

# Assignment 2

## 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 reverse 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();
    }
}
}
}

```

```

aman@aman-VMware-Virtual-Platform: ~/Desktop/DS/Ass2
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$ idlj -fall ReverseModule.idl
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$ javac *.java ReverseModule/*.java
ReverseModule/_ReverseStub.java:46: warning: IORCheckImpl is internal proprietary API and may be removed in a future release
    com.sun.corba.se.impl.orbutil.IORCheckImpl.check(str, "ReverseModule._ReverseStub");
    ^
Note: ReverseModule/ReversePOA.java uses unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.
1 warning
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$ orbd -ORBInitialPort 1050&
[1] 6418
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$

```

```

OpenJDK Runtime Environment (build 21.0.6+7-Ubuntu-124.10.1)
OpenJDK 64-Bit Server VM (build 21.0.6+7-Ubuntu-124.10.1, mixed mode, sharing)
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$ sudo update-alternatives --config java
There are 2 choices for the alternative java (providing /usr/bin/java).

  Selection    Path                                          Priority  Status
  -----
* 0            /usr/lib/jvm/java-21-openjdk-amd64/bin/java  2111    auto mode
  1            /usr/lib/jvm/java-21-openjdk-amd64/bin/java  2111    manual mode
  2            /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/java 1081    manual mode

Press <enter> to keep the current choice[*], or type selection number: 2
update-alternatives: using /usr/lib/jvm/java-8-openjdk-amd64/jre/bin/java to provide /usr/bin/java (java) in manual mode
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$ java ReverseServer -ORBInitialPort 1050& -ORBInitialHost localhost&
[1] 7147
[2] 7148
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$ -ORBInitialHost: command not found
Reverse Object Created
Step1
Step2
Step3
Step4
Reverse Server reading and waiting....
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$

```

```
aman@aman-VMware-Virtual-Platform: ~/Desktop/DS/Ass2
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$ java ReverseClient -ORBInitialPort 1050 -ORBInitialHost localhost
Enter String=
hello_aman
Server Send nama_olleh
aman@aman-VMware-Virtual-Platform:~/Desktop/DS/Ass2$
```