



# Create Page Fragments

## Learning Objectives

Understand how to use Page Fragments to create unique Content Pages. Front-End Developers can use reusable bits of HTML, CSS, and JavaScript to implement appropriate designs for the content business users add to the platform.

## Tasks to Accomplish

- Create Page Fragments using the Fragment Generator
- Package a collection of fragments and import into a Liferay DXP instance
- Create a Content Page using a collection of fragments

## 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](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

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# Creating Page Fragments

## Exercise Goals

- Install the NPM Liferay Fragments Generator
- Create a collection and an Editable Banner Fragment
- Add editable elements to the Fragment by using the editable tag

## Install the NPM Fragments Generator

1. **Open** Command Prompt/Terminal.
2. **Run** `npm install -g generator-liferay-fragments@1.7.0` to install the Liferay Fragments Generator.
  - If you have not yet installed the node.js, yeoman, gulp dependencies, please refer to the front-end developer module 1 exercises.
3. **Run** `yo` in the *Command Line/Terminal* to see all the generators installed.
4. **Choose** *Get me out of here!* at the bottom.

## Add a Livingstone Fragments Project

1. **Go to** your *liferay* folder in your *Command Line/Terminal*.
  - Windows: *C:\liferay*
  - Unix Systems: *[userhome]/liferay*
2. **Run** `yo liferay-fragments`.
3. **Run** *Livingstone Fragments* for the *Project name*.
4. **Run** *N* to deny sample content

## Add a Collection in the new Project Folder

1. **Go to** the *livingstone-fragments* project folder in the *Command Line/Terminal*.
  - Windows: *C:\liferay\livingstone-fragments*
  - Unix Systems: *[userhome]/liferay/livingstone-fragments*
2. **Run** *npm run add-collection* in the project folder.
3. **Type** *Livingstone Front Page* for the *Collection name*.
4. **Type** *Livingstone Front Page Fragments* for the *Collection description*.

## Add the Main Banner Fragment to the Collection

1. **Go to** the *livingstone-front-page* folder in the *Command Line/Terminal*.
  - Windows: *C:\liferay\livingstone-fragments\src\livingstone-front-page*
  - Unix Systems: *[userhome]/liferay/livingstone-fragments/src/livingstone-front-page*
2. **Run** *npm run add-fragment*.
3. **Type** *7.4.0* as the minimum liferay version for our fragment to be compatible with.
4. **Type** *01-main-banner* for the *Fragment name*.
5. **Choose** *Livingstone Front Page* as the collection.

*Note: the next two exercise sub-sections go over adding snippets to Visual Studio Code. If you have already done this you can skip ahead to the Open the Index HTML File and Add a Background Image sub-section.*

## 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-page-fragments* for the *name*.
  - The full file name will be *lfr-page-fragments.code-snippets*.
5. **Click** *Save*.

## Add the Snippet Content

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

## Open the Index HTML File and Add a Background Image

1. **Go to** your *01-main-banner* folder.
2. **Open** the `index.html` file in *Visual Studio Code*.
3. **Delete** the sample code in the file.
4. **Type** `lfr` and choose the `06-beginning-image-div` snippet.
  - Alternatively, you can type the following:

```
<div class="jumbotron main-background-image" style="background-image: url(https://images.  
</div>
```

## Add the Fluid Section and Left Column

1. **Press *Enter* and *Tab*** after the `<div class="jumbotron main-background-image" style="background-image: url(https://images.pexels.com/photos/9537/sea-beach-sand-sun.jpg);">` line.

2. **Type** `lfr` and choose the `07-add-container-left-column` snippet.

- Alternatively, you can type the following within the first div:

```
<section class="container-fluid container-fluid-max-xl">

  <div class="col-md-6 mr-auto text-left">

    </div>

</section>
```

## Add the Banner Heading

1. **Press *Enter* and *Tab*** after the `<div class="col-md-6 mr-auto text-left">` line.
2. **Type** `lfr` and choose the `08-banner-heading` snippet.

- Alternatively, you can type the following within the column div:

```
<h1 class="display-4">Livingstone Hotels & Resorts</h1>
```

## Add the Banner Lead Text

1. **Press *Enter*** after the `</h1>` tag.
2. **Type** `lfr` and choose the `09-banner-lead-text` snippet.

- Alternatively, you can type the following under the banner heading:

```
<p class="lead">

  Get ready for the journey of a lifetime. It's time to <strong>go anywhere</strong>.

</p>
```

## Add Two Buttons for Discovering and Booking

1. **Press *Enter*** after the `</p>` tag.
2. **Type** `lfr` and choose the `10-banner-buttons` snippet.
  - Alternatively, you can type the following under the feature title:

```
<div class="btn-group">

  <div class="btn-group-item">

    <a class="btn btn-default btn-theme-default btn-xl" href="#">Discover</a>

  </div>

  <div class="btn-group-item">

    <a class="btn btn-primary btn-theme-primary btn-xl" href="#">Book Now</a>

  </div>

</div>
```

## Make the Heading and Lead Text Editable

1. **Click** to place your cursor after `"display-4"` in the `<h1 class="display-4">` tag.
2. **Type** `data-lfr-editable-id="header1" data-lfr-editable-type="text"` as attributes within the `h1` tag to make the text editable.
3. **Click** to place your cursor in front of the *Get ready...* text.
4. **Type** `<lfr-editable id="body-text" type="text">` to make the text editable.
5. **Click** to place your cursor after the *Get ready...* text.
6. **Type** `</lfr-editable>` to close the editable tag.
7. **Save** the file.
  - Make sure the heading and lead text sections look like this:



```
<h1 class="display-4" data-lfr-editable-id="header1" data-lfr-editable-type="text">
  Livingstone Hotels & Resorts
</h1>

<p class="lead" data-lfr-editable-id="body-text" data-lfr-editable-type="text">
  <lfr-editable id="body-text" type="text">Get ready for the journey of a lifetime. It's
</p>
```

## Make the Buttons Editable

1. **Click** to place your cursor in the first `<a class="btn btn-default btn-theme-default btn-xl" href="#">` tag.
2. **Type** `data-lfr-editable-id="first-button" data-lfr-editable-type="link"` as an attribute to make the text editable.
3. **Click** to place your cursor in the second `<a class="btn btn-default btn-theme-primary btn-xl" href="#">` tag.
4. **Type** `data-lfr-editable-id="second-button" data-lfr-editable-type="link"` to make the text editable.
5. **Save** the file.
  - Make sure the heading and lead text sections look like this:

```
<div class="btn-group">

  <div class="btn-group-item">

    <a class="btn btn-default btn-theme-default btn-xl" href="#" data-lfr-editable-id="discover">
      Discover
    </a>

  </div>

  <div class="btn-group-item">

    <a class="btn btn-primary btn-theme-primary btn-xl" href="#" data-lfr-editable-id="booknow">
      Book Now
    </a>

  </div>

</div>
```

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## Bonus Exercises

1. Create a new Collection using the Fragments Generator
2. Create new Fragments using the Fragments Generator. Make sure it has editable elements.

# Packaging Fragments

## Exercise Goals

- Import the Fragments created in the last exercise into the platform
- Export a Collection

## 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.

## Import the Fragment onto the Liferay Platform

1. **Open** *Terminal/Command Prompt* if it isn't opened already.
2. **Go to** the *livingstone-fragments* project folder in the *Command Line/Terminal*.
  - Windows: *C:\liferay\livingstone-fragments*
  - Unix Systems: *[userhome]/liferay/livingstone-fragments*
3. **Run** *npm run import*.
4. **Press** *Enter* to accept the default *localhost:8080* *host & port*.
5. **Type** in the administrator Username for the Platform.
  - If you see your admin email as the address, simply hit enter to accept.
6. **Type** your password.
7. **Choose** the default *Company ID*.
8. **Choose** the default Site *Group ID*.
  - If you installed the platform in module one, it should be *Livingstone Hotels & Resorts*.
9. **Go to** *localhost:8080* in your browser.
  - Your Liferay instance must be running in this port. If it is not, start it up and wait until it is running before continuing this exercise.
10. **Go to** *Site Administration # Design # Fragments* to verify that it imported.

*Note: There is a chance that the import command will not work. If you are running into this issue, you can simply add a new Collection and Fragment in Menu # Site Builder # Page Fragments and copy the html code to the new fragment.*

## Export a Collection

1. **Click** the *options* icon next to the Livingstone Front Page title.
  2. **Choose** *Export* in the drop-down.
  3. **Click** *Ok* in the pop-up.
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## Bonus Exercises

1. Create a new Collection in the Fragments Editor. Export the Collection and import it into a new instance.

## Create Page Fragments Module Quiz

1. Which of the following can you use to import Fragments into a Liferay instance? (Choose two.)
  - A. Gradle
  - B. Dev Studio
  - C. The Liferay DXP UI
  - D. The Fragments Toolkit (Generator)
2. Which of the following are used to create page fragments? (Choose three.)
  - A. HTML
  - B. Java
  - C. JavaScript
  - D. CSS
  - E. C++
3. Collections are groups of Page Fragments.
  - A. True
  - B. False
4. Which of the following is not a `data-lfr-editable-type`?
  - A. image
  - B. video
  - C. text
  - D. html
  - E. link
5. You must use the Liferay Fragments Generator in order to create Page Fragments.
  - A. True
  - B. False

## Answer Key

1. C, D
2. A, C, D
3. True
4. B
5. False