DeJanae Faison

CSD430

M10 – Creating Custom Tags Paper

Due 10/5/2025

Creating Custom Tags

# Introduction

JSP Tags refer to elements that either declare variables and methods, write expressions or calling other pages. For example, to declare a method or define a variable the tag syntax would be: *<%! variable declaration here%>*. Custom Tags in JSP are user made custom elements that perform specific tasks. Overall custom tags make JSP pages more modular, cleaner, and easier to understand however they can introduce complexity if misused.

# Advantages

One advantage of Custom Tags as mentioned previously is that it allows the code to be reusable. When developers encounter repetitive patterns across multiple JSP pages, such as displaying formatted dates, rendering menus, or handling authentication messages, these tasks can be encapsulated in a single custom tag. This approach avoids duplicating code, making maintenance easier and updates more efficient. Instead of editing many JSP pages, a developer can modify the behavior in one place by changing the custom tag implementation. This can save time and money by being able to reuse the same components.

Another advantage is separation of concerns. JSP pages often mix HTML markup with embedded Java code, which can make them difficult to read and maintain. By moving complex logic into custom tag handlers, developers keep JSP pages cleaner and more focused on structure and presentation. This separation aligns with the Model–View–Controller (MVC) design pattern, where the JSP page acts primarily as the view layer.

# Disadvantages

Though it has its advantages, Custom JSP tags has its disadvantages as well. For instance, one issue is learning curve and debugging. New developers who are unfamiliar with the tag libraries may find it more difficult to trace the flow of execution, especially since the Java logic is abstracted away from the JSP page. Debugging errors in tag handlers can be more complex than troubleshooting script-lets directly in JSP. Also, overuse of custom tags can lead to bloated libraries. When every minor functionality is turned into a tag, the tag library may become difficult to manage, defeating its purpose of simplifying the codebase.

# Developing a Custom tag

There are several steps needed in order to create a Custom JSP Tag, and the first thing that is needed is a Tag Handler. A Tag Handler is a Java Class that is used to implement the logic for the tag. Essentially it is a container-managed object that is created by a JSP container at runtime. It is basically an instruction manual that defines what the tag is to do. The second needed element is an XML file that describes the tag and maps it to the Java Class, this is called a TLD or a Tag Library Descriptor. Third is the Taglib Directive, which is a directive in the JSP file to use the tag library in order to use the newly created custom tag. The tag handler and TLD must be packaged properly, usually in a JAR file placed inside WEB-INF/lib. This ensures that the container can load the tag library correctly.

# My Opinion & Conclusion

In my opinion depending on the size of the project, Custom tags can either be a valuable asset or complete overkill. With larger more complex projects, it can aid in clean coding and reduce and redundancy in the program. However, in smaller projects it can too much and maintaining the library might be harder to maintain than the actual main code. Custom tags are a powerful feature in JSP that allow developers to encapsulate reusable functionality, promote clean separation of concerns, and enable collaboration between teams. While they introduce some complexity and overhead, their benefits in terms of maintainability and modularity make them an essential tool for serious web application development. Like any technology, they should be used judiciously—when their advantages outweigh their setup cost. A good grasp of their lifecycle, configuration, and best practices is key to using them effectively.

References:

*JSP - Custom Tags - Tutorialspoint*. (n.d.). Www.tutorialspoint.com. https://www.tutorialspoint.com/jsp/jsp\_custom\_tags.htm

GeeksforGeeks. (2022, December 28). *Custom Tags in JSP*. GeeksforGeeks. https://www.geeksforgeeks.org/java/custom-tags-in-jsp/

Pandey, S. (2025, January 6). *Advanced Java — Custom Tags in JSP*. Medium. http://medium.com/@SachinPandeyOnline/advanced-java-custom-tags-in-jsp-da3f324e8ee0

*JSP Tags - TechGuruSpeaks*. (2019). TechGuruSpeaks. https://www.techguruspeaks.com/jsp-tags/

‌Team, D. (2020, September 2). *JSP Custom Tags with Examples*. DataFlair. https://data-flair.training/blogs/jsp-custom-tags/

‌