

## Code:

### 1. ReverseClient.java

```
J ReverseClient.java 2 X
J ReverseClient.java > ReverseClient
1  import ReverseModule.*;
2  import org.omg.CosNaming.*;
3  import org.omg.CosNaming.NamingContextPackage.*;
4  import org.omg.CORBA.*;
5  import java.io.*;
6
7  class ReverseClient
8  {
9      public static void main(String args[]){
10         Reverse ReverseImpl=null;
11         try {
12             // Initialize the ORB
13             org.omg.CORBA.ORB orb=org.omg.CORBA.ORB.init(args,null);
14             org.omg.CORBA.Object objRef = orb.resolve_initial_references("NameService");
15             NamingContextExt ncRef=NamingContextExtHelper.narrow(objRef);
16             String name = "Reverse";
17             ReverseImpl=ReverseHelper.narrow(ncRef.resolve_str(name));
18             System.out.println("Enter String=");
19             BufferedReader br= new BufferedReader(new InputStreamReader(System.in));
20             String str= br.readLine();
21             String tempStr= ReverseImpl.reverse_string(str);
22             System.out.println(tempStr);
23         } catch(Exception e) {
24             e.printStackTrace();
25         }
26     }
27 }
28
```

### 2. ReverseModule.idl

```
ReverseModule.idl X
ReverseModule.idl
1  module ReverseModule
2  {
3      interface Reverse
4      {
5          {
6              string reverse_string(in string str);
7          };
8      };
9  };
10
```

### 3. ReverseServer.java

J ReverseServer.java 2 X

J ReverseServer.java > ...

```
1  import org.omg.CosNaming.NamingContextPackage.*;
2  import org.omg.CORBA.*;
3  import org.omg.PortableServer.*;
4  import ReverseModule.Reverse;
5  import org.omg.CosNaming.NamingContextExt;
6  import org.omg.CosNaming.NamingContextExtHelper;
7  import org.omg.CosNaming.NameComponent;
8
9  class ReverseServer
10 {
11     public static void main(String[] args){
12         try{
13             // Initialize the ORB
14             org.omg.CORBA.ORB orb=org.omg.CORBA.ORB.init(args,null);
15             // initialize the BOA/POA
16             POA rootPOA=POAHelper.narrow(orb.resolve_initial_references("RootPOA"));
17             rootPOA.the_POAManager().activate();
18             // creating the calculator object
19             ReverseImpl rvr=new ReverseImpl();
20             // get the object reference from the servant class
21             org.omg.CORBA.Object ref=rootPOA.servant_to_reference(rvr);
22             System.out.println("Step1");
23             Reverse h_ref=ReverseModule.ReverseHelper.narrow(ref);
24             System.out.println("Step2");
25             org.omg.CORBA.Object objRef=orb.resolve_initial_references("NameService");
26             System.out.println("Step3");
27             NamingContextExt ncRef=NamingContextExtHelper.narrow(objRef);
28             System.out.println("Step4");
29             String name = "Reverse";
30             NameComponent path[]=ncRef.to_name(name);
31             ncRef.rebind(path,h_ref);
32             System.out.println("Reverse Server reading and watting....");
33             orb.run();
34         } catch (Exception e){
35             e.printStackTrace();
36         }
37     }
38 }
```

#### 4. ReverseImpl.java

```
J ReverseImpl.java ×
J ReverseImpl.java > ReverseImpl
1  import ReverseModule.ReversePOA;
2  import java.lang.String;
3  class ReverseImpl extends ReversePOA
4  {
5      ReverseImpl() {
6          super();
7          System.out.println("Reverse object Created");
8      }
9      public String reverse_string(String name)
10     {
11         StringBuffer str = new StringBuffer(name);
12         str.reverse();
13         return ("server Send"+str);
14     }
15 }
16
```

#### Output:

##### 1. IDL compilation using idlj

```
varadmash@varadmash-G3-3590: ~/LP5_lab/Assignment2
varadmash@varadmash-G3-3590:~/LP5_lab/Assignment2$ ls
corba-api-5.0.1  ReverseImpl.java  ReverseModule.idl
ReverseClient.java  ReverseModule  ReverseServer.java
varadmash@varadmash-G3-3590:~/LP5_lab/Assignment2$ idlj -fall ReverseModule.idl
varadmash@varadmash-G3-3590:~/LP5_lab/Assignment2$ javac *.java ReverseModule/*.java
Note: ReverseModule/ReversePOA.java uses unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
varadmash@varadmash-G3-3590:~/LP5_lab/Assignment2$ ls
corba-api-5.0.1  ReverseClient.java  ReverseImpl.java  ReverseModule.idl  ReverseServer.java
ReverseClient.class  ReverseImpl.class  ReverseModule  ReverseServer.class
varadmash@varadmash-G3-3590:~/LP5_lab/Assignment2$
```

## 2. ORB Server start on port 8000

```
varadmash@varadmash-G3-3590: ~/LP5_lab/Assignment2
varadmash@varadmash-G3-3590:~/LP5_lab/Assignment2$ orbd -ORBInitialPort 8000
█
```

## 3. Start Server

```
varadmash@varadmash-G3-3590: ~/LP5_lab/Assignment2
varadmash@varadmash-G3-3590:~/LP5_lab/Assignment2$ java ReverseServer -ORBInitialPort 8000 -ORBInitialHostlocalhost
Reverse object Created
Step1
Step2
Step3
Step4
Reverse Server reading and waiting....
█
```

## 4. Start Client (Run query)

```
varadmash@varadmash-G3-3590: ~/LP5_lab/Assignment2
varadmash@varadmash-G3-3590:~/LP5_lab/Assignment2$ java ReverseClient -ORBInitialPort 8000 -ORBInitialHostlocalhost
Enter String=
Pune Institute of Computer Technology
server SendygonlhceT retupmoC fo etutitsnI enuP
varadmash@varadmash-G3-3590:~/LP5_lab/Assignment2$ █
```