

Assignment No.2

Problem Statement:

Develop any distributed application using CORBA to demonstrate object brokering.

Code:

1. ReverseModule.idl

```
module ReverseModule
{
    interface Reverse
    {
        string reverse_string(in string str);
    };
}
```

2. 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)));
    }
}
```

3. 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 calculator 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();
    }
}
}

```

4. ReverseClient.java

```

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
            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";
        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();
    }
}
}

```

OUTPUT:

```

Activities Terminal Tue 13:02
File Edit View Search Terminal Help
student@ITLAB2:~$ cd Desktop
student@ITLAB2:~/Desktop$ cd IDL\ CORBA\
> ^
student@ITLAB2:~/Desktop$ cd IDL\ CORBA\
student@ITLAB2:~/Desktop/IDL CORBA$ idlj -fall ReverseModule.idl
student@ITLAB2:~/Desktop/IDL CORBA$ sudo update-alternatives --config javac
[sudo] password for student:
There are 2 choices for the alternative javac (providing /usr/bin/javac).
      Selection    Path          Priority   Status
                                                auto mode
0            /usr/lib/jvm/java-11-openjdk-amd64/bin/javac  1111
1            /usr/lib/jvm/java-11-openjdk-amd64/bin/javac  1111
* 2           /usr/lib/jvm/java-8-openjdk-amd64/bin/javac  1081
manual mode

Press <enter> to keep the current choice[*], or type selection number: 2
student@ITLAB2:~/Desktop/IDL CORBA$ javac *.java ReverseModule/*.java
Note: ReverseModule/ReversePOA.java uses unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
student@ITLAB2:~/Desktop/IDL CORBA$ orbd -ORBInitialPort 1050&
[1] $120
student@ITLAB2:~/Desktop/IDL CORBA$ java ReverseServer -ORBInitialPort 1050& -ORBInitialHost localhost&
[2] $139
[3] $140
student@ITLAB2:~/Desktop/IDL CORBA$ Reverse Object Created
Step1
Step2
Step3
Step4
Reverse Server reading and waiting....
-ORBInitialHost: command not found
student@ITLAB2:~/Desktop/IDL CORBA$ 

```

```

Activities Terminal Tue 13:02
File Edit View Search Terminal Help
student@ITLAB2:~$ cd Desktop
student@ITLAB2:~/Desktop$ cd IDL\ CORBA\
student@ITLAB2:~/Desktop/IDL CORBA$ java ReverseClient -ORBInitialPort 1050 -ORBInitialHost localhost
Enter String=
hi how are you
Server Send uoy era woh ih
student@ITLAB2:~/Desktop/IDL CORBA$ 

```