// RMI Interface

import java.rmi.Remote;

import java.rmi.RemoteException;

public interface RemoteService extends Remote {

String processRequest(String clientName) throws RemoteException;

}

// Server Implementation

import java.rmi.RemoteException;

import java.rmi.server.UnicastRemoteObject;

public class RemoteServiceImpl extends UnicastRemoteObject implements RemoteService {

public RemoteServiceImpl() throws RemoteException {

super();

}

@Override

public String processRequest(String clientName) throws RemoteException {

System.out.println("Processing request from: " + clientName);

return "Hello, " + clientName + "! Your request is processed.";

}

}

// Multi-threaded Server

import java.rmi.Naming;

import java.rmi.registry.LocateRegistry;

public class RMIServer {

public static void main(String[] args) {

try {

LocateRegistry.getRegistry(1099);

RemoteServiceImpl service = new RemoteServiceImpl();

Naming.rebind("rmi://localhost/RemoteService", service);

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

} catch (Exception e) {

e.printStackTrace();

}

}

}

// Client Implementation

import java.rmi.Naming;

public class RMIClient {

public static void main(String[] args) {

try {

RemoteService service = (RemoteService) Naming.lookup("rmi://localhost/RemoteService");

for (int i = 1; i <= 5; i++) {

String clientName = "Client-" + i;

new Thread(() -> {

try {

String response = service.processRequest(clientName);

System.out.println(response);

} catch (Exception e) {

e.printStackTrace();

}

}).start();

}

} catch (Exception e) {

e.printStackTrace();

}

}

}

Output:  
rmiregsitry 1099 &

javac \*.java

java RMIServer

Server is running...

Processing request from: Client-4

Processing request from: Client-3

Processing request from: Client-5

Processing request from: Client-1

Processing request from: Client-2

java RMIClient

Hello, Client-1! Your request is processed.

Hello, Client-3! Your request is processed.

Hello, Client-4! Your request is processed.

Hello, Client-5! Your request is processed.

Hello, Client-2! Your request is processed.