Assignment 1

**Step 1: Define the Remote Interface**

**File Name:** Adder.java

**Used by:** Client & Server

Code:  
import java.rmi.Remote;

import java.rmi.RemoteException;

// Remote interface

public interface Adder extends Remote {

int add(int x, int y) throws RemoteException;

}

**Step 2: Implement the Remote Interface (Server-Side)**

**File Name:** AdderRemote.java  
**Used by:** Server

Code:

import java.rmi.RemoteException;

import java.rmi.server.UnicastRemoteObject;

// Implementing the remote interface

public class AdderRemote extends UnicastRemoteObject implements Adder {

// Constructor (Exports the remote object)

protected AdderRemote() throws RemoteException {

super();

}

// Remote method to perform addition

public int add(int x, int y) throws RemoteException {

return x + y;

}

}

**Step 3: Create the Server Application**

**File Name:** Server.java  
**Used by:** Server

Code:

import java.rmi.Naming;

import java.rmi.registry.LocateRegistry;

public class Server {

public static void main(String args[]) {

try {

// Programmatically start the RMI registry on port 5000

LocateRegistry.createRegistry(5000);

// Create an instance of the remote object

Adder stub = new AdderRemote();

// Bind the remote object to the RMI registry with name "Adder"

Naming.rebind("rmi://localhost:5000/Adder", stub);

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

} catch (Exception e) {

System.out.println(e);

}

}

}

**Step 4: Create the Client Application**

**File Name:** Client.java  
**Used by:** Client

Code:

import java.rmi.Naming;

import java.util.Scanner;

public class Client {

public static void main(String args[]) {

try {

// Lookup the remote object from the RMI registry

Adder stub = (Adder) Naming.lookup("rmi://localhost:5000/Adder");

// Take input from the user

Scanner sc = new Scanner(System.in);

System.out.print("Enter first number: ");

int a = sc.nextInt();

System.out.print("Enter second number: ");

int b = sc.nextInt();

// Call the remote method

int result = stub.add(a, b);

System.out.println("Result: " + result);

} catch (Exception e) {

System.out.println(e);

}

}

}

Outputs:

A screenshot of a computer

AI-generated content may be incorrect.

