Web :

JSP :

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
   pageEncoding="UTF-8" import="java.util.*, model.*"
   %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Associate</title>
</head>
<body>

        <h1>Persons</h1>
        <br>
        <%
        ArrayList<Person> personList = (ArrayList<Person>) request.getAttribute("PersonList");
        ArrayList<Address> addressList = (ArrayList<Address>) request.getAttribute("AddressList");
        for (Person p : personList) {
                String a = p.getFirstName() + " " + p.getLastName();
        %>
                <div>
                        <input type="radio" id="<%= p.getId() %>" value="<%= a %>" name="1">
                        <label for="<%= a %>"><%= a %></label>
                </div>
                <br>
        <%
        }
        %>
        <h1>Address</h1>
        <br>
        <%
        for (Address a : addressList) {
                String b = a.getStreet() + " " + a.getCity();
        %>
                <div>
                        <input type="radio" id="<%= a.getId() %>" value="<%= b %>" name="2">
                        <label for="<%= b %>"><%= b %></label>
                </div>
                <br>
        <%
        }
        %>
</body>
</html>
```

—----------------------

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
   pageEncoding="UTF-8" import="java.util.*, model.*"
   %>
<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>List</title>
</head>
<body>

        <h1>List</h1>
        <br>
        <%
        ArrayList<Person> personList = (ArrayList<Person>) request.getAttribute("PersonList");
        Collection<Address> addressList = (Collection<Address>) request.getAttribute("AddressList");
        for (Person p : personList) {
                String out1 = p.getFirstName() + " " + p.getLastName();
        %>
                <%= out1 %> <br>
        <%
                for (Address a : addressList) {
                        String out2 = a.getStreet() + " " + a.getCity();
                %>
                        &nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;<%= out2 %> <br>
                <%
                }
                %>
                <br>
        <%
        }
        %>
</body>
</html>
```

Html:

```
<html>
<body>

<h3>Add address</h3>

<div>
  <form action="Serv" method="get">
    <label for="fname">Street</label>
    <input type="text" id="street" name="street" placeholder="3 rue Camichel">

    <label for="lname">City</label>
    <input type="text" id="city" name="city" placeholder="Toulouse">

    <input type="submit" name="op" value="AddAddress">
  </form>
</div>

</body>
</html>
—----------------------------------
</style>
<body>

<h3>Add person</h3>

<div>
  <form action="Serv" method="get">
    <label for="fname">First Name</label>
    <input type="text" id="fname" name="firstName" placeholder="Hamza">

    <label for="lname">Last Name</label>
    <input type="text" id="lname" name="lastName" placeholder="Mouddene">

    <input type="submit" name="op" value="AddPerson">
  </form>
</div>

</body>
</html>
—-------------------<!DOCTYPE html>
<html>
<head>
<meta charset="UTF-8">
<title>Insert title here</title>
</head>
<body>
        <br>
        <a href="./addPerson.html">Add person</a><br>
        <a href="./addAddress.html">Add address</a><br>
        <a href="http://localhost:8080/Agenda/Serv?op=Associate">Associate</a><br>
        <a href="http://localhost:8080/Agenda/Serv?op=List">List</a>
</body>
```

```
</html>
```

Servlet:

```
package controller;

import java.io.IOException;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.HttpServlet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;

import model.AgendaImpl;
import model.IAgendaLocal;

/**
 * Servlet implementation class Servlet
 */
@WebServlet("/Serv")
public class Servlet extends HttpServlet {
	private static final long serialVersionUID = 1L;
	IAgendaLocal agenda;

    /**
     * Default constructor.
     */
    public Servlet() {
        super();
        this.agenda = new AgendaImpl();
    }

	/**
	 * @see HttpServlet#doGet(HttpServletRequest request, HttpServletResponse response)
	 */
	protected void doGet(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
		String op = request.getParameter("op");
		if (op.equals("AddPerson")) {
			System.out.println("Add person started...");
			this.agenda.AddPerson(request.getParameter("firstName"),
request.getParameter("lastName"));
			System.out.println("Add person done with success");
			request.getRequestDispatcher("index.html").forward(request, response);
		} else if (op.equals("AddAddress")) {
			this.agenda.AddAddress(request.getParameter("street"),
request.getParameter("city"));
			request.getRequestDispatcher("index.html").forward(request, response);
		} else if (op.equals("Associate")) {
			System.out.println("Associate started...");
			request.setAttribute("PersonList", this.agenda.personList());
			request.setAttribute("AddressList",this.agenda.addressList());
			request.getRequestDispatcher("Associate.jsp").forward(request, response);
			System.out.println("List done with success");
		} else if (op.equals("List")) {
			System.out.println("List started...");
			request.setAttribute("PersonList", this.agenda.personList());
			request.setAttribute("AddressList",this.agenda.addressList());
			request.getRequestDispatcher("List.jsp").forward(request, response);
			System.out.println("List done with success");
		}
	}

	/**
	 * @see HttpServlet#doPost(HttpServletRequest request, HttpServletResponse response)
	 */
	protected void doPost(HttpServletRequest request, HttpServletResponse response) throws
ServletException, IOException {
		doGet(request, response);
}

}
```

Façade :

```
package model;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Statement;
import java.sql.Types;
import java.util.ArrayList;

import model.Address;
import model.Person;

public class AgendaImpl implements IAgendaLocal {

        Connection con;
        int personID, addressID;

        public AgendaImpl() {
                this.personID = 0;
                this.addressID = 0;
                try {
                        String db_url = "jdbc:hsqldb:hsql://localhost/xdb";
                        String db_user = "sa";
                        Class.forName("org.hsqldb.jdbcDriver");
                        this.con = DriverManager.getConnection(db_url, db_user, null);
                } catch (Exception e) {
                        e.printStackTrace();
                }
        }

        @Override
        public void AddPerson(String firstName, String lastName) {
                try {
                        PreparedStatement ps;
                        System.out.println("INSERT INTO PERSONNE VALUES(?,?,?) " + firstName + " " +
lastName);
                        ps = con.prepareStatement("INSERT INTO \"PUBLIC\".\"PERSONNE\"\n" +
                                        "( \"ID\", \"NOM\", \"PRENOM\" ) VALUES(?,?,?)");
                        ps.setNull(1, this.personID++);
                        ps.setString(2, firstName);
                        ps.setString(3, lastName);
                        ps.executeUpdate();
                        System.out.println("INSERT done");
                } catch (SQLException e) {
                        e.printStackTrace();
                }
        }

        @Override
        public void AddAddress(String street, String city) {
                try {
                        PreparedStatement ps;
                        ps = con.prepareStatement("INSERT INTO \"PUBLIC\".\"ADRESSE\"\n" +
                                        "( \"ID\", \"RUE\", \"VILLE\", \"PERSONNEID\" )\n" +
                                        "VALUES (?,?,?,?)");
                        ps.setNull(1, this.addressID++);
                        ps.setString(2, street);
                        ps.setString(3, city);
                        ps.setNull(4, Types.INTEGER);
                        ps.executeUpdate();
```

```
		} catch (SQLException e) {
			e.printStackTrace();
		}
	}

	@Override
	public ArrayList<Person> personList() {
		try {
			System.out.println("1");
			ArrayList<Person> personList = new ArrayList<>();
			System.out.println("2");
			Statement s = con.createStatement();
			System.out.println("3");
			ResultSet res = s.executeQuery("SELECT * FROM \"PUBLIC\".\"PERSONNE\"");
			System.out.println("4");
			while (res.next()) {
				System.out.println("4.1" + res.getInt(1) +  res.getString(2) + res.getString(3));
				Person p = new Person(res.getInt(1), res.getString(2), res.getString(3));
				System.out.println("4.2");
				personList.add(p);
				System.out.println("4.3");
			}
			System.out.println("5");
			return personList;
		} catch (SQLException e) {
			e.printStackTrace();
			System.out.println("Exception list person");
			return null;
		}
	}

	@Override
	public ArrayList<Address> addressList() {
		try {
			System.out.println("1");
			ArrayList<Address> addressList = new ArrayList<>();
			System.out.println("2");
			Statement s = con.createStatement();
			System.out.println("3");
			ResultSet res = s.executeQuery("SELECT * FROM \"PUBLIC\".\"ADRESSE\"");
			System.out.println("4");
			while (res.next()) {
				System.out.println("4.1" + res.getInt(1) +  res.getString(2) + res.getString(3));
				System.out.println(res.toString());
				Address a = new Address(res.getInt(1), res.getString(2), res.getString(3));
				System.out.println("4.2");
				addressList.add(a);
				System.out.println("4.3");
			}
			System.out.println("5");
			return addressList;
		} catch (SQLException e) {
			e.printStackTrace();
			System.out.println("Exception list address");
			return null;
		}
	}

	@Override
	public void associate(int personID, int addressID) {
		try {
			PreparedStatement ps;
			ps = con.prepareStatement("UPDATE \"PUBLIC\".\"ADRESSE\" SET
PERSONNE.ID=? WHERE ID=?");
			ps.setNull(1, personID);
			ps.setNull(2, addressID);
			ps.executeUpdate();
```

```
				} catch (SQLException e) {
					e.printStackTrace();
				}
		}

}
package model;

import java.util.ArrayList;

import javax.ejb.Local;

import model.Address;
import model.Person;

@Local
public interface IAgendaLocal {

		public void AddPerson(String firstName, String lastName);

		public void AddAddress(String street, String city);

		public ArrayList<Person> personList();

		public ArrayList<Address> addressList();

		public void associate(int personID, int addressID);
}
```