Spring’s form tag library

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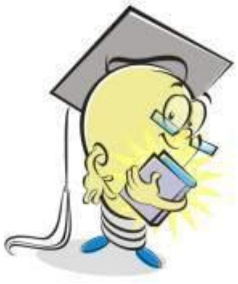

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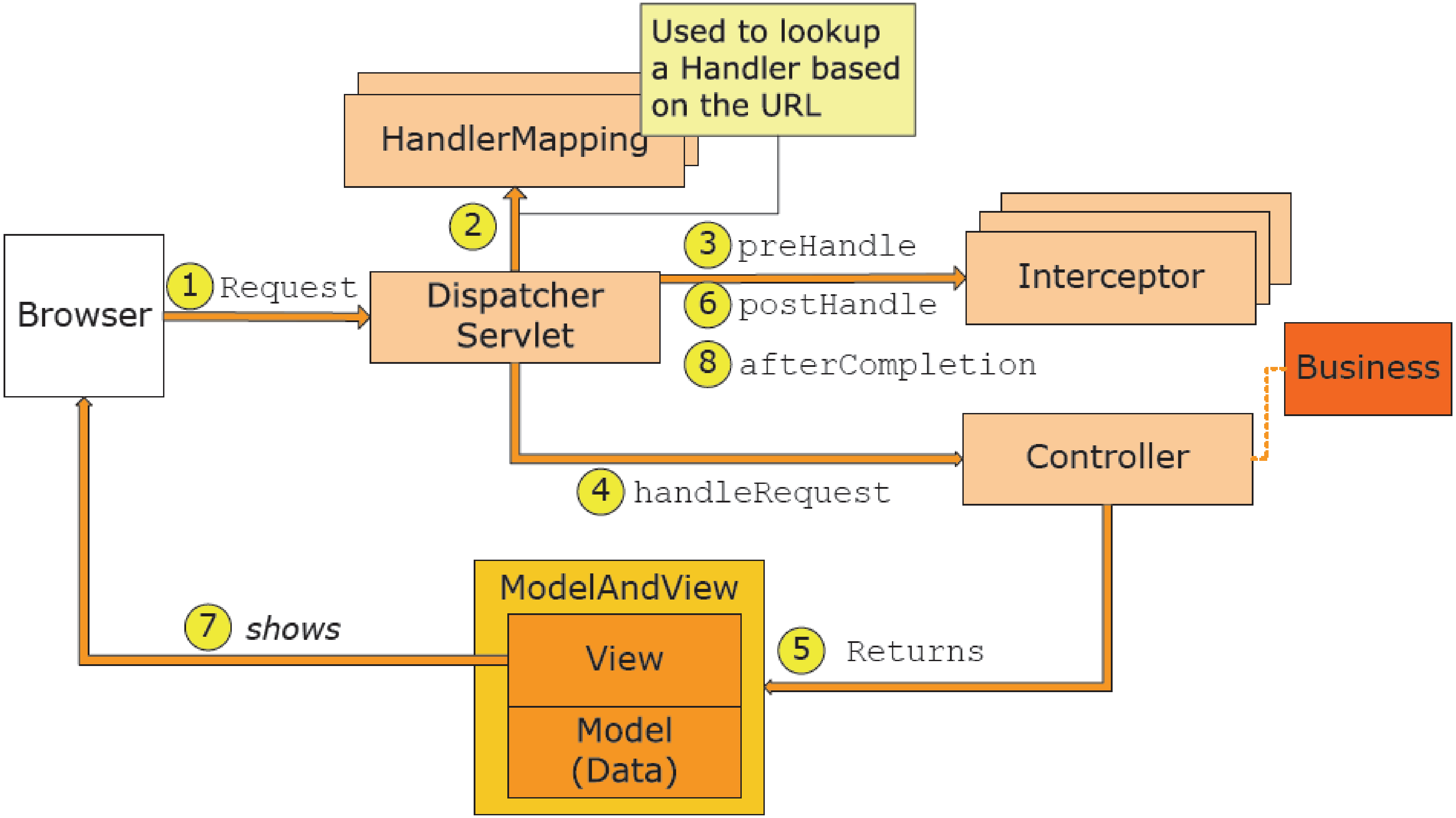

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Spring's form tag library: Overview

- Introduction:
  - Spring provides a comprehensive set of data binding-aware tags for handling form elements when using JSP and Spring Web MVC.
  - Each tag provides support for the set of attributes of its corresponding HTML tag counterpart, making the tags familiar and intuitive to use.
  - Unlike other form/input tag libraries, Spring's form tag library is integrated with Spring Web MVC, giving the tags access to the command object and reference data your controller deals with.

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Spring’s form tag library: Objectives

- Objective:

After completing this chapter you will be able to:

  - Use spring’s form tag to develop user interface for an Web application.

Configuration

- The form tag library comes bundled in spring.jar.
- The library descriptor is called spring-form.tld.
- To use the tags from this library, add the following directive to the top of your JSP page:

  ```
  <%@ taglib prefix="form" uri="http://www.springframework.org/tags/form" %>
  ```

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The Form

- The Form contains input elements to be used in the model components
  - Contains form fields bound to the command (using a Tag Library)
  - The form's `action` attribute points to the URL of the controller
  - The form's `method` must be `post` (default, can be configured differently)

```
<form action="Registration.form" method="post">
  ...
</form>
```

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The Form (Contd.)

Tag	Description
`htmlEscape`	Global value specifying if Spring tags should be escaped (can be overridden on other tags).
`message`	Shows a message from a messageSource (similar to JSTL's `message` tag).
`theme`	Obtains a value from a theme (for Themed pages). The value is based on the current theme.
`transform`	Transforms the supplied value using a registered property editor. Used with forms.
`bind`	Binds the body to an object and property ("path") used to create status, errors and property editors. Used with forms.
`hasBindErrors`	Conditional tag whose body is evaluated when the specified bean contains errors. Used with forms.
`nestedPath`	Nested bind tags will prepend their path (similar to the `with` keyword in Pascal). Used with forms.

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The form tag

- This tag renders an HTML 'form' tag and exposes a binding path to inner tags for binding.
- It puts the command object in the PageContext so that the command object can be accessed by inner tags.
- All the other tags in this library are nested tags of the form tag.

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The form tag

```
<form:form commandName="user">
   <table>
     <tr>
       <td>First Name:</td>
       <td><form:input path="firstName" /></td>
     </tr>
     <tr>
       <td>Last Name:</td>
       <td><form:input path="lastName" /></td>
     </tr>
     <tr>
       <td colspan="2">
         <input type="submit" value="Save Changes" />
       </td>
     </tr>
   </table>
 </form:form>
```

The Form (Contd.)

```
<%@ taglib uri="http://www.springframework.org/tags" prefix="spring" %>
<form action="Registration.form" method="post">
  <table>
    <tr>
      <td>Username</td>
      <td>
        <spring:bind path="command.username">
          <input name="username" value="${status.value}"/>
          ${status.errorMessage}
        </spring:bind>
      </td>
   </tr>
   <tr>
     <td>email</td>
     <td>
       <spring:bind path="command.email">
         <input name="email" value="${status.value}"/>
         ${status.errorMessage}
       </spring:bind>
     </td>
    </tr>
    ...
  </table>
</form>
```

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The Spring Form tags

- SpringMVC has a number of custom tags that can help assist in page rendering
  - Prior to Spring 2.0, the <spring:bind> tag was used to bind a command object to a form field
  - This technique was cumbersome and was improved
- Use <form:tagname> tag library with the following taglib declaration:

```
<%taglib prefix="form"
    uri="http://www.springframework.org/tags/form"%>
```

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The Spring Form tags

- The Spring Custom Form Tags:

  form
  input
  label
  errors
  textarea
  checkbox
  checkboxes

  select
  password
  hidden
  radiobutton
  radiobuttons
  option
  options

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Using a `PropertyEditor`

- Certain data types must be rendered and entered in a specific way
  - Spring uses the standard `java.beans.PropertyEditor` for this
  - Registered inside the controller for a specific type (inside the `initBinder` method)

```
protected void initBinder(HttpServletRequest request,
        ServletRequestDataBinder binder) throws Exception {
  SimpleDateFormat df = new SimpleDateFormat("yyyy-MM-dd",
  request.getLocale());
  binder.registerCustomEditor(Date.class,new
                              CustomDateEditor(df,false));
}
```

The input tag

- This tag renders an HTML 'input' tag with type 'text' using the bound value

```
<form:input path="firstName" />
<form:input path=“lastName”  />
```

The checkbox tag

- This tag renders an HTML 'input' tag with type 'checkbox'.

```
 // User preference class
  public class Preferences {
        private String[] interests;
        // getter and setter methods
       ...
 }
```

The checkbox tag (Contd.)

```
<form:form commandName=“user”>
<table>
…
 <tr>
        <td>Interests:</td>
        <td>
          Java 5:       <form:checkbox path="preferences.interests" value=“Java 5"/>
          Pro Spring: <form:checkbox path="preferences.interests" value=“Pro Spring"/>
           JSF Pro:      <form:checkbox path="preferences.interests” value=“JSF Pro"/>
        </td>
</tr>
…
</table>
</form:form>
```

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The radiobutton tag

- This tag renders an HTML 'input' tag with type 'radio'.

```
<tr>
    <td>Sex:</td>
    <td>Male: <form:radiobutton path="sex" value="M"/>
   <br/>
    Female: <form:radiobutton path="sex" value="F"/>
   </td>
   <td>&nbsp;</td>
 </tr>
```

The password tag

- This tag renders an HTML 'input' tag with type 'password' using the bound value.

```
 <tr>
     <td>Password:</td>
     <td> <form:password path="password" /> </td>
</tr>
```

The select tag

- This tag renders an HTML 'select' element:

Let us assume a User has a list of skills

```
<tr>
        <td>Skills:</td>
        <td><form:select path="skills" items="${skills}"/></td>
 </tr>
```

The option tag

- This tag renders an HTML 'option‘

```
  <tr>
   <td>City:</td>
   <td>
        <form:select path="city">
               <form:option value="Chennai"/>
               <form:option value="Los Angles"/>
               <form:option value="Mumbai"/>
               <form:option value="Pune"/>
   s       </form:select>
  </td>
</tr>
```

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The textarea tag

- This tag renders an HTML 'textarea‘

```
 <tr>
   <td>Comments :</td>
   <td><form:textarea path=“comments" rows="3" cols="20“ /></td>
</tr>
```

The Hidden tag

- This tag renders an HTML 'input' tag with type 'hidden' using the bound value.
- To submit an unbound hidden value, use the HTML input tag with type 'hidden'.

```
<form:hidden path=“todo" />
```

The errors tag

- This tag renders field errors in an HTML 'span' tag.
- It provides access to the errors created in your controller or those that were created by any validators associated with your controller.

```
<form:input path="userName" />
   <%-- Show errors for userName field --%>
 <form:errors path="userName" />
```

path="*" - displays all errors

Path=“userName” - displays all errors associated with the userName field

Spring's form tag library

Time for a Break !

Spring's form tag library

- Questions from participants

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Test Your Understanding

1) Which of the following is a mandatory attribute of form input tag

   a) path
   b) id
   c) lang
   d) Title

2) The tag-generated HTML is HTML 4.01/XHTML 1.0 compliant. Say true or false

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Spring's form tag library: Summary

- Spring 3.0 provides the very powerful tag library to create user interface using JSPs
- The tag library consists of tags to generate HTML tags that are HTML 4.X compliant.
- These tags are data-binding aware.

Spring's form tag library : Source

- http://static.springsource.org/spring/docs/3.0.x/spring-framework-reference/html/view.html#view-jsp-formtaglib

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