Corba – CallBack

```
       ======
       Hello.idl
       =====
 4  module HelloApp {
        interface HelloCallback {
            void callback(in string message);
        };
 8      interface Hello {
            string sayHello(in HelloCallback objRef, in string message);
            oneway void shutdown();
        };
12  };
       ======
       HelloServeur.java
       =====
16  import org.omg.CORBA.*;
    import org.omg.PortableServer.*;
    import java.util.*;
    import java.io.*;
20  import org.omg.CosNaming.*;
    import HelloApp.HelloPOA;
    import HelloApp.Hello;
    import HelloApp.HelloCallback;
24  import HelloApp.HelloHelper;

    class HelloImpl extends HelloPOA {
      private ORB orb;
28    public void setORB(ORB orb_val) {
        orb = orb_val;
      }
      public String sayHello (HelloCallback objRef, String message) {
32      objRef.callback(message);
        return "second affichage";
      }
      public void shutdown() {
36      orb.shutdown(false); }
    }

    public class HelloServeur {
40    public static void main(String args[]) {
        try{
          ORB orb = ORB.init(args, null);

44        HelloImpl helloImpl = new HelloImpl();
          helloImpl.setORB(orb);

          // init POA
48        POA rootpoa =
          POAHelper.narrow(orb.resolve_initial_references("RootPOA"));
          rootpoa.the_POAManager().activate();

52        org.omg.CORBA.Object ref = rootpoa.servant_to_reference(helloImpl);
          Hello href = HelloHelper.narrow(ref);

          // inscription de l'objet au service de noms
56        org.omg.CORBA.Object objRef =
              orb.resolve_initial_references("NameService");
          NamingContextExt ncRef = NamingContextExtHelper.narrow(objRef);
          NameComponent path[] = ncRef.to_name( "Hello" );
60        ncRef.rebind(path, href);

          System.out.println("HelloServeur ready and waiting ...");
          orb.run();
64      }

        catch (Exception e) {
          System.err.println("ERROR: " + e);
68        e.printStackTrace(System.out);
        }

        System.out.println("HelloServeur Exiting ..."); }
72  }
```

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```
       ======
       HelloClient.java
       =====
76  import org.omg.CORBA.*;
    import org.omg.PortableServer.*;
    import java.util.*;
    import java.io.*;
80  import org.omg.CosNaming.*;
    import HelloApp.HelloCallbackPOA;
    import HelloApp.Hello;
    import HelloApp.HelloHelper;
84  import HelloApp.HelloCallback;
    import HelloApp.HelloCallbackHelper;

    class HelloCallbackImpl extends HelloCallbackPOA {
88    public void callback(String message) {
        System.out.println(message);     }}

    class ThreadRun extends Thread {
92    private ORB orb;
      public ThreadRun(ORB orb) {
        this.orb = orb;
      }
96    public void run() {
        try{
          orb.run();
        } catch (Exception e) {
100       System.out.println("ERROR:" + e) ;
          e.printStackTrace(System.out);
          System.exit(1);
        }
104   }
      public void shutdown() {
        orb.shutdown(false);     }}

108 public class HelloClient {
      public static void main(String args[]) {
        try{
          ORB orb = ORB.init(args, null);
112       org.omg.CORBA.Object objRef =
              orb.resolve_initial_references("NameService");
          NamingContextExt ncRef = NamingContextExtHelper.narrow(objRef);
          String name = "Hello";
116
          // obtenir reference sur l'objet distant
          Hello helloImpl = HelloHelper.narrow(ncRef.resolve_str(name));
          // Init POA
120       POA rootpoa =
              POAHelper.narrow(orb.resolve_initial_references("RootPOA"));
          rootpoa.the_POAManager().activate();

          // creer l'objet qui sera appele' depuis le serveur
124       HelloCallbackImpl helloCallbackImpl = new HelloCallbackImpl();
          org.omg.CORBA.Object ref =
              rootpoa.servant_to_reference(helloCallbackImpl);
128       HelloCallback hcbref = HelloCallbackHelper.narrow(ref);

          // lancer l'ORB dans un thread
          ThreadRun thread = new ThreadRun(orb);
132       thread.start();

          // declenche la methode sur l'objet distant
          System.out.println(helloImpl.sayHello(hcbref,"premier affichage"));
136
          // shutdown
          helloImpl.shutdown();
          thread.shutdown();
140
        } catch (Exception e) {
          System.out.println("ERROR:" + e) ;
          e.printStackTrace(System.out);         }}}
```