

Content Presentation

Learning Objectives

- Learn how to style traditional content in Liferay DXP

Tasks to Accomplish

- Use FreeMarker to create templates that structure platform content
- Learn how to structure and style Web Content
- Understand how to use Widget Templates to customize both out-of-the-box and custom Liferay widgets

Exercise Prerequisites

- Java JDK installed to run Liferay
 - Download here: <https://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>
 - Instructions on installation here: https://www.java.com/en/download/help/download_options.xml
- Unzipped module exercise files in the following folder structure:
 - Windows: `C:\liferay`
 - Unix Systems: `[user-home]/liferay`
- A Liferay DXP or CE 7.4 instance up and running

Table of Contents

- Create Web Content Templates
- Customize a Navigation Menu Widget
- Content Presentation Module Quiz
- Answer Key

Create Web Content Templates

Exercise Goals

- Create a Structure for Featured Hotels that includes four fields for text, images, and links
- Create a Template for the Featured Hotels that formats different hotel fields into two rows with two columns

Create a Global Snippets File in Visual Studio Code

1. **Open** *Visual Studio Code*.
2. **Go to** the *User Snippets* menu.
 - Windows: File # Preferences # User Snippets
 - OSX: Gear icon # User Snippets
3. **Click** on *New Global Snippets file...* in the drop-down menu.
4. **Type** *lfr-experience-management* for the *name*.
 - The full file name will be `lfr-experience-management.code-snippets`.
5. **Press** *Enter* to open the file.

Add the Snippet Content

1. **Open** the `experience-management-snippets.json` in your module exercises folder.
2. **Copy** the contents of the file.
3. **Paste** the contents of the file in the `lfr-experience-management.code-snippets` file just created in Visual Studio Code.
 - Make sure to replace all the existing content in the file.
4. **Save** the file.

Start the Liferay-Tomcat Bundle

1. **Go to** the Tomcat server's `bin` directory:
 - Windows: `C:\liferay\bundles\liferay-dxp-[version]\tomcat-[version]\bin` in the file manager
 - Mac/Linux: `[userhome]/liferay/bundles/liferay-dxp-[version]/tomcat-[version]/bin` using the *Terminal*
2. **Start** the Tomcat Server:
 - Windows: **Double-click** on the `startup.bat`.
 - Mac/Linux: **Run** `./catalina.sh run` in your *Terminal*.
3. **Go to** `localhost:8080` in your browser if you're not already there.
4. **Sign in** to the *Livingstone Hotels & Resorts* platform.

Create a Structure with Two Text Fields, an Image, and a Link Field

1. **Go to** *Site Administration # Content & Data # Web Content* in the *Menu*.
2. **Click** the *Structures* tab at the top.
3. **Click** *Add* at the top right.
4. **Type** `Featured Hotels Content` for the *Name*.
5. **Drop** a *Textfield* from the *Builder* at the right into the editor.
 - Click the *Back* (<) arrow to return to the *Builder* after adding each field.
6. **Drop** another *Textfield* under the first field.
7. **Drop** an *Image* field onto the second *Textfield* to group them.
8. **Drop** a *Link to Page* field just below the *Image* field to group it with the *Text* and *Image* fields.
 - Hover your mouse over the *Fields Group* label to confirm that the three fields are grouped together.

Configure the Field Labels and Field References

1. **Click** the first *Text* field at the top of the page.
2. **Type** `Title` as the *Label* under the *Basic* tab.
3. **Click** the *Advanced* tab.
4. **Type** `Title` as the *Field Reference*.
5. **Click** the second *Text* field inside the *Fields Group*.
6. **Type** `Text1` as the *Label* under the *Basic* tab.
7. **Type** `Text1` as the *Field Reference* under the *Advanced* tab.
8. **Click** the *Image* field.
9. **Type** `Image1` as the *Label* under the *Basic* tab.
10. **Type** `Image1` as the *Field Reference* under the *Advanced* tab.
11. **Click** the *Link to Page* field.
12. **Type** `Link1` as the *Label* under the *Basic* tab.
13. **Type** `Link1` as the *Field Reference* under the *Advanced* tab.

Duplicate the Field Group Three More Times to Feature Four Hotels

1. **Click** the *Fields Group* label.
2. **Click** the *Options* (three dots) icon beside the label.
3. **Click** *Duplicate* in the drop-down menu.
4. **Click** *Duplicate* again to add a third set of fields.
5. **Click** *Duplicate* a third time to add a fourth set of fields.
 - Make sure you have a total of four field sets with Text, Image, and Link to Page fields.

Label the Second Set of Fields

1. **Click** the *Copy of Text1* field in the first *Copy of Fields Group*.
2. **Type** `Text2` as the *Label* under the *Basic* tab.
3. **Type** `Text2` as the *Field Reference* under the *Advanced* tab.
4. **Click** the *Copy of Image1* field.
5. **Type** `Image2` as the *Label* under the *Basic* tab.
6. **Type** `Image2` as the *Field Reference* under the *Advanced* tab.
7. **Click** the *Copy of Link1* field.
8. **Type** `Link2` as the *Label* under the *Basic* tab.
9. **Type** `Link2` as the *Field Reference* under the *Advanced* tab.

Label the Third Set of Fields

1. **Click** the *Copy of Text1* field in the second *Copy of Fields Group*.
2. **Type** `Text3` as the *Label* under the *Basic* tab.
3. **Type** `Text3` as the *Field Reference* under the *Advanced* tab.
4. **Click** the *Copy of Image1* field.
5. **Type** `Image3` as the *Label* under the *Basic* tab.
6. **Type** `Image3` as the *Field Reference* under the *Advanced* tab.
7. **Click** the *Copy of Link1* field.
8. **Type** `Link3` as the *Label* under the *Basic* tab.
9. **Type** `Link3` as the *Field Reference* under the *Advanced* tab.

Label the Fourth Set of Fields

1. **Click** the *Copy of Text1* field in the third *Copy of Fields Group*.
2. **Type** `Text4` as the *Label* under the *Basic* tab.
3. **Type** `Text4` as the *Field Reference* under the *Advanced* tab.
4. **Click** the *Copy of Image1* field.
5. **Type** `Image4` as the *Label* under the *Basic* tab.
6. **Type** `Image4` as the *Field Reference* under the *Advanced* tab.
7. **Click** the *Copy of Link1* field.
8. **Type** `Link4` as the *Label* under the *Basic* tab.
9. **Type** `Link4` as the *Field Reference* under the *Advanced* tab.

Hide the Fields Group Labels

1. **Click** the first *Fields Group*.
2. **Click** the toggle beside *Show Label* to hide the label.
3. **Click** the next *Fields Group*, the first *Copy of Fields Group*.
4. **Click** the *Show Label* toggle to hide.
5. **Click** the next *Fields Group*, the second *Copy of Fields Group*.
6. **Click** the *Show Label* toggle to hide.
7. **Click** the last *Fields Group*, the third *Copy of Fields Group*.
8. **Click** the *Show Label* toggle to hide.
9. **Click** *Save* at the top right.

Create the Featured Hotel Content

1. **Click** on the *Web Content* tab.
2. **Click** *Add*.
3. **Choose** the *Featured Hotels Content* Structure.
4. **Type** Featured Hotels for the *Name* at the top.
5. **Type** Livingstone Group Hotels for the *Title* field.
6. **Type** Playa Azul Hotel for the *Text1* field.
7. **Click** the *Select* button beside the *Image1* field.
8. **Click** *Select File*.
9. **Choose** the `playaazul.jpg` file from your Course Module exercise folder.
10. **Click** *Add*.

Add More Text and Images for the Featured Hotels Content

1. **Type** Grand Livingstone Hotel for the *Text2* field.
2. **Click** the *Select* button beside the *Image2* field.
3. **Click** *Select File*.
4. **Choose** the `grandlivingstone.jpg` file from your Course Module exercise folder.
5. **Click** *Add*.
6. **Type** The Iron Rose for the *Text3* field.
7. **Click** the *Select* button beside the *Image3* field.
8. **Click** *Select File*.
9. **Choose** the `ironrose.jpg` file from your Course Module exercise folder.
10. **Click** *Add*.

Add the Last Text and Image for the New Web Content

1. **Type** `Purple Palace Hotel` for the *Text4* field.
2. **Click** the *Select* button beside the *Image4* field.
3. **Click** *Select File*.
4. **Choose** the `purple.jpg` file from your Course Module exercise folder.
5. **Click** *Add*.
6. **Click** *Publish* in the top right corner.

Add Content to the Livingstone Landing Page

1. **Click** *Home* at the top of the Site Administration panel.
2. **Click** the *Edit* icon in the top right.
3. **Open** the *Fragments and Widgets* tab in the sidebar.
4. **Drag** the *Web Content Display* widget from the *Widget* tab to the top of the page.
5. **Click** the *Options* icon on the right of the new display.
6. **Choose** *Configuration*.
7. **Click** the *Select* button in the pop-up.
8. **Choose** the *Featured Hotels Content* web content that we just created.
9. **Click** *Save*.
10. **Close** the pop-up.
11. **Click** *Publish*.

Begin Creating the Featured Hotels Template

1. **Go to** your *exercise-src* folder.
2. **Open** the `featured-hotels-template.ftl` file with *Visual Studio Code*.
3. **Click** to highlight the `<#-- Insert 01-div-header-and-body snippet here -->` comment.
4. **Type** `lfr` and choose the `01-div-header-and-body` snippet.
 - Alternatively, you can type the following to replace the comment:

```

<div class="card-type-asset">

    <div class="card-item-first aspect-ratio">

</div>

    <div class="card-body">

</div>

</div>

```

Add Code for the Image Header

1. Press *Enter* and *Tab* after the `<div class="card-header aspect-ratio">` line
2. Type `lfr` and choose the `02-hotel-image` snippet.
 - Alternatively, you can type the following to replace the comment:

```

<#if Text1.Image1.getData()?? && Text1.Image1.getData() != "">

    <a href="{Text1.Image1.getData()}">

        <img class="aspect-ratio-item-fluid" ${languageUtil.format(locale, "download-x",

    </a>

</#if>

```

Add Code for the Title and Link

1. Press *Enter* and *Tab* after the `<div class="card-body">` line.
2. Type `lfr` and choose the `03-hotel-title-link` snippet.
 - Alternatively, you can Type the following to replace the comment:

```

<h2 class="text-center">

    <a class="item-one" href="{Text1.Link1.getFriendlyUrl()}">${Text1.getData()}</a>

</h2>

```

Add the Second Rows and Columns

1. Click to highlight the `<!-- Insert 04-top-row-second-column snippet here -->` comment.
2. Type `lfr` and choose the `04-top-row-second-column` snippet.
 - Alternatively, you can Type the following to replace the comment:

```

<li class="card col-md-6">

  <div class="card-type-asset">

    <div class="card-item-first aspect-ratio">

      <#if Text2.Image2.getData()?? && Text2.Image2.getData() != "">

        <a href="{Text2.Image2.getData()}">

          <img class="aspect-ratio-item-fluid" ${languageUtil.format(locale, "c

        </a>

      </#if>

    </div>

    <div class="card-body">

      <h2 class="text-center">

        <a class="item-one" href="{Text2.Link2.getFriendlyUrl()}">${Text2.getDat

      </h2>

    </div>

  </div>

</li>

```

Add the Final Rows and Columns

1. **Click** to highlight the `<#-- Insert 05-second-row snippet here -->` comment.
2. **Type** `lfr` and choose the `05-second-row` snippet and *Save* the file.
 - Alternatively, you can Type the following to replace the comment:

```

<ul class="list-unstyled row">

  <li class="card col-md-6">

    <div class="card-type-asset">

      <div class="card-item-first aspect-ratio">

        <#if Text3.Image3.getData()?? && Text3.Image3.getData() != "">

          <a href="{Text3.Image3.getData()}">

            <img class="aspect-ratio-item-fluid" ${languageUtil.format(locale

          </a>

        </#if>

```

```

        </div>

        <div class="card-body">

            <h2 class="text-center">

                <a class="item-one" href="{Text3.Link3.getFriendlyUrl()}">${Text3.ge

            </h2>

        </div>

    </div>

</li>

<li class="card col-md-6">

    <div class="card-type-asset">

        <div class="card-item-first aspect-ratio">

            <#if Text4.Image4.getData()?? && Text4.Image4.getData() != "">

                <a href="{Text4.Image4.getData()}">

                    <img class="aspect-ratio-item-fluid" ${languageUtil.format(locale

                </a>

            </#if>

        </div>

        <div class="card-body">

            <h2 class="text-center">

                <a class="item-one" href="{Text4.Link4.getFriendlyUrl()}">${Text4.ge

            </h2>

        </div>

    </div>

</li>

</ul>

```

Add the Template to the Platform and Include the Title Data

1. **Go to** the *Livingstone Hotels & Resorts* site in the browser.
 - Make sure you're logged in.
2. **Go to** *Site Administration # Content & Data # Web Content* in the *Menu*.
3. **Click** the *Templates* tab in the top menu.
4. **Click** the *Add* at the top right.
5. **Type** `Featured Hotels Template` as the Title at the top of the page.
6. **Click** *Select Structure* under the *Structure* field in the *Properties* menu.
7. **Choose** the `Featured Hotels Content Structure`.
8. **Copy** the code from our new *featured-hotels-template.ftl*/template.
9. **Paste** it into the Template editor, replacing the default text.
10. **Click** to highlight `<!-- Insert title data here -->` at the very top of the code.
11. **Click** the *Title* field in the *Fields* section to the left.
12. **Click** *Save*.

Select the Template and View the Content

1. **Go to** the *Web Content* tab.
2. **Click** the *Featured Hotels Content*.
3. **Click** *Select* under the *Default Template* field in the right column.
4. **Choose** the `Featured Hotels Template`.
 - Click *OK* if the browser pop-up requests access.
5. **Click** *Publish* at the top right.
6. **Click** *Home* in Site Administration to view the content.

Bonus Exercises

1. Update the Featured Hotels Template to your liking.
2. Create a Structure for a Press Release with the following:
 - Headline
 - Date of Publication
 - Logo
 - Content
3. Create a Template for the Press Release using the built-in editor.

Customize a Navigation Menu Widget

Exercise Goals

- Create a Navigation Widget Template
- Change the Template on the Navigate Menu for the default Site

Create a Global Snippets File in Visual Studio Code

1. **Open** *Visual Studio Code*.
2. **Go to** the *User Snippets* menu.
 - Windows: File # Preferences # User Snippets
 - OSX: Gear Icon # User Snippets
3. **Click** on *New Global Snippets file...* in the drop-down menu.
4. **Type** *lfr-widget-templates* for the *name*.
 - The full file name will be `lfr-widget-templates.code-snippets`.
5. **Press** enter to save.

Add the Snippet Content

1. **Open** the `widget-template-snippets.json` in your module exercises folder.
2. **Copy** the contents of the file.
3. **Paste** the contents of the file in the `lfr-widget-templates.code-snippets` file just created in Visual Studio Code.
 - Make sure to replace all the existing content in the file.
4. **Save** the file.

Add Alert Information if there are No Pages

1. **Go to** the module exercise folder.
2. **Drop** the `vertical-navigation.ftl` into your *Visual Studio Code* editor.
3. **Click** to highlight the `<#-- Insert 04-if-no-content-message here -->` comment.
4. **Type** `lfr-widget` to view the available code snippets.
5. **Choose** the `04-if-no-content-message` snippet.

```
<#if themeDisplay.isSignedIn()>

    <div class="alert alert-info">

        <@liferay.language key="there-are-no-menu-items-to-display" />

    </div>

</#if>
```

Add a Macro for the Navigation Pages

1. **Click** to highlight the `<#-- insert 05-build-navigation-macro here -->` comment.
2. **Type** `lfr-widget` to view the available code snippets.
3. **Choose** the `05-build-navigation-macro` snippet.
 - Alternatively, you can type:

```
<#macro buildNavigation navItem>

    <#-- Add 06-nav-item-assignments snippet here -->

    <li class="nav-item">

        <div class="d-inline-flex">

            <a class="{nav_item_css_class}" href="{navItem.getRegularURL()}">

                {navItem.getName()}

            </a>

            <#-- Add 07-children-menu-if-statement snippet here -->

        </li>

    </#macro>
```


Add Nav Item and Nav Item CSS Variables

1. **Click** to highlight the `<#-- Add 06-nav-item-assignments snippet here -->` comment.
2. **Type** `lfr-widget` to view the available code snippets.
3. **Choose** the `06-nav-item-assignments` snippet.
 - Alternatively, you can type:

```
<#assign
    nav_item_css_class = "nav-link"
/>

<#if navItem.isSelected()>
    <#assign
        nav_item_css_class = "${nav_item_css_class} active"
    />
</#if>
```

Add If Statement for Child Pages in the Menu

1. **Click** to highlight the `<#-- Add 07-children-menu-if-statement snippet here -->` comment.
2. **Type** `lfr-widget` to view the available code snippets.
3. **Choose** the `07-children-menu-if-statement` snippet.
 - Alternatively, you can type:

```
<#if navItem.hasBrowsableChildren()>

    <#assign randomNamespace = portalUtil.generateRandomKey(request, "expandCollapse") />

    <a aria-controls="{randomNamespace}" aria-expanded="true" class="collapse-icon r

        <!-- Add 08-opt-clay-symbol-macros snippet or type here -->

    </a>

</div>

<div class="collapse" id="{randomNamespace}">

    <ul class="nav nav-stacked">

        <!-- Add 09-nav-children-macro snippet or type here -->

    </ul>

</div>

<#else>

    </div>

</#if>
```

Add Clay Icon Macros for Child Menu Icons

1. **Click** to highlight the `<!-- Add 08-opt-clay-symbol-macros snippet or type here -->` comment.
2. **Type** `` to replace the comment.
3. **Press *Enter***.
4. **Type** `` to close the div.
5. **Press *Enter* and *Tab*** after the `` line above the closing span.
6. **Type** `<@clay.icon symbol="caret-right" />` to add the Clay caret icon macro.
7. **Press *Enter*** after the `` line.
8. **Type** `` to replace the comment.
9. **Press *Enter***.
10. **Type** `` to close the div.
11. **Press *Enter* and *Tab*** after the `` line above the closing span.
12. **Type** `<@clay.icon symbol="caret-bottom" />` to add the Clay caret icon macro.

- Alternatively, you can use the `08-opt-clay-symbol-macros` snippet to add the following:

```
<span class="collapse-icon-open">

  <@clay.icon symbol="caret-right" />

</span>

<span class="collapse-icon-closed">

  <@clay.icon symbol="caret-bottom" />

</span>
```

Add a List with Child Navigation Items Macro

1. **Click** to highlight the `<#-- Add 9-opt-nav-children-macro snippet or type here -->` comment.
2. **Type** `<#list navItem.getBrowsableChildren() as navItemChild>` to replace the comment.
3. **Press** *Enter*.
4. **Type** `</#list>` to close the div.
5. **Press** *Enter* and *Tab* after the `<#list navItem.getBrowsableChildren() as navItemChild>` line above the closing list.
6. **Type** `<@buildNavigation navItem=navItemChild />` to add the Clay caret icon macro.
 - Alternatively, you can use the `09-opt-nav-children-macro` snippet to add the following:

```
<#list navItem.getBrowsableChildren() as navItemChild>

    <@buildNavigation navItem=navItemChild />

</#list>
```

Add the Final Navigation Code Using the Custom Macro

1. **Click** to highlight the `<#-- Insert 10-nav-menu-using-macro here -->` comment.
2. **Type** `lfr-widget` to view the available code snippets.
3. **Choose** the `10-nav-menu-using-macro` snippet.
4. **Save** the file.
 - Alternatively, you can type:

```

<nav class="menubar menubar-transparent menubar-vertical-expand-md">

    <a aria-controls="navigationWDTEExample" aria-expanded="false" class="menubar-toggler"
        ${themeDisplay.getLayout().getNameCurrentValue()}

        <@clay.icon symbol="caret-bottom" />

    </a>

    <div class="collapse menubar-collapse" id="navigationWDTEExample">

        <ul class="nav nav-nested">

            <#list entries as navItem>

                <@buildNavigation navItem=navItem />

            </#list>

        </ul>

    </div>

</nav>

```

Add the New Navigation Widget Template to the Platform

1. **Go to** the default Site in your browser.
 - Make sure you're logged in.
2. **Open** the *Menu*.
3. **Go to** *Design # Templates* in the *Site Administration* panel.
4. **Click** the *Widget Templates* tab.
5. **Click** *Add* at the top right.
6. **Choose** the *Menu Display Widget Template*.
7. **Type** *Vertical Navigation Template* for the *Name*.
8. **Open** the completed `vertical-navigation.ftl`.
9. **Copy** the contents.
10. **Paste** the contents into the Widget Template editor.
11. **Click** *Save* at the bottom.

Change the Theme

1. **Go to** *Site Administration # Site Builder # Pages* in the Menu.
2. **Open** the *Configuration menu* next to *Public Pages*.
 - This is the gear icon.
3. **Click** the *Change Current Theme* button near the bottom.
4. **Choose** *Classic*.
5. **Click** the *Save* button at the bottom.

Change the Navigation Widget Template

1. **Click** *Home* in the *Site Administration* panel.
2. **Click** the *Options* menu at the top of the Navigation Menu.
3. **Choose** *Configuration*.
4. **Open** the *Display Template* drop-down.
5. **Choose** the new *Vertical Navigation Template*.
6. **Click** *Save*.
7. **Close** the pop-up.
 - *Note: You will need to create child pages to see the caret icons*

Bonus Exercises

1. Create child pages to test the navigation
2. Test the Navigation in Mobile, Tablet, or Desktop sizes using the Simulation Menu at the top right
3. Create new widget templates for other widgets

Content Presentation Module Quiz

1. Which of the following is not a FreeMarker Template that can be used to control presentation?
 - A. Widget Templates
 - B. Page Fragments
 - C. Web Content Templates
 - D. Theme Templates
2. What can Developers take advantage of in FreeMarker to reduce code with re-usability in their Widget Templates?
 - A. Nesting
 - B. Clay Classes
 - C. Macros
 - D. If, Else Statements
3. FreeMarker is an HTML Markup language that gives developers access to Java Objects.
 - A. True
 - B. False
4. Which API needs to be used to display Assets in an Asset Publisher Widget Template?
 - A. `clayRenderer`
 - B. `assetDisplayRender`
 - C. `displayAsset`
 - D. `assetRenderer`
 - E. `bourbonRenderer`
5. Web Content Templates are special FreeMarker Templates that allow front-end developers to use FreeMarker, HTML, CSS, and JavaScript to provide a design for any given Structure.
 - A. True
 - B. False

Answer Key

1. B
2. C
3. True
4. D
5. True