

SERVLETS AND JSP COURSE

EJERCICIO

HANDLING HTML FORMS WITH SERVLETS



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EXERCISE OBJECTIVE

We are going to create a project to learn how to use HTML forms with Servlets. At the end we will see:

Data Registration Form

User (*)	<input type="text" value="admin"/>
Password: (*)	<input type="password" value="..."/>
Technologies of Interest: (*)	Java <input checked="" type="checkbox"/> .Net <input checked="" type="checkbox"/> Php <input checked="" type="checkbox"/>
Gender: (*)	Male <input checked="" type="radio"/> Female <input type="radio"/>
Occupation: (*)	<input type="text" value="Teacher"/>
Favorite Music:	<div>Rock ▲ Pop Salsa ▼</div>
Comments:	<div>comment</div>

1: CREATE A NEW PROJECT

Create a new web Project using Maven:

New Web Application

Steps

1. Choose Project
2. **Name and Location**
3. Settings

Name and Location

Project Name: HandlingForm

Project Location: C:\Courses\Servlets\Lesson04 Browse...

Project Folder: C:\Courses\Servlets\Lesson04\HandlingForm

Artifact Id: HandlingForm

Group Id: web

Version: 1

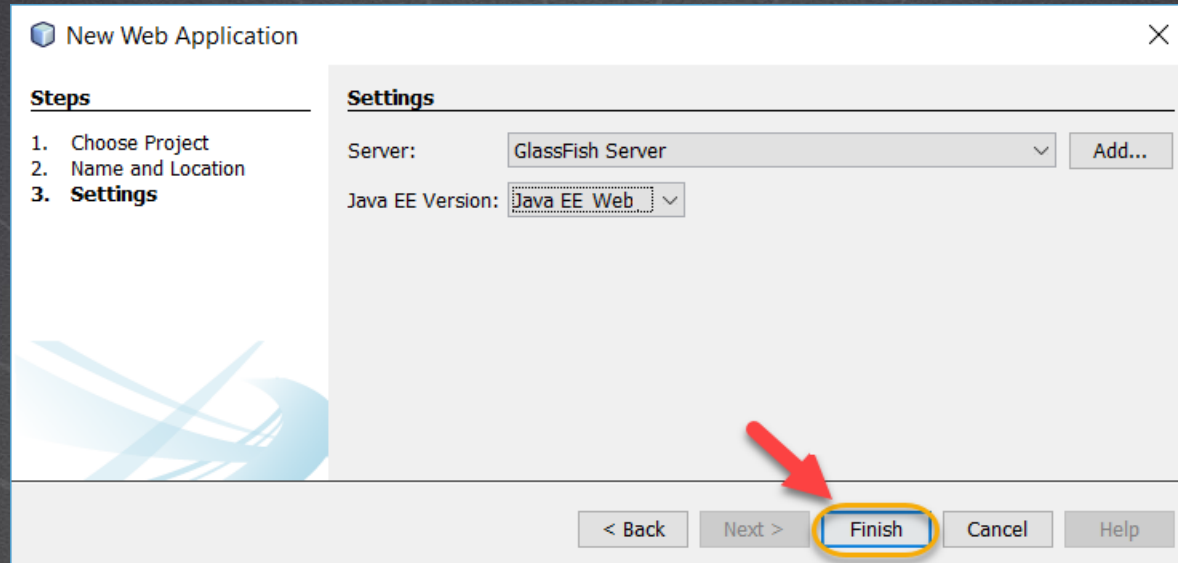
Package: (Optional)

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1: CREATE A NEW PROJECT (CONT)



New Web Application

Steps

1. Choose Project
2. Name and Location
3. **Settings**

Settings

Server: GlassFish Server Add...

Java EE Version: Java EE Web

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2: CREATE A NEW CLASS

New Java Class

Steps

1. Choose File Type
2. **Name and Location**

Name and Location

Class Name:

Project:

Location:

Package:

Created File:

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3. MODIFY THE CODE

Servlet.java:

```
package web;

import java.io.*;
import javax.servlet.ServletException;
import javax.servlet.annotation.WebServlet;
import javax.servlet.http.*;

@WebServlet(name = "Servlet", urlPatterns = {"/Servlet"})
public class Servlet extends HttpServlet {

    @Override
    protected void doPost(HttpServletRequest request, HttpServletResponse response)
        throws ServletException, IOException {

        response.setContentType("text/html;charset=UTF-8");
        try (PrintWriter out = response.getWriter()) {
            String user = request.getParameter("user");
            String password = request.getParameter("password");
            // The technology element can have several
            // values, so we process it as an array
            String[] technologies = request.getParameterValues("technology");
            String gender = request.getParameter("gender");
            String occupation = request.getParameter("occupation");
            // The music component, indicates that you can
            // select multiple elements, therefore
            // we process it as an arrangement
            String[] music = request.getParameterValues("music");
            String comments = request.getParameter("comments");
```

3. MODIFY THE CODE

Servlet.java:

```
out.println("<html>");
out.println("<head>");
out.println("<title>Servlet Result</title>");
out.println("</head>");
out.println("<body>");
out.println("<h1>Parameters processed by the Servlet:</h1>");
out.println("<table border='1'>");

out.println("<tr>");
out.println("<td>");
out.println("User");
out.println("</td>");
out.println("<td>");
out.println(user);
out.println("</td>");
out.println("</tr>");

out.println("<tr>");
out.println("<td>");
out.println("Password");
out.println("</td>");
out.println("<td>");
out.println(password);
out.println("</td>");
out.println("</tr>");
```

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3. MODIFY THE CODE

Servlet.java:

```
out.println("<tr>");
out.println("<td>");
out.println("Technologies");
out.println("</td>");
out.println("<td>");
for (String technology : technologies) {
    out.println(technology);
    out.println(" / ");
}
out.println("</td>");
out.println("</tr>");

out.println("<tr>");
out.println("<td>");
out.println("Gender");
out.println("</td>");
out.println("<td>");
out.println(gender);
out.println("</td>");
out.println("</tr>");

out.println("<tr>");
out.println("<td>");
out.println("Occupation");
out.println("</td>");
out.println("<td>");
out.println(occupation);
out.println("</td>");
out.println("</tr>");
```


3. MODIFY THE CODE

Servlet.java:

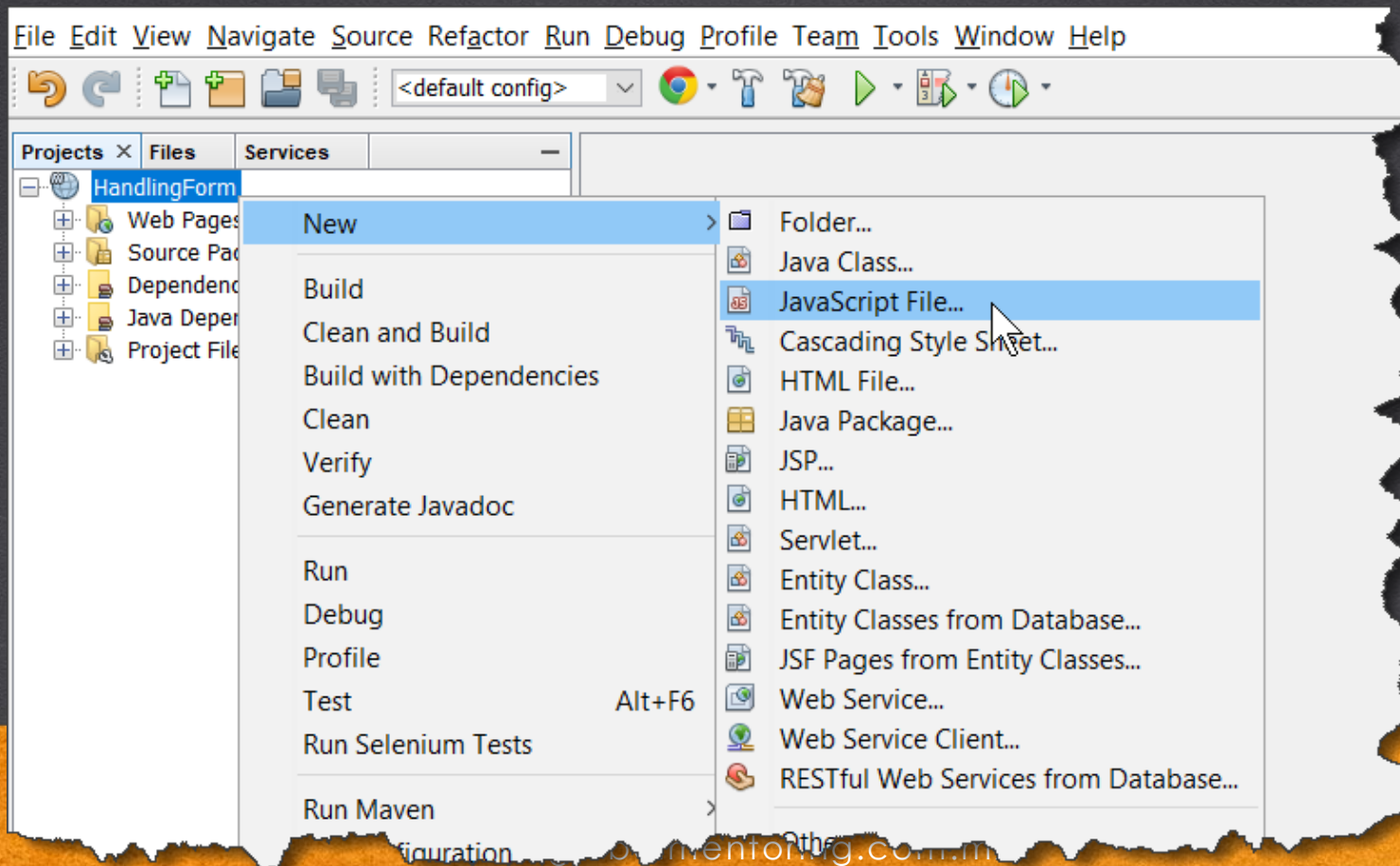
```
        out.println("<tr>");
        out.println("<td>");
        out.println("Favorite Music");
        out.println("</td>");
        out.println("<td>");
        if (music != null) {
            for (String m : music) {
                out.println(m);
                out.println(" / ");
            }
        }
        out.println("</td>");
        out.println("</tr>");

        out.println("<tr>");
        out.println("<td>");
        out.println("Comments");
        out.println("</td>");
        out.println("<td>");
        out.println(comments);
        out.println("</td>");
        out.println("</tr>");

        out.println("<table>");

        out.println("</body>");
        out.println("</html>");
    }
}
```

4. CREATE A NEW JAVASCRIPT FILE



4: CREATE A JAVASCRIPT FILE

New JavaScript File

Steps

1. Choose File Type
2. **Name and Location**

Name and Location

File Name:

Project:

Folder:

Created File:

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5. MODIFY THE FILE

functions.js:

```
/**
 * Function to validate the required elements (*)
 * @param {Object} form
 */
function validateForm(form) {
    //validate the user
    var user = form.user;
    if (user.value == "" || user.value == "Write the user") {
        alert("You must provide a username");
        user.focus();
        user.select();
        return false;
    }

    //Validate the password
    var password = form.password;
    if (password.value == "" || password.value.length < 3) {
        alert("You must provide a password of at least 3 characters");
        password.focus();
        password.select();
        return false;
    }

    //Validate the technologies of interest
    var technologies = form.technology;
    var selectedCheck = false;
```


5. MODIFY THE FILE

functions.js:

```
//Check if a checkbox is selected
for (i = 0; i < technologies.length; i++) {
    if (technologies[i].checked) {
        selectedCheck = true;
        break;
    }
}
if (!selectedCheck) {
    alert("Must provide a Technology");
    return false;
}

//Validate the Gender
var genders = form.gender;
var selectedRadio = false;

//check if a radiobutton is selected
for (i = 0; i < genders.length; i++) {
    if (genders[i].checked) {
        selectedRadio = true;
        break;
    }
}
if (!selectedRadio) {
    alert("You must select the Gender");
    return false;
}
```

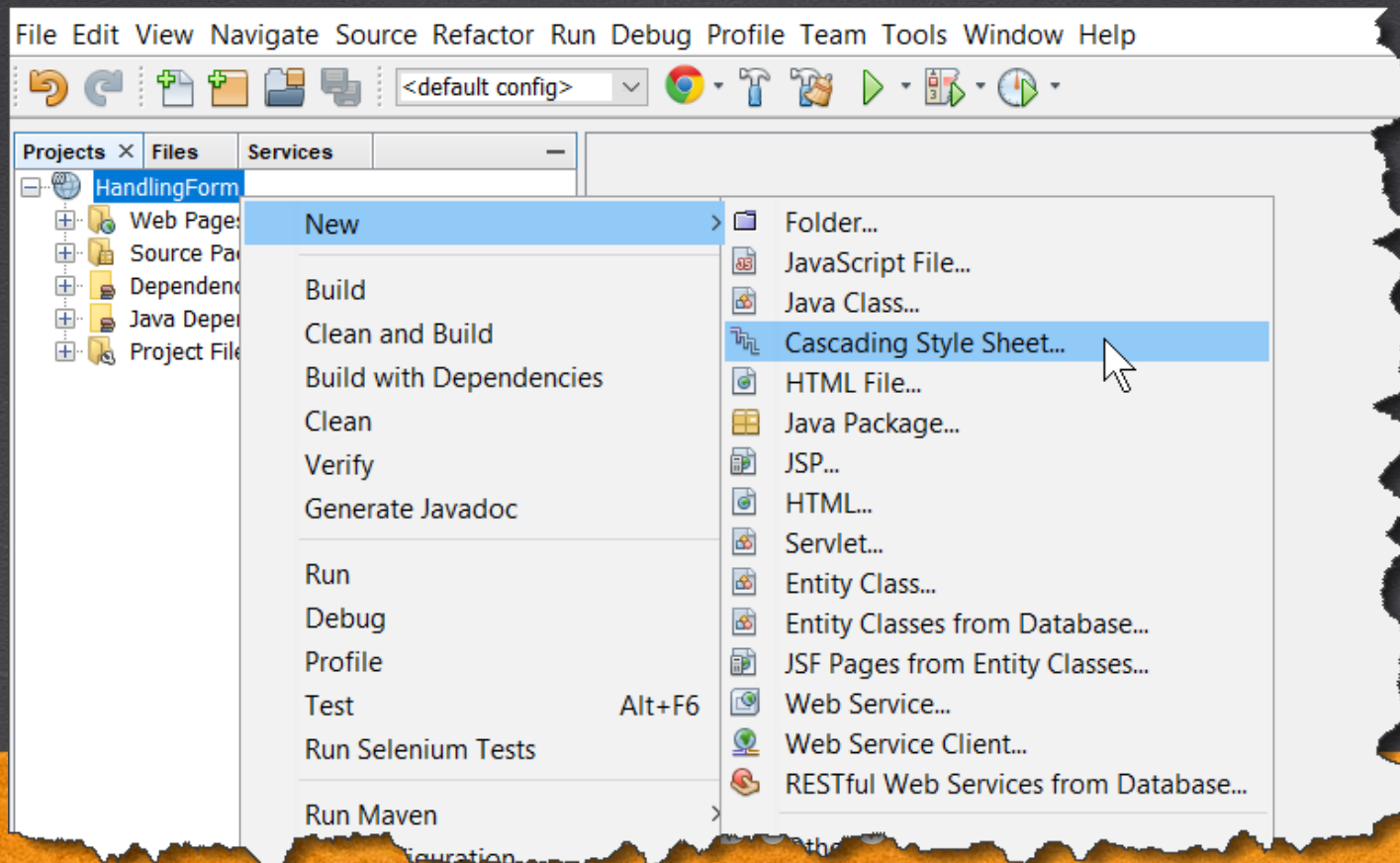
5. MODIFY THE FILE

functions.js:

```
//validate the occupation
var occupation = form.occupation;
if (occupation.value == "") {
    alert("You must select an occupation");
    return false;
}

//Validated form
alert("Valid form, sending data to the server...");
return true;
}
```

6. CREATE A NEW CSS FILE



6. CREATE A NEW CSS FILE

New Cascading Style Sheet

Steps

1. Choose File Type
2. **Name and Location**

Name and Location

File Name:

Project:

Folder:

Created File:

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7. MODIFY THE FILE

styles.css:

```
body, .default {
  line-height: 1.6em;
  font-family: "Lucida Sans Unicode", "Lucida Grande", Sans-Serif;
  font-size: 12px;
  color: #669;
}

#one-column-emphasis
{
  margin: 45px;
  width: 480px;
  text-align: left;
  border-collapse: collapse;
}

#one-column-emphasis caption
{
  font-size: 20px;
}

#one-column-emphasis th
{
  font-size: 14px;
  font-weight: normal;
  padding: 12px 15px;
  color: #039;
}
```

7. MODIFY THE FILE

styles.css:

```
#one-column-emphasis td
{
    padding: 10px 15px;
    color: #669;
    border-top: 1px solid #e8edff;
}

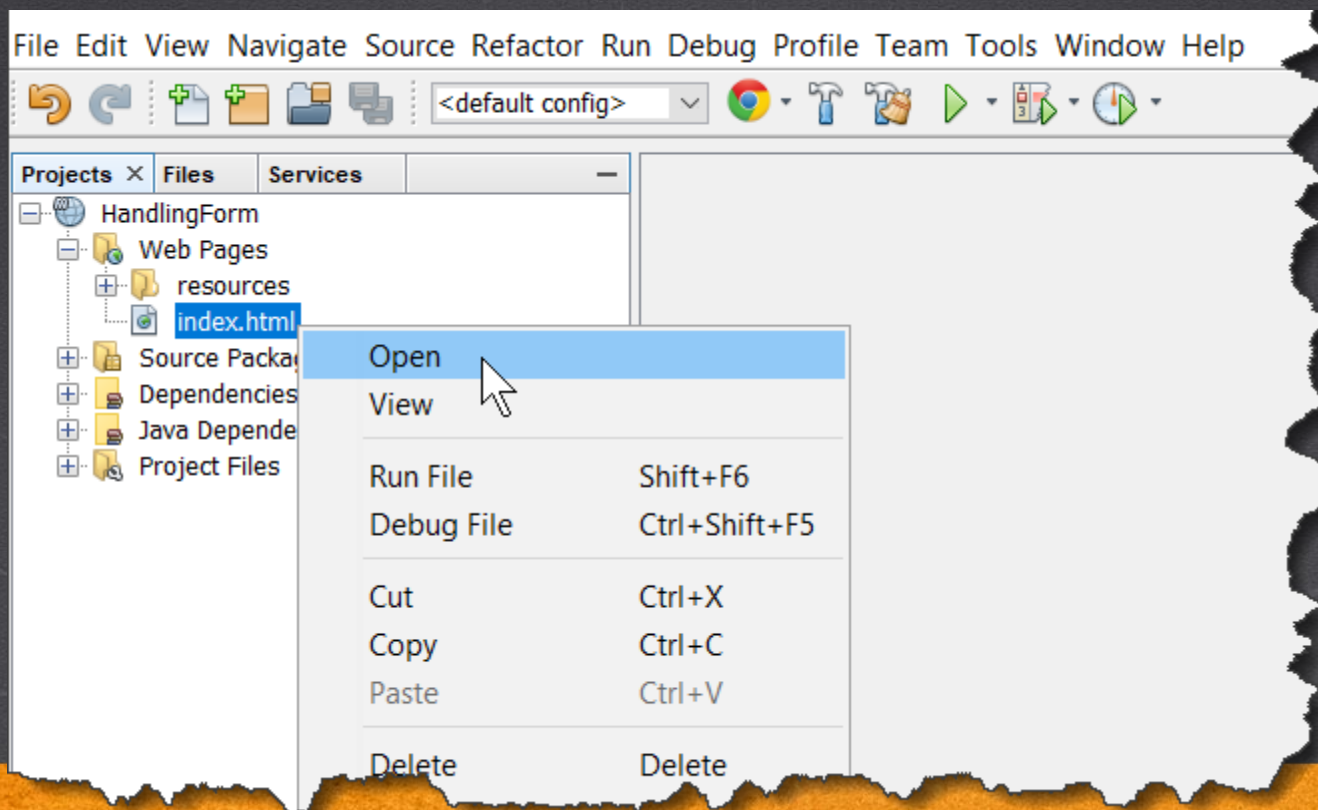
.occ-first
{
    background: #d0dafd;
    border-right: 10px solid transparent;
    border-left: 10px solid transparent;
}

#one-column-emphasis tr:hover td
{
    color: #339;
    background: #eff2ff;
}
```

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8. MODIFY THE INDEX.HTML FILE



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8. MODIFY THE FILE

index.html:

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8">
    <title>Final Form Exercise</title>
    <link rel="stylesheet" type="text/css" href="resources/styles.css">
    <script type="text/javascript" src="resources/functions.js"></script>
  </head>
  <body>
    <form name="form1" action="/HandlingForm/Servlet"
          method="post" onsubmit="return validateForm(this);">

      <input type="hidden" name="hidden" value="hiddenValue">

      <table width="200" id="one-column-emphasis">
        <caption>
          Data Registration Form
        </caption>
        <tr>
          <td class="oce-first">
            User (*)
          </td>
          <td>
            <input class="default" type="text"
                  name="user" value="Write the user"
                  onfocus="this.select();" />
          </td>
        </tr>
      </table>
    </body>
  </html>
```


8. MODIFY THE FILE

index.html:

[illegible]

8. MODIFY THE FILE

index.html:

[illegible]

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8. MODIFY THE FILE

[index.html:](#)

```
<tr>
  <td class="oce-first">
    Favorite Music:
  </td>
  <td>
    <select name="music" multiple class="default">
      <option value="rock">Rock</option>
      <option value="pop">Pop</option>
      <option value="salsa">Salsa</option>
    </select>
  </td>
</tr>
<tr>
  <td class="oce-first">
    Comments:
  </td>
  <td>
    <textarea name="comments" cols="30" rows="2"
      class="default" onfocus="this.select();">
      Write a text</textarea>
  </td>
</tr>
```

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8. MODIFY THE FILE

index.html:

```
<tr style="text-align:center;">
  <td>
    <input type="reset" value="Clean" class="default">
  </td>
  <td>
    <input type="submit" value="Send" class="default">
  </td>
</tr>
</table>
</form>
</body>
</html>
```

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9. VERIFY THE RESULT

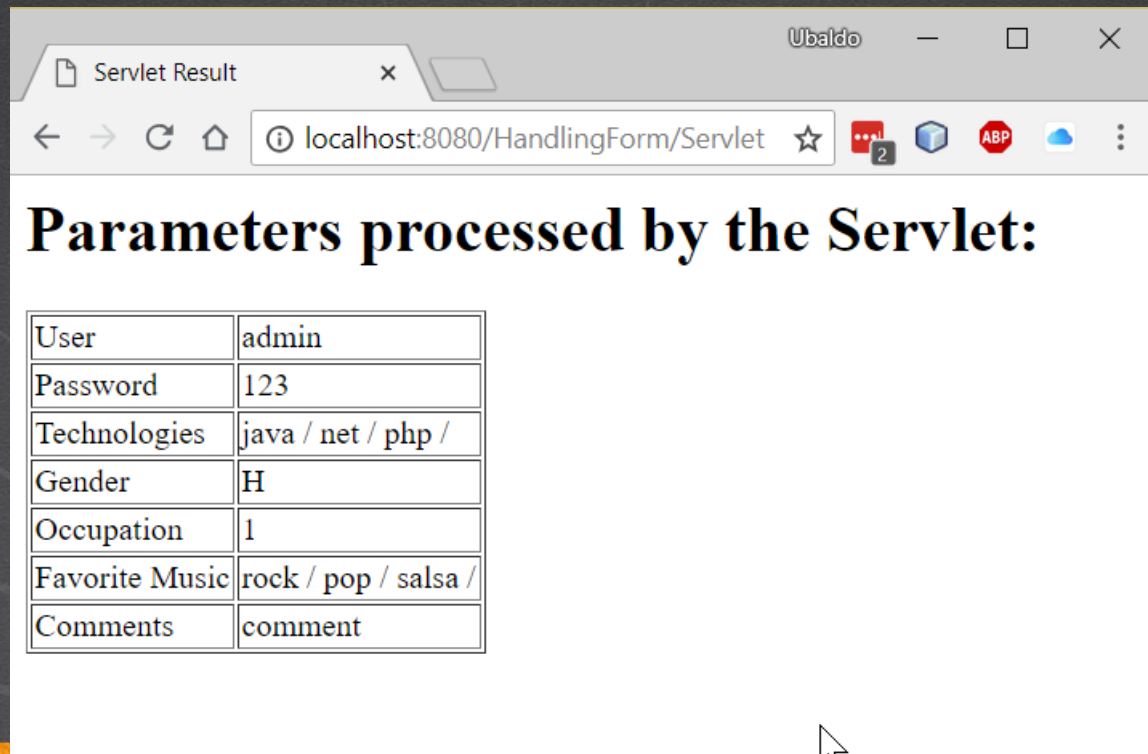
Final Form Exercise

localhost:8080/HandlingForm/

Data Registration Form

User (*)	<input type="text" value="admin"/>
Password: (*)	<input type="password" value="..."/>
Technologies of Interest: (*)	Java <input checked="" type="checkbox"/> .Net <input checked="" type="checkbox"/> Php <input checked="" type="checkbox"/>
Gender: (*)	Male <input checked="" type="radio"/> Female <input type="radio"/>
Occupation: (*)	<input type="text" value="Teacher"/>
Favorite Music:	<div>Rock Pop Salsa</div>
Comments:	<input type="text" value="comment"/>

9. VERIFY THE RESULT



Servlet Result

localhost:8080/HandlingForm/Servlet

Parameters processed by the Servlet:

User	admin
Password	123
Technologies	java / net / php /
Gender	H
Occupation	1
Favorite Music	rock / pop / salsa /
Comments	comment

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EXERCISE CONCLUSION

- With this exercise we put into practice in more detail the handling of parameters received from an HTML form.
- We saw how to process the most common elements in an HTML form, and how to display them from a Servlet. Later we will see how to process more HTML elements with Servlets.



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ONLINE COURSE

SERVLETS & JSPS

By: Eng. Ubaldo Acosta



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