

```
/*  
Assignment 2: To develop any distributed application with CORBA  
program using JAVA IDL */
```

```
// ReverseClient.java
```

```
// Client
```

```
import ReverseModule.*;  
import org.omg.CosNaming.*;  
import org.omg.CosNaming.NamingContextPackage.*;  
import org.omg.CORBA.*;  
import java.io.*;
```

```
class ReverseClient
```

```
{
```

```
    public static void main(String args[])
```

```
    {
```

```
        Reverse ReverseImpl=null;
```

```
        try
```

```
        {
```

```
            // initialize the ORB object request broker
```

```
            org.omg.CORBA.ORB orb =
```

```
            org.omg.CORBA.ORB.init(args,null);
```

```

org.omg.CORBA.Object objRef =
orb.resolve_initial_references("NameService");
NamingContextExt ncRef =
NamingContextExtHelper.narrow(objRef);

String name = "Reverse";

// narrow converts generic object into string type
ReverseImpl = ReverseHelper.narrow(ncRef.resolve_str(name));

System.out.println("Enter String=");
BufferedReader br = new BufferedReader(new
InputStreamReader(System.in));
String str= br.readLine();

String tempStr= ReverseImpl.reverse_string(str);

System.out.println(tempStr);
}
catch(Exception e)
{
e.printStackTrace();
}
}
}

/*****
*****/

// ReverseImpl.java

```

```

import ReverseModule.ReversePOA;

import java.lang.String;

class ReverseImpl extends ReversePOA
{
    ReverseImpl()
    {
        super();
        System.out.println("Reverse Object Created");
    }

```

```

    public String reverse_string(String name)
    {
        StringBuffer str=new StringBuffer(name);
        str.reverse();
        return ("Server Send "+str);
    }
}

```

```

/*****
*****/

```

```

//ReverseServer.java

```

```

import ReverseModule.Reverse;

import org.omg.CosNaming.*;

import org.omg.CosNaming.NamingContextPackage.*;

import org.omg.CORBA.*;

import org.omg.PortableServer.*;

```

```

class ReverseServer
{

```

```
public static void main(String[] args)
{
    try
    {
        // initialize the ORB
        org.omg.CORBA.ORB orb =
        org.omg.CORBA.ORB.init(args,null);

        // initialize the BOA/POA
        POA rootPOA =
        POAHelper.narrow(orb.resolve_initial_references("RootPOA"));

        rootPOA.the_POAManager().activate();

        // creating the object
        ReverseImpl rvr = new ReverseImpl();

        // get the object reference from the servant class
        org.omg.CORBA.Object ref =
        rootPOA.servant_to_reference(rvr);

        System.out.println("Step1");
        Reverse h_ref = ReverseModule.ReverseHelper.narrow(ref);
        System.out.println("Step2");

        org.omg.CORBA.Object objRef =
        orb.resolve_initial_references("NameService");

        System.out.println("Step3");
        NamingContextExt ncRef =
        NamingContextExtHelper.narrow(objRef);
```

```
System.out.println("Step4");
```

```
String name = "Reverse";
```

```
NameComponent path[] = ncRef.to_name(name);
```

```
ncRef.rebind(path,h_ref);
```

```
System.out.println("Reverse Server reading and waiting.... ");
```

```
orb.run();
```

```
}
```

```
catch(Exception e)
```

```
{
```

```
e.printStackTrace();
```

```
}
```

```
}
```

```
}
```

```
//ReverseModule.idl
```

```
module ReverseModule
```

```
{
```

```
interface Reverse
```

```
{
```

```
string reverse_string(in string str);
```

```
};
```

```
};
```

Output:

```
PROBLEMS 25 OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR
PS E:\NEHA_ENGG\BE\Distributed systems\IDL CORBA DSprac2> ls

Directory: E:\NEHA_ENGG\BE\Distributed systems\IDL CORBA DSprac2

Mode                LastWriteTime         Length Name
----                -
-a----            06-02-2024    16:02           951 ReverseClient.java
-a----            06-02-2024    15:52           321 ReverseImpl.java
-a----            06-02-2024    15:53            92 ReverseModule.idl
-a----            06-02-2024    15:56          1221 ReverseServer.java

PS E:\NEHA_ENGG\BE\Distributed systems\IDL CORBA DSprac2> idlj -fall ReverseModule.idl
PS E:\NEHA_ENGG\BE\Distributed systems\IDL CORBA DSprac2> javac *.java ReverseModule/*.java
Note: ReverseModule\ReversePOA.java uses unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
PS E:\NEHA_ENGG\BE\Distributed systems\IDL CORBA DSprac2> orbd -ORBInitialPort 1050&
At line:1 char:26
+ orbd -ORBInitialPort 1050&
+ ~
The ampersand (&) character is not allowed. The & operator is reserved for future use; wrap an ampersand in double quotation marks ("&") to pass it as part of a string.
+ CategoryInfo          : ParserError: (:) [], ParentContainsErrorRecordException
+ FullyQualifiedErrorId : AmpersandNotAllowed
```

```
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PS E:\NEHA_ENGG\BE\Distributed systems\IDL CORBA DSprac2> Start-Process -NoNewWindow orbd -ArgumentList "-ORBInitialPort 1050"
>>
PS E:\NEHA_ENGG\BE\Distributed systems\IDL CORBA DSprac2> Start-Process -NoNewWindow java -ArgumentList "ReverseServer -ORBInitialPort 1050 -ORBI
nitialHost localhost"
>>
PS E:\NEHA_ENGG\BE\Distributed systems\IDL CORBA DSprac2> Reverse Object Created
Step1
Step2
Step3
Step4
Reverse Server reading and waiting....
[]

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```

PROBLEMS 25 OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR

PS E:\NEHA\_ENGG\BE\Distributed systems\IDL CORBA DSprac2> java ReverseClient -ORBInitialPort 1050 -ORBInitialHost localhost  
>>  
Enter String=  
hi this is corba application  
Server Send noitacilppa abroc si siht ih  
PS E:\NEHA\_ENGG\BE\Distributed systems\IDL CORBA DSprac2>

orbd  
powersh...

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