



# TEMPLATE LANGUAGE OPTIONS

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# TEMPLATE LANGUAGE OPTIONS

- ❖ Templates can use the following templating languages:
  - ❖ **Velocity:** Velocity is a scripting language that lets you mix logic with HTML. Velocity is deprecated as of 7.0.
  - ❖ **Extensible Style Sheet Language:** Widely used for transforming XML into other formats.
  - ❖ **FreeMarker:** FreeMarker is a templating language that could be considered a successor to Velocity and is recommended.

Extensible Stylesheet Language (.xsl)
✓ FreeMarker (.ftl)
Velocity (.vm)

Description

## FREEMARKER: THE WAY FORWARD

- ❖ FreeMarker templates in Liferay act as the intermediary between the back-end code in Java and the front-end.
- ❖ They enhance HTML by adding constructs such as variables, conditional statements, and loops.
- ❖ Once it's processed, the result is HTML, which is then styled by your CSS and displayed by the browser.
- ❖ FreeMarker provides a straightforward, clean, and simple method for incorporating dynamic content in a webpage.
- ❖ It permits the user to use a simple yet powerful template language to reference objects defined in the Java code.

## FREEMARKER OPTIONS

- ❖ Here are some examples of what you can use in Freemarker:
  - ❖ **Variable:** accessed by its name `${var_name}`
  - ❖ **Arithmetics:** `+`, `-`, `/`
  - ❖ **Logical Operators:** `&&`, `||`, `<=`
  - ❖ **Sequence slice:** `${profile.assets[1..]}`
  - ❖ **Include files:** `[#include "header.html"]`
  - ❖ **Comments:** `[#- this is a comment -]`
- ❖ You can also use if else statements or loops, using the directive symbol `#`.
- ❖ Macros can also be created and reused using `@`.
- ❖ Let's walk through some examples.

## FREEMARKER EXAMPLES IN THE THEME

- ❖ Let's look at some examples from the theme we created.

- ❖ We defined a variable in the `init_custom.ftl` file.

```
<#assign show_header_search = getterUtil.getBoolean(themeDisplay.  
getThemeSetting("show-header-search")) />
```

- ❖ The variable can then be used in the following way:

```
${show_header_search}
```

- ❖ Our theme also has an if statement that includes a file if a theme setting is turned on.

```
<#if has_navigation>  
<#include "$full_templates_path}/navigation.ftl" />  
</if>
```

- ❖ We also have macros being used for things like the *menu*.

```
<@liferay.control_menu />
```

## USING TAGLIBS WITH FREEMARKER

- ❖ Developers using FreeMarker have access to Liferay's taglibs in templates.
  - ❖ There is no need to instantiate taglibs as they're already available.
- ❖ Taglibs are accessed by indicating the TLD file name with underscores.
  - ❖ For example, `liferay-portlet-ext.tld` is specified as `@liferay_portlet_ext`.
- ❖ *Note:* The `utilLocator`, `objectUtil`, and `staticUtil` variables for FreeMarker and the `utilLocator` variable for Velocity are disabled by default.
  - ❖ These variables are vulnerable to remote code execution and privilege escalation and should be used with caution, if enabled.

## FREEMARKER EXAMPLES IN THE CONTENT TEMPLATES

- ❖ We can see an example of the Carousel Content Template.
- ❖ This section includes the `<#list>` as well in order to iterate through content for display in the Carousel format.

```
<#list contents.getSiblings() as cur_contents>
  <div class="$ {(cur_contents?counter == 1)?then('active', '')} item">
    <#assign article = cur_contents.getData()?eval />

    <!-- Here is our taglib call -->
    <@liferay_ui["asset-display"]
      className=article.className
      classPK=getterUtil.getLong(article.classPK, 0)
      template="full_content"
    />
  </div>
</#list>
```

- ❖ The `<@liferay_ui["asset-display"]` is a taglib that allows us to grab information and display content articles.

## ACCESSING DATABASE INFORMATION

- ❖ Although Freemarker gives us a helpful way to interact with back-end code, it doesn't natively provide access to contextual information we may need (e.g., current user, page information).
- ❖ In some cases, the need may arise to create custom variables that can access the database and inject contextual information into our templates.
- ❖ We can use the *serviceLocator* property to access the database, but would have to leave it unrestricted, which can become a security risk.
- ❖ *Context Contributors* offer a middle ground where we can safely access contextual information in our template.



## CONTEXT CONTRIBUTORS







- ❖ *Context Contributors* give users the ability to inject contextual variables and functionality into Freemarker templates.
- ❖ There are two types of *Context Contributors* in Liferay DXP:
  - ❖ TYPE\_GLOBAL: Variables that are available globally
  - ❖ TYPE\_THEME: Variables available only within themes
- ❖ For more information on creating and using *Context Contributors*, documentation is available at [https://dev.liferay.com/develop/tutorials/-/knowledge\\_base/7-0/context-contributors](https://dev.liferay.com/develop/tutorials/-/knowledge_base/7-0/context-contributors)

## CHANGES IN FREEMARKER FOR DXP

- ❖ There are some changes to Freemarker Templates in DXP that are worth noting for those who created templates on previous version.
- ❖ One major change is that the theme variable is no longer injected into the FreeMarker context.
- ❖ For more information about why the theme variable was removed for Liferay DXP and suggestions for updating your code, go here:  
[https://dev.liferay.com/develop/reference/-/knowledge\\_base/7-0/breaking-changes#taglibs-are-no-longer-accessible-via-the-theme-variable-in-freemarker](https://dev.liferay.com/develop/reference/-/knowledge_base/7-0/breaking-changes#taglibs-are-no-longer-accessible-via-the-theme-variable-in-freemarker)

# DEFAULT EXAMPLE

❖ With FreeMarker, our pages can go from this:


✚ Asset Publisher	
<b>Your dreams cannot be stopped</b>	
Your dreams cannot be stopped This is not the work of any one man or even a group of men Buy why, some say, the moon? Why choose this as our goal?...	
<b>When I orbited the Earth in a spaceship</b>	
When I orbited the Earth in a spaceship I saw for the first time how beautiful our planet is Mankind, let us preserve and increase this beauty, and...	
<b>We want to explore</b>	
We want to explore We're curious people We want to explore. We're curious people. Look back over history, people have put their lives at stake...	
<b>We have an infinite amount to learn</b>	
We have an infinite amount to learn both from nature and from each other We have an infinite amount to learn both from nature and from each other ...	
<b>We choose to go to the moon</b>	
We choose to go to the moon We have an infinite amount to learn both from nature and from each other You know, being a test pilot isn't always...	
<b>We are all connected</b>	
We are all connected To each other, biologically. To the earth, chemically Never in all their history have men been able truly to conceive of the...	

# TEMPLATE EXAMPLE

❖ To something like this:

+


Asset Publisher



**Your dreams cannot be stopped**

This is not the work of any one man or even a group of men

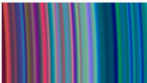
BY



**When I orbited the Earth in a spaceship**

I saw for the first time how beautiful our planet is


BY



**We want to explore**

We're curious people


BY



**We have an infinite amount to learn**

both from nature and from each other


BY



**We choose to go to the moon**

We have an infinite amount to learn both from nature and from each other

BY



**We are all connected**

To each other, biologically. To the earth, chemically

BY

Notes: