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Assignment 10.2 Custom Tags in JSP

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**Custom Tags in JSP**

Making custom tags in the Java Server Pages (JSP) space can be a powerful way to simplify and organize web development. Developers can hide complex Java code behind a straightforward tag that can be utilized directly in JSP pages by using custom tags, which are tiny, reusable code blocks. This can make life easier for both developers and designers because the logic of the code is hidden from the page itself, letting the page focus only on layout and display. One of the biggest reasons to use custom tags is reusability. Once a tag is created, it can be used on multiple web pages without rewriting the same code again and again. For example, if I create a tag that prints a welcome message or handles user login, I can use that same tag wherever needed just by calling it in my JSP file. This saves time and also reduces mistakes, as the code is written once and reused rather than rewritten multiple times.

Another advantage is that custom tags help keep JSP pages simple and readable. Normally, when developers mix Java code inside HTML (called using scriptlets), it can make pages messy and hard to manage. With custom tags, Java code is moved into separate files, so JSP files stay clean, and only the tags are visible. This also makes it easier for non-programmers like designers to work with JSP pages because they do not need to understand Java code; they just use the tag like an HTML element. This separation between design and logic is one reason why many professionals prefer using custom tags when working in teams. However, there are some disadvantages too. Custom tags have the drawback of requiring more work to set up. To correctly connect it to their JSP pages, developers must produce a Tag Library Descriptor (TLD) file and construct a distinct Java class. For beginners or tiny applications where straightforward scriptlets would be enough, this approach may seem overwhelming. Another downside is that using too many custom tags may slightly slow down a website if not handled carefully, as each tag requires the server to process its logic every time the tag is used.

There are a few important steps to create a custom tag correctly. First, you need to create a Java class that extends either the SimpleTagSupport or TagSupport class. This Java file contains the logic of your tag and tells the server what the tag should do when it is used in a JSP file. Next, you create a Tag Library Descriptor file, also known as a TLD file, which describes your custom tag to the JSP engine. This TLD file includes the tag's name, the class it connects to, and other information the server needs to run the tag. Finally, once the tag is ready, you can include it in your JSP page by declaring the tag library and using the tag wherever needed. For example, after setting everything up, using the tag in a JSP file can look as simple as <mt:hello />, which is much easier than writing Java code directly inside the page.

My own experience has shown me that custom tags are a useful tool, particularly for larger projects. Using custom tags keeps things organized and helps prevent code repetition when a website expands and has multiple pages. Additionally, it becomes simpler to operate in teams because backend engineers and designers can concentrate on their own jobs without interfering with one another's. On the other hand, for small or simple websites, I sometimes avoid using custom tags because they feel like extra work. Setting up a Java class and TLD file can be unnecessary if I only need a simple function that could be written quickly using Expression Language (EL) or JSTL tags. So, I choose whether to use custom tags based on the size and complexity of the project. Even with the extra setup work, I believe learning custom tags is helpful because it teaches good coding habits like keeping logic separate from design and writing reusable code. Once learned, custom tags can save time and reduce errors in the long run.

In conclusion, creating custom tags in JSP is a smart way to simplify web development, especially for large projects. Although the initial setup may take time, the benefits of code reusability, clean JSP files, and easier teamwork make custom tags worth using. Personally, I choose to use them based on project needs, but learning how to create and use them properly has been very useful in my development journey.

Source

Oracle. (n.d.). Developing Custom Tags. Oracle Java EE 7 Tutorial. <https://docs.oracle.com/javaee/7/tutorial/jsf-custom002.htm>

GeeksforGeeks. (n.d.). Custom Tags in JSP. <https://www.geeksforgeeks.org/custom-tags-in-jsp/>