

SERVLETS AND JSP COURSE

EXERCISE

HANDLING OF JAVABEANS

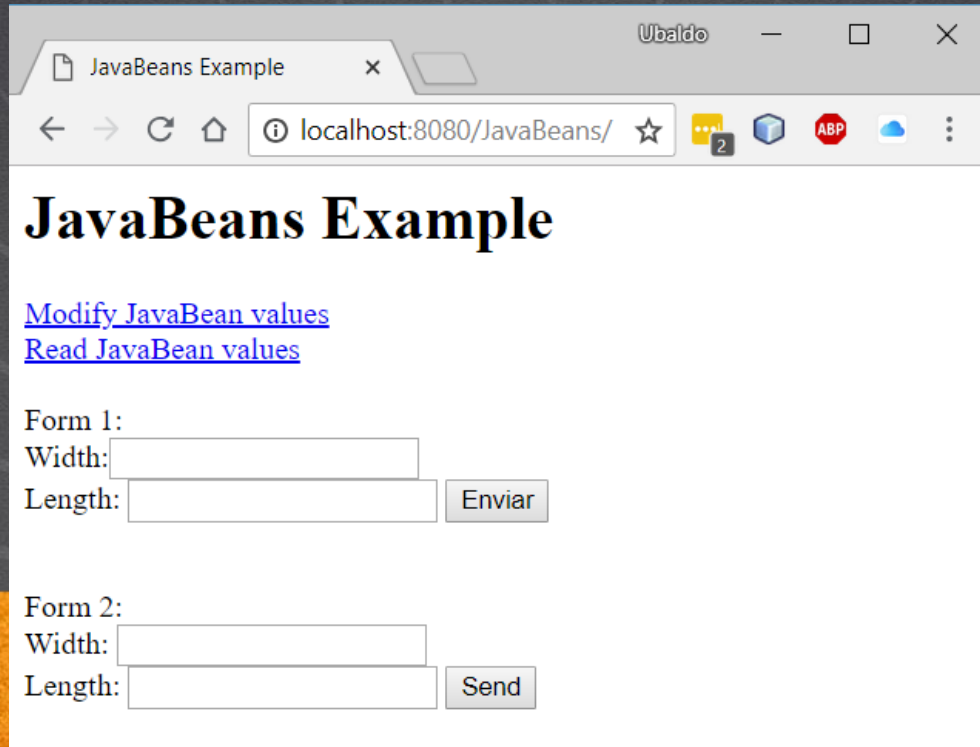


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EXERCISE OBJECTIVE

Create a project to implement the Handling of JavaBeans with JSPs. At the end we should observe the following:



The screenshot shows a web browser window with the title "JavaBeans Example". The address bar displays "localhost:8080/JavaBeans/". The page content includes the title "JavaBeans Example" in a large, bold, black serif font. Below the title are two blue underlined links: "Modify JavaBean values" and "Read JavaBean values". There are two forms on the page. Form 1 is labeled "Form 1:" and contains two input fields: "Width:" and "Length:". To the right of the "Length:" field is a button labeled "Enviar". Form 2 is labeled "Form 2:" and also contains two input fields: "Width:" and "Length:". To the right of the "Length:" field is a button labeled "Send".

JavaBeans Example

[Modify JavaBean values](#)
[Read JavaBean values](#)

Form 1:
Width:
Length: Enviar

Form 2:
Width:
Length: Send

1. CREATE A NEW PROJECT

Create a new project:

New Web Application

Steps

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

Name and Location

Project Name:

Project Location:

Project Folder:

Artifact Id:

Group Id:

Version:

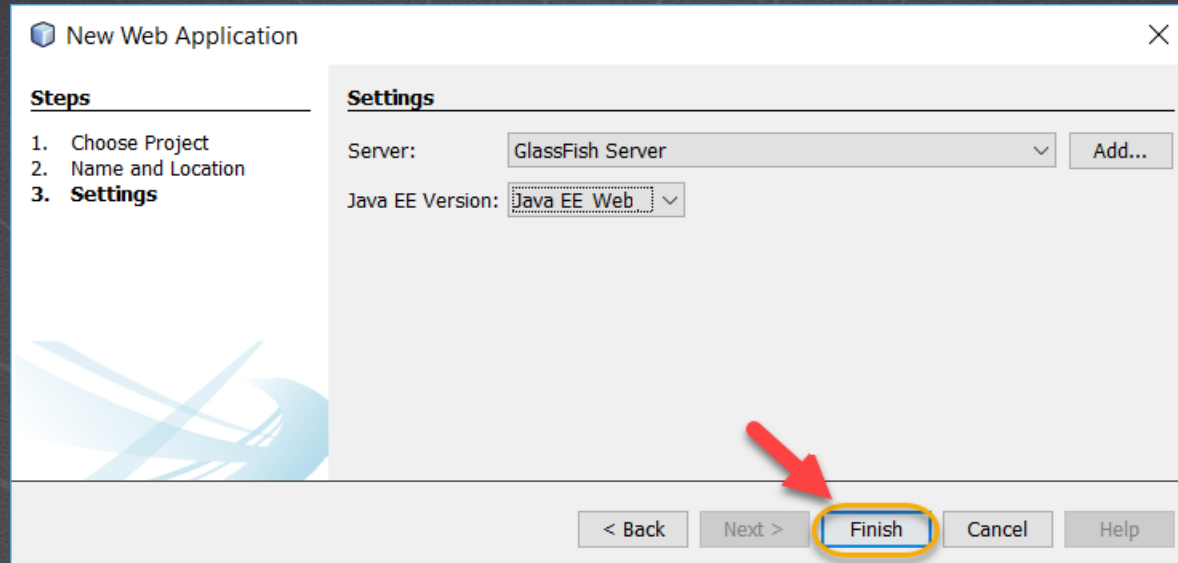
Package: (Optional)

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1. CREATE A NEW PROJECT

Create a new project:



New Web Application

Steps

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

Settings

Server: GlassFish Server Add...

Java EE Version: Java EE Web

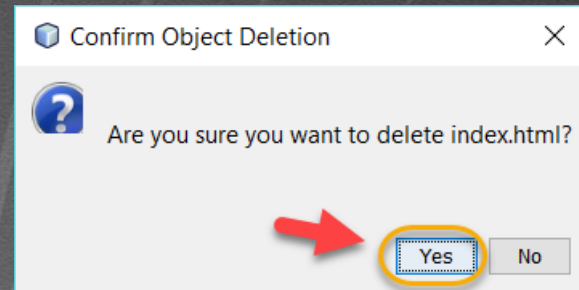
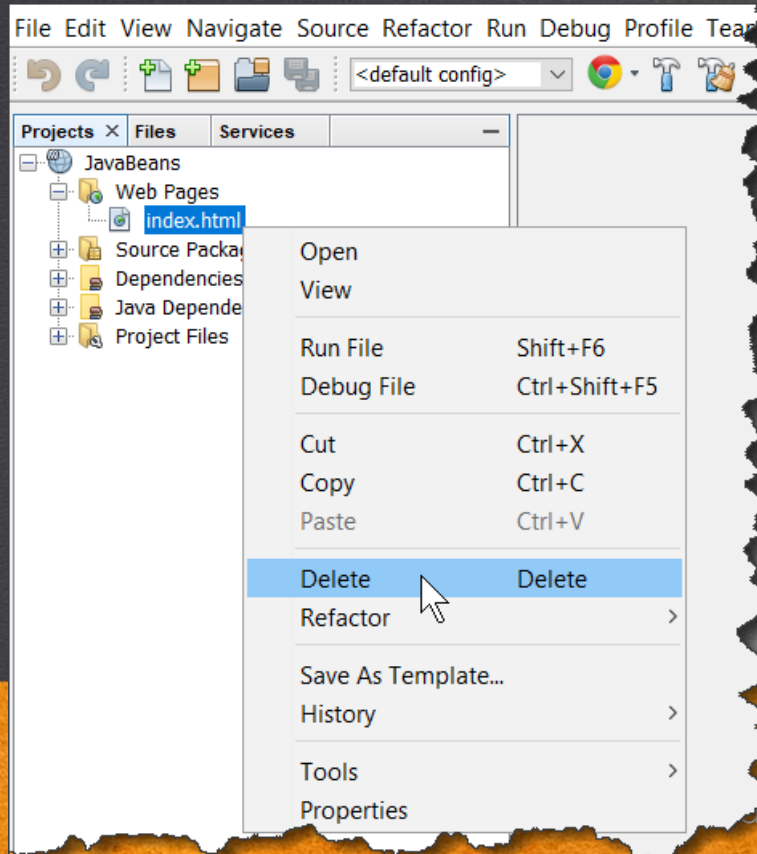
< Back Next > **Finish** Cancel Help

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2. DELETE THE INDEX.HTML FILE

Delete the index.html file:

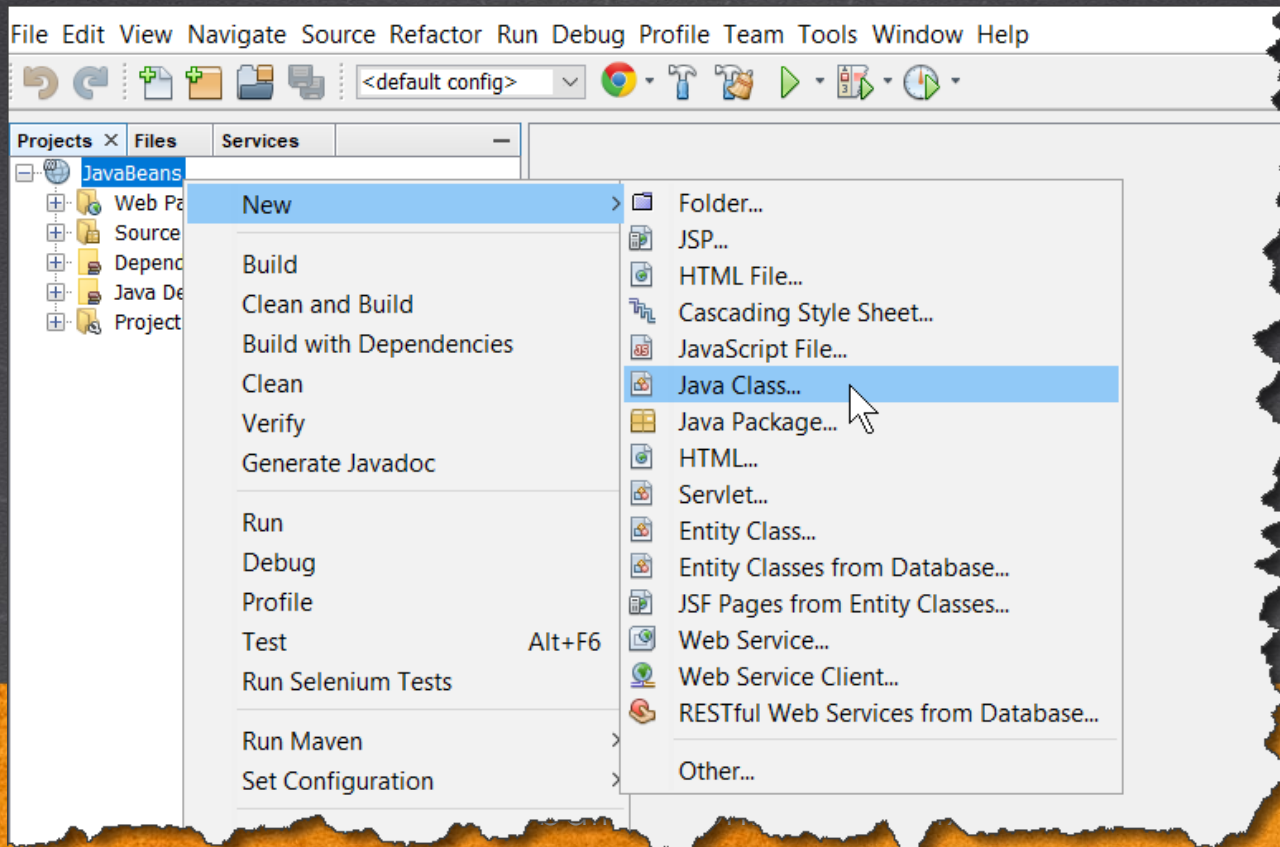


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3. CREATE A NEW JAVA CLASS

Create a new Java Class:



3. CREATE A NEW JAVA CLASS

Create a new Java Class:

New Java Class

Steps

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

Name and Location

Class Name:

Project:

Location:

Package:

Created File:

< Back Next > **Finish** Cancel Help

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4. MODIFY THE CODE

Rectangle.java:

Click to download

```
package beans;
public class Rectangle {
    private int width;
    private int length;

    public int getWidth() {
        return width;
    }

    public void setWidth(int width) {
        this.width = width;
    }

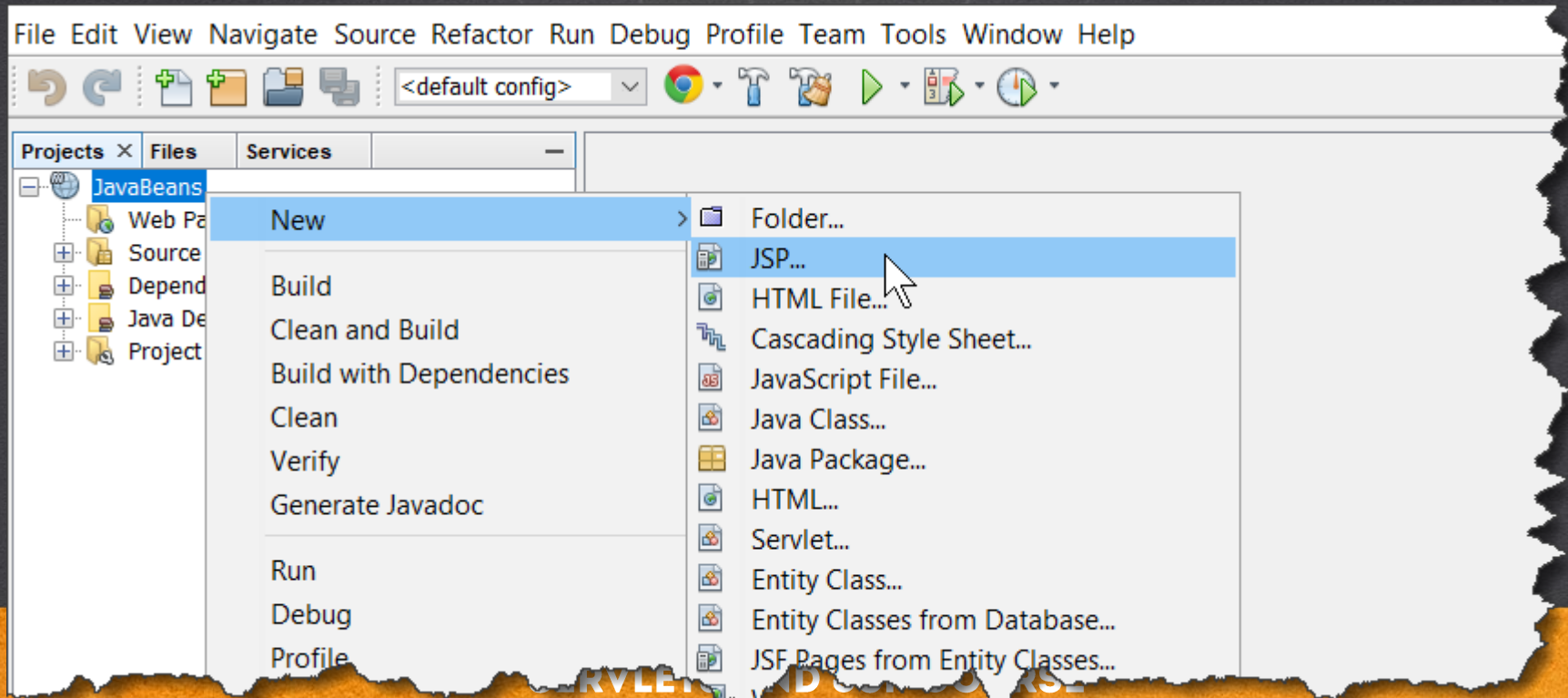
    public int getLength() {
        return length;
    }

    public void setLength(int length) {
        this.length = length;
    }

    /**
     * We add a method that does not map with any property but is the
     * result of a calculation
     *
     * @return int area value
     */
    public int getArea() {
        return this.width * this.length;
    }
}
```


5. CREATE A NEW JSP

Create a new JSP:



5. CREATE A NEW JSP

Create a new JSP:

New JSP

Steps

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

Name and Location

File Name:

Project:

Location:

Folder:

Created File:

Options:

☒ JSP File (Standard Syntax) ☐ Create as a JSP Segment

☐ JSP Document (XML Syntax)

Description:

6. MODIFY THE CODE

[getterJsp.jsp](#)

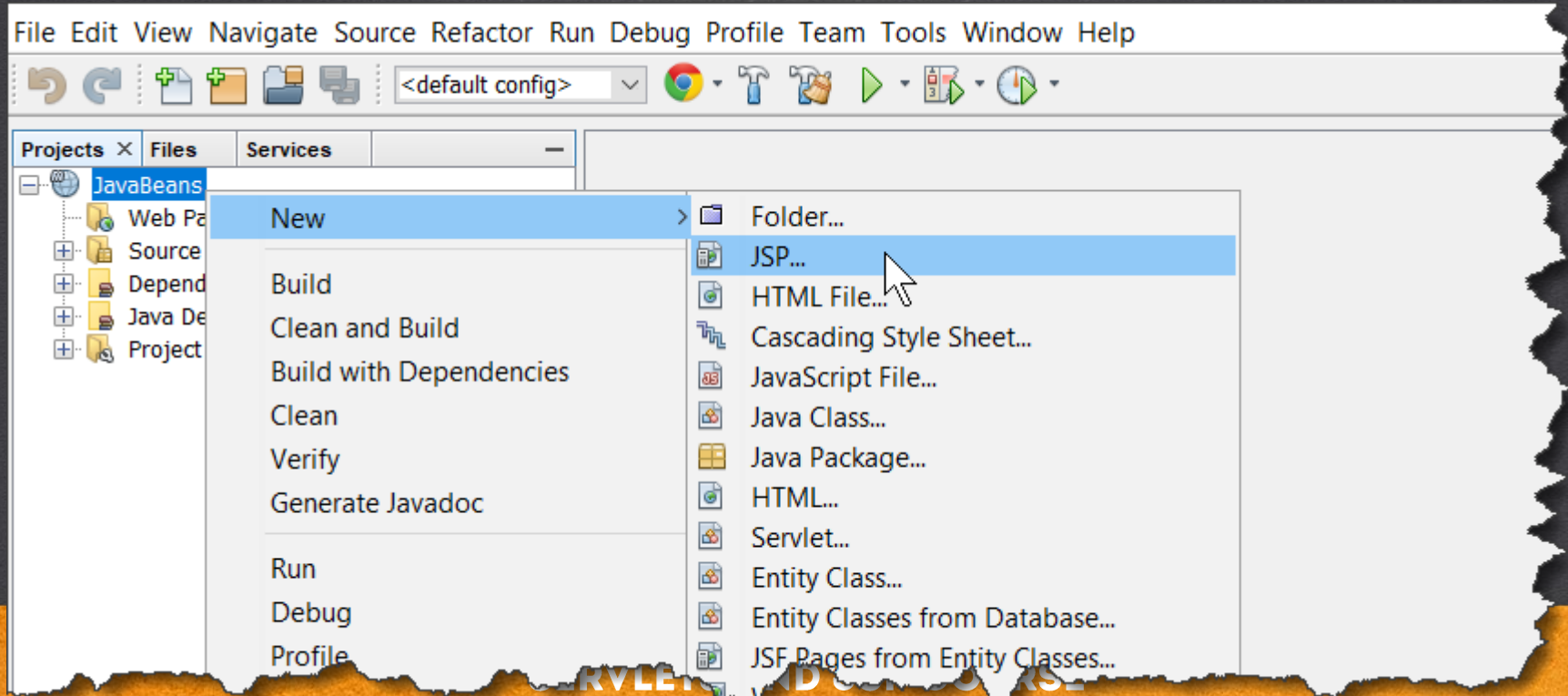
Click to download

```
<html>
  <head>
    <meta charset="UTF-8">
    <title>JSP that reads JavaBean values</title>
  </head>
  <body>
    <h1>JSP that reads JavaBean values</h1>
    <!-- We declare the JavaBean to use
    if there already exists a bean in the session called "rectangle",
    return the same object and do not create a new one -->
    <jsp:useBean id="rectangle" class="beans.Rectangle" scope="session" />

    <!--We retrieve the values and show them-->
    <br>
    Width value: <jsp:getProperty name="rectangle" property="width" />
    <br>
    Length value: <jsp:getProperty name="rectangle" property="length" />
    <br>
    <!--In this case, it does not matter that the property does not exist
    in the JavaBean, just with having a method called getArea ()
    it is possible to simulate a property -->
    Area value: <jsp:getProperty name="rectangle" property="area" />
    <br>
    <br>
    <a href="index.jsp">Return to index</a>
  </body>
</html>
```


7. CREATE A NEW JSP

Create a new JSP:



7. CREATE A NEW JSP

Create a new JSP:

New JSP

Steps

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

Name and Location

File Name:

Project:

Location:

Folder:

Created File:

Options:

☒ JSP File (Standard Syntax) ☐ Create as a JSP Segment

☐ JSP Document (XML Syntax)

Description:

8. MODIFY THE FILE

[setterJsp.jsp](#):

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```
<html>
  <head>
    <meta charset="UTF-8">
    <title>JSP that modifies a JavaBean</title>
  </head>
  <body>
    <h1>JSP that modifies a JavaBean</h1>

    <!-- Declare the JavaBean to be used -->
    <!-- The scope of the variable is of type session -->
    <jsp:useBean id="rectangle"
                  class="beans.Rectangle" scope="session" />
```


8. MODIFY THE FILE

[Archivo setterJsp.jsp:](#)

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Modify the attributes:

<%

//Values in hard code

int widthValue = 5;

int lengthValue = 10;

%>

<jsp:setProperty name="rectangle" property="width"
value="<%=widthValue%>" />

New width value: <%=widthValue%>

<jsp:setProperty name="rectangle" property="length"
value="<%= lengthValue%>" />

New length value: <%= lengthValue%>

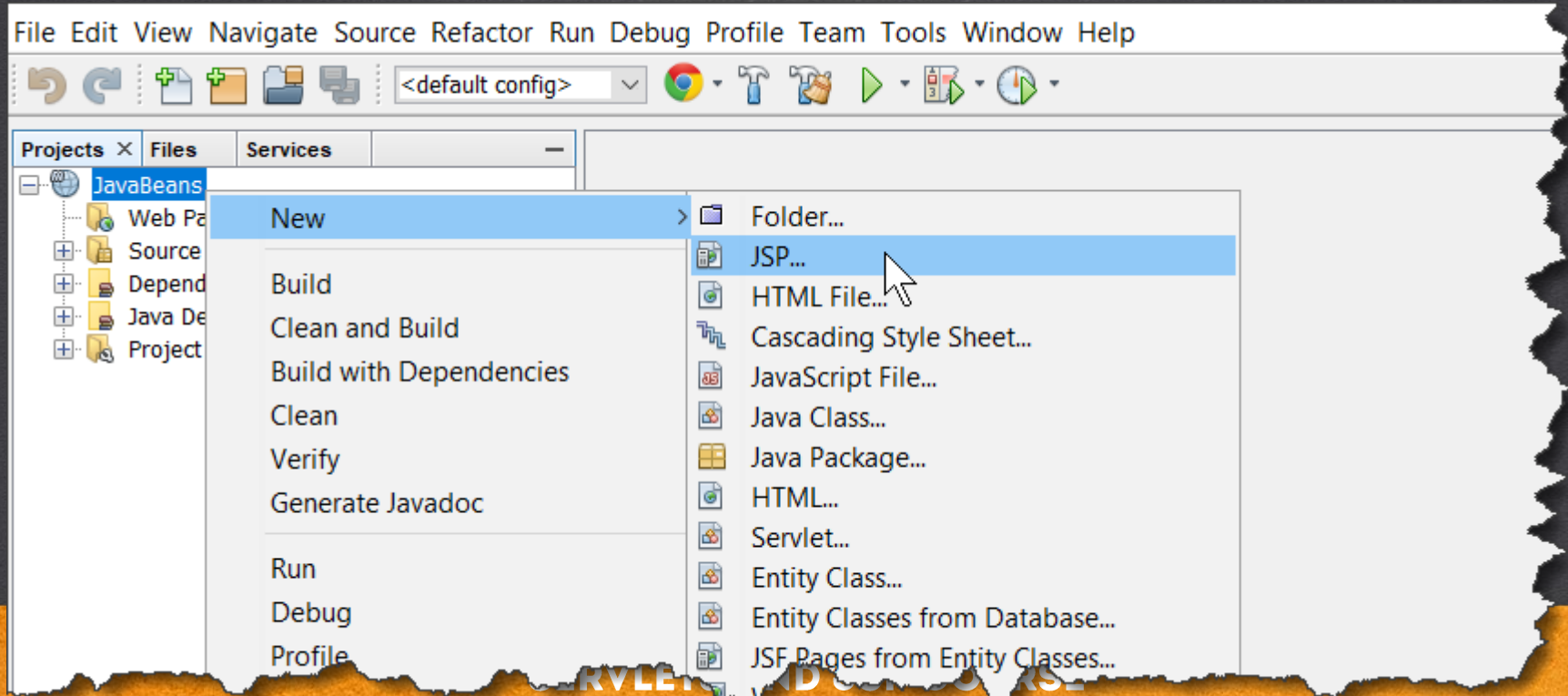
Return to index

</body>

</html>

9. CREATE A NEW JSP

Create a new JSP:



9. CREATE A NEW JSP

Create a new JSP:

New JSP

Steps

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

Name and Location

File Name:

Project:

Location:

Folder:

Created File:

Options:

☒ JSP File (Standard Syntax) ☐ Create as a JSP Segment

☐ JSP Document (XML Syntax)

Description:

10. MODIFY THE CODE

setterParamJsp.jsp:

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```
<html>
  <head>
    <meta charset="UTF-8">
    <title>JSP that modifies a JavaBean by parameters</title>
  </head>
  <body>
    <h1>JSP that modifies a JavaBean by parameters</h1>

    <!--declare the JavaBean to be used-->
    <jsp:useBean id="rectangle" class="beans.Rectangle" scope="session" />

    Modification of attributes:
    <br>
    <br>

    <jsp:setProperty name="rectangle"
                     property="width" param="widthParam" />

    New width value: <%= request.getParameter("widthParam") %>
    <br>

    <jsp:setProperty name="rectangle"
                     property="length" param="lengthParam" />
```

10. MODIFY THE CODE

[setterParamJsp.jsp:](#)

Click to download

```
New length value:<%= request.getParameter("lengthParam") %>
```

```
<br>
```

```
<br>
```

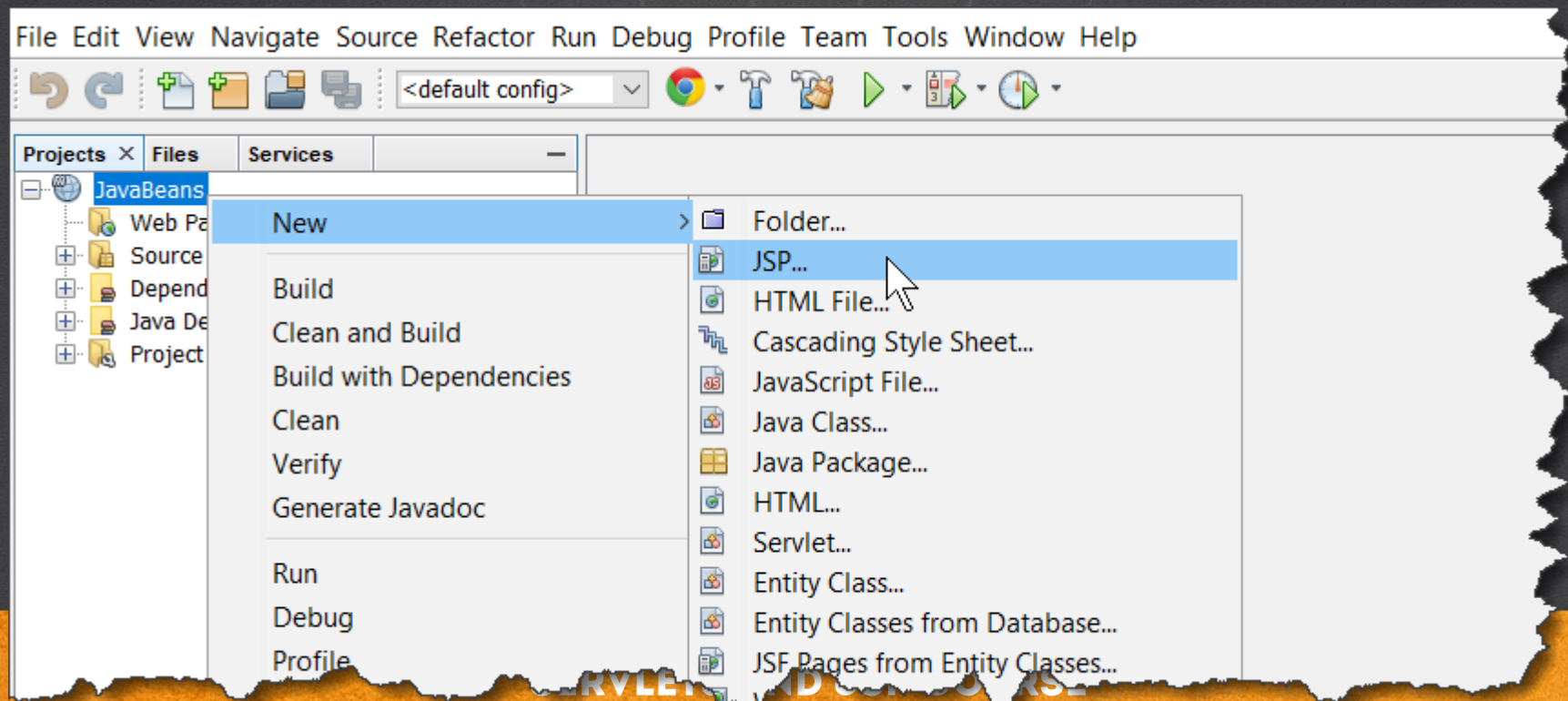
```
<a href="index.jsp">Return to index</a>
```

```
</body>
```

```
</html>
```

11. CREATE A NEW JSP

Create a new JSP:



11. CREATE A NEW JSP

Create a new JSP:

New JSP

Steps

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

Name and Location

File Name:

Project:

Location:

Folder:

Created File:

Options:

☒ JSP File (Standard Syntax) ☐ Create as a JSP Segment

☐ JSP Document (XML Syntax)

Description:

< Back Next > **Finish** Cancel Help

12. MODIFY THE CODE

[setterAllParamsJsp.jsp](#)

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```
<html>
<head>
  <meta charset="UTF-8">
  <title>JSP that modifies a JavaBean by Parameters</title>
</head>
<body>
  <h1>JSP that modifies a JavaBean by Parameters</h1>

  <!--declare the JavaBean to be used-->
  <jsp:useBean id="rectangle" class="beans.Rectangle"
    scope="session" />

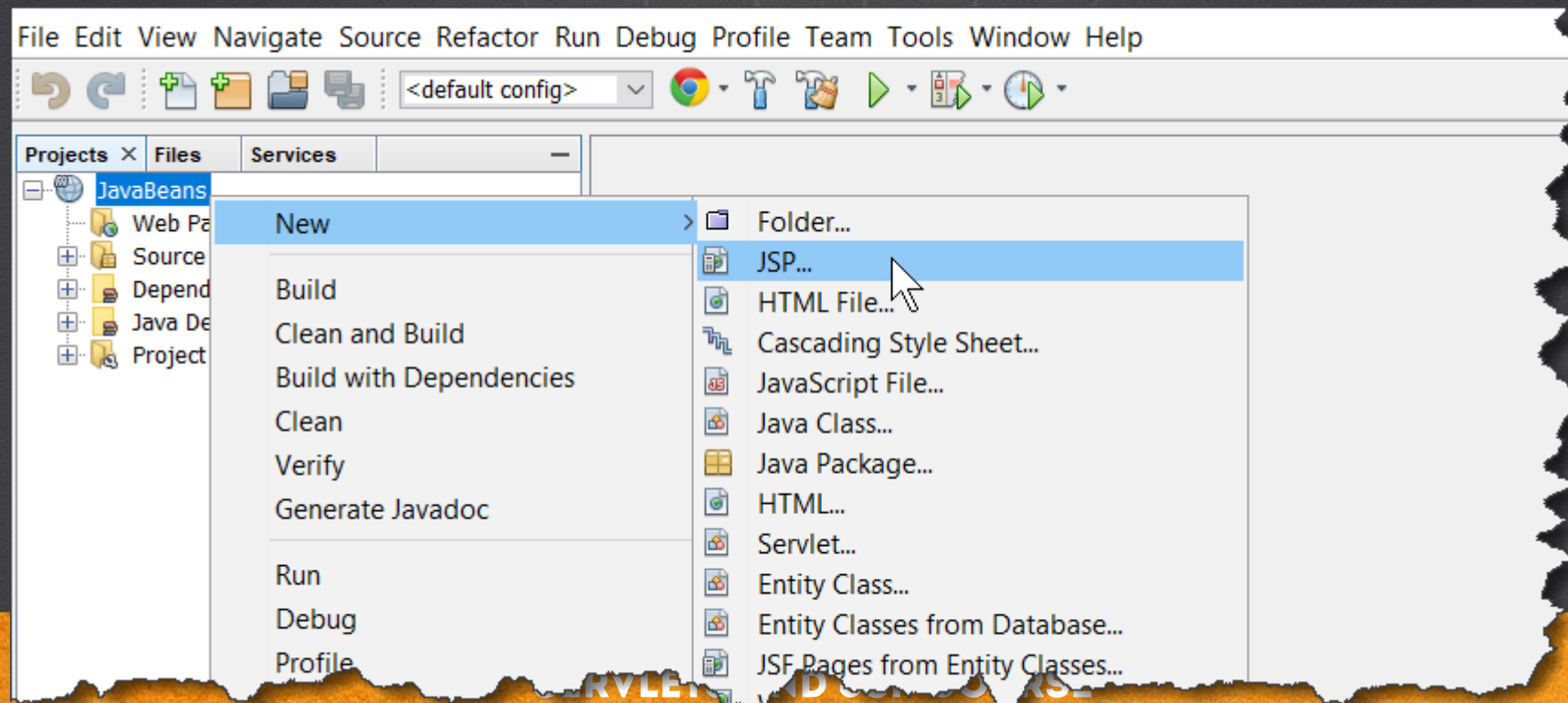
  <!--We modify all the properties whose parameter
    match the name of the property-->
  <jsp:setProperty name="rectangle" property="*" />

  All attributes were modified:
  <br>
  <br>

  New width value: <%= request.getParameter("width") %>
  <br>
  New length value: <%= request.getParameter("length") %>
  <br>
  <br>
  <a href="index.jsp">Return to index</a>
</body>
</html>
```

13. CREATE A JSP FILE

Create a JSP file:



13. CREATE A JSP FILE

Create the index.jsp file:

New JSP

Steps

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

Name and Location

File Name:

Project:

Location:

Folder:

Created File:

Options:

☒ JSP File (Standard Syntax) ☐ Create as a JSP Segment

☐ JSP Document (XML Syntax)

Description:

14. MODIFY THE CODE

[index.jsp:](#)

Click to download

```
<html>
  <head>
    <meta charset="UTF-8">
    <title>JavaBeans Example</title>
  </head>
  <body>
    <h1>JavaBeans Example</h1>
    <!-- JSP to modify values -->
    <a href="setterJsp.jsp">Modify JavaBean values</a>
    <br>
    <!-- JSP to read JavaBean values -->
    <a href="getterJsp.jsp">Read JavaBean values</a>
    <br>
    <br>
```

14. MODIFY THE CODE

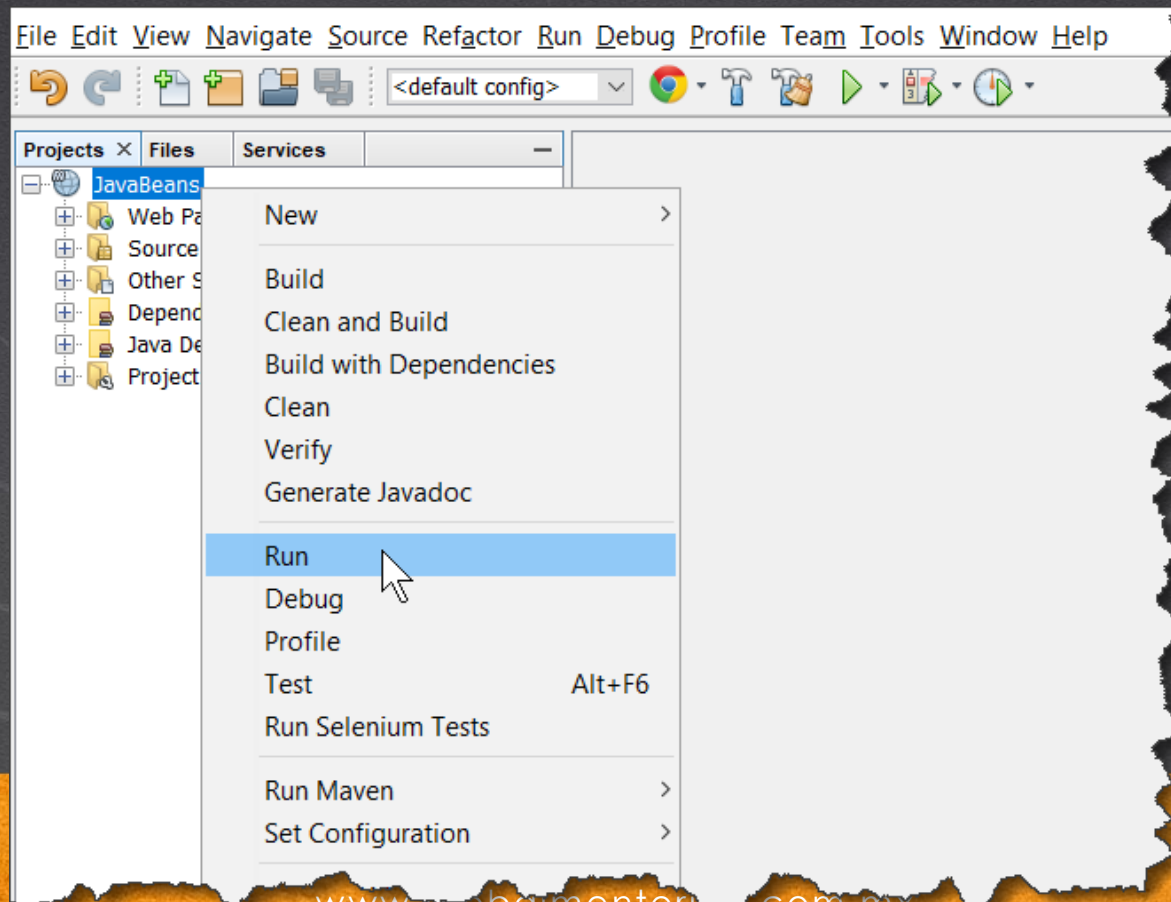
[index.jsp:](#)

Click to download

```
<!-- JSP to retrieve parameters of a form-->
<!--Form1 -->
Form 1:
<br>
<form name="form1" action="setterParamJsp.jsp">
    Width:<input type="text" name="widthParam">
    <br>
    Length: <input type="text" name="lengthParam">
    <input type="submit" value="Enviar" >
</form>

<br>
Form 2:
<br>
<form name="form2" action="setterAllParamsJsp.jsp">
    Width: <input type="text" name="width" >
    <br>
    Length: <input type="text" name="length" >
    <input type="submit" value="Send">
</form>
</body>
</html>
```

15. EXECUTE THE PROJECT



15. EXECUTE THE PROJECT

Ubaldo

JavaBeans Example

localhost:8080/JavaBeans/

JavaBeans Example

[Modify JavaBean values](#)

[Read JavaBean values](#)

Form 1:

Width:

Length:

Form 2:

Width:

Length:

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EXTRA TASKS OF THE EXERCISE

- Test with each of the options of the project.
- Verify step by step each of the options to clarify any flow or detail that was needed.



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EXERCISE CONCLUSION

- With this exercise we have seen the use of JavaBeans and their integration with JSPs.
- This concept, although it seems simple, will be one of the most used throughout our Web applications, not only with the Servlets and JSPs technology, but practically with any Web framework.



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