoteException {

return (str1.compareTo(str2) > 0) ? str1 : str2;

}

}

**3️⃣ StringCompareServer.java – RMI Server**

java

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import java.rmi.registry.LocateRegistry;

import java.rmi.registry.Registry;

public class StringCompareServer {

public static void main(String[] args) {

try {

StringCompareImpl obj = new StringCompareImpl();

Registry registry = LocateRegistry.createRegistry(1099);

registry.rebind("CompareService", obj);

System.out.println("String Compare Server is running...");

} catch (Exception e) {

e.printStackTrace();

}

}

}

**4️⃣ StringCompareClient.java – Multi-threaded Client**

java

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import java.rmi.registry.LocateRegistry;

import java.rmi.registry.Registry;

public class StringCompareClient implements Runnable {

private final String str1, str2;

public StringCompareClient(String s1, String s2) {

this.str1 = s1;

this.str2 = s2;

}

public void run() {

try {

// Replace with server IP for different machine setup

Registry registry = LocateRegistry.getRegistry("localhost", 1099);

StringCompare stub = (StringCompare) registry.lookup("CompareService");

String result = stub.getLarger(str1, str2);

System.out.println(Thread.currentThread().getName() + ": Larger string between \"" + str1 + "\" and \"" + str2 + "\" is \"" + result + "\"");

} catch (Exception e) {

e.printStackTrace();

}

}

public static void main(String[] args) {

// Example input pairs

String[][] testCases = {

{"apple", "banana"},

{"zebra", "ant"},

{"hello", "hello"},

{"Sejal", "Sejall"},

{"Kite", "KiteS"}

};

for (String[] pair : testCases) {

new Thread(new StringCompareClient(pair[0], pair[1])).start();

}

}

}

**✅ How to Run**

**1. Compile**

bash

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javac \*.java

**2. Start RMI Registry (In server directory)**

bash

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rmiregistry

Keep this terminal open.

**3. Run Server**

bash

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java StringCompareServer

**4. Run Client (on same or different machine)**

bash

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java StringCompareClient

📍 If running on different machines, **replace "localhost" with server IP** in the client code:

java

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Registry registry = LocateRegistry.getRegistry("192.168.1.5", 1099);