LIFERAY®

# GETTING INFORMATION FROM WORKFLOW

# THE WORLD IS OUR LIBRARY

- Workflow definitions allow us to use FreeMarker natively in the workflow definition xml file.
- This means we can pull information from the platform.
- Using FreeMarker, let's see how to pull information from Liferay by modifying an existing workflow.

# GETTING INFORMATION INTO THE WORKFLOW TEMPLATE

- Pulling information into our workflow definition is not much different from the same process for an Application Display Template.
- In this example, we’ll start off simple and pull information from the workflow.
- Recall that as something goes through the workflow, workflow approvers are able to leave comments along the way.
- We’ll pull information from the comments that are left from the workflow approvers.

# WORKFLOWS IN S.P.A.C.E.

- S.P.A.C.E has been using the workflow process to enable instructors to grade assignments and leave feedback.
- Students aren't always going to be signing in and out of the S.P.A.C.E. platform.
- We want a way to ensure that students get feedback from their instructors via email.
- This exercise will take the comments left by the instructor and send them to the student through an email notification that we configure in the workflow definition.

# EXERCISE: INCLUDING SNIPPETS

- Before we start modifying our workflow definition, we have some snippets we can use with *Brackets*.

1. **Open** Brackets.
2. **Click** on the dropdown in the left-hand side bar.
3. **Click** *Open Folder...*
4. **Go to** *exercises/front-end-developer-exercises/07-workflow-templates*.
5. **Choose** the snippets folder.

✓ Now that we have our snippets, let's start modifying our workflow definition.

# EXERCISE: USING FREEMARKER NOTIFICATIONS

- The workflow definition xml file has already been created for us.
- We need to enable our workflow definition to use FreeMarker and then add our notification template.

1. **Go to** *exercises/front-end-developer-exercises/07-workflow-templates/* in your file manager.
2. **Open** the *assignment-grading.xml* file in *Brackets*.
3. **Find** *<name>Graded Notification</name>* on line 59.
    - This is where we will add our FreeMarker notification.
4. **Go to** *<template-language>text</template-language>* on line 65.
5. **Replace** *text* with *freemarker*.

# EXERCISE: SENDING OUT EMAIL NOTIFICATIONS

- As previously discussed, Workflow notifications can also be configured to receive emails.
- Let's go ahead and enable email notifications.

1. **Go to** *<notification-type>user-notification</notification-type>* on line 66.
2. **Replace** *user-notification* with *email*.
3. **Save** the file.

- Now that we have our workflow definition all set up, let's add our notification template to reference information from the workflow process.

# EXERCISE: RETRIEVING THE COMMENTS FROM OUR WORKFLOW

- Notification templates can be added inside a *<template>* tag in the workflow definition.
- Developers simply need to find the *template* section in the workflow definition and place the notification template in the *<![CDATA[]]>* section.

1. **Open** the *01-workflow-comment-retrieve* snippet.
2. **Copy** the contents of the snippet.
3. **Go to** the *<template>* tag on line 62 of the *assignment-grading.xml* file.
4. **Paste** the contents of the snippet within the *<![CDATA[]]>* tag on line 63.
5. **Save** the file.

# WHAT'S GOING ON HERE?

- Our email notification template is simple.
- We first assign *taskComments* to the *comments* variable, allowing us to display comments from the workflow process.
- Then we create a simple HTML structure that shows the graded assignment, using the *entryType* variable, and the included comments if they exist.

```
<![CDATA[
<#assign comments = taskComments!"">
    <!-- email body -->
<p>
  Your assignment, ${entryType}, has been graded by the instructor.
<#if comments != "" >
   <br />Here are the comments included: <strong>${comments}</strong>
</#if>
</p>
     <!-- signature -->
<p>Sincerely,<br /><strong>S.P.A.C.E. Instructor</strong></p>
]]>
```

# STYLING AND BRANDING OUR EMAIL NOTIFICATIONS

- We can provide additional company branding or styling to our notification templates.
- Adding styling to the template is simple, but more complex notifications could potentially be a bit unwieldy.
- Instead of adding all the styling in the template, we can do things like reference web content in our notifications.
- Injecting web content helps keep things much cleaner and more modular in the workflow xml file.

# EXERCISE: MAKING SURE YOU'RE IN THE RIGHT PLACE

- Let's start by importing some content created for our email notifications.

1. **Open** the *Menu*.
2. **Go to** the Site Administration Panel and make sure you are on the S.P.A.C.E. Site.
3. **Go to** *Content→Web Content*.
4. **Click** on the *Options* button at the top-right corner.

# EXERCISE: IMPORTING STYLED WEB CONTENT

1. **Choose** *Export/Import*.
2. **Click** the *Import Tab*.
3. **Choose** the *email-styled-banner.lar* from *exercises/front-end-developer-exercises/07-workflow-templates*.
4. **Click** *Continue*→*Import*.
5. **Close** the pop-up.

# EXERCISE: ADDING WEB CONTENT TO THE WORKFLOW

- Now we have a simple example of a S.P.A.C.E. banner content article that can be referenced in our notification template.
- Let’s update our email notification.

1. **Open** the *02-workflow-web-content* snippet.
2. **Copy** the contents of the snippet.
3. **Replace** *<!– Add snippet 02-workflow-web-content here –>*, on line 65 of the `assignment-grading.xml` file with the contents of the snippet.
4. **Save** the file.

- Here we’re using the *serviceLocator* variable to reference a web content article by its Site ID and title.
- Next, let’s update the article parameters.

# EXERCISE: SITE ID AND ARTICLE NAME

1. **Open** the *Menu* in Liferay.
2. **Go to** *Configuration→Site Settings* in the Site Administration Panel.
3. **Copy** the Site ID found at the top.
4. **Replace** the first parameter in *journalArticleLocalService.getArticleByUrlTitle(0, "header-web-content")* on line 67 of the `assignment-grading.xml` file with the Site ID.
5. **Replace** the "header-web-content" with "email-styled-banner".
6. **Save** the file.

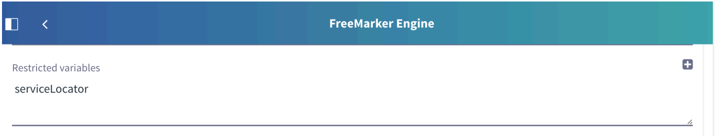
✓ Now, our email template is using a web content article to provide a header banner in our emails.

# THE SERVICELOCATOR

- Our snippet is referencing web content by using the following:

```
<#assign journalArticleLocalService = serviceLocator.findService("com.
liferay.journal.service.JournalArticleLocalService") />
```

- Because the `serviceLocator` can get access to the database, it is restricted by default.
- This variable can be unlocked by removing it from the Freemarker Engine Restricted Variables found in *Menu→Control Panel→Configuration→System Settings→Foundation*.
  - This is typically done by a System Administrator.



Restricted variables

serviceLocator

# MAKING THE WORKFLOW DEFINITION AVAILABLE

- Once the notification templates have been added, the xml can be handed off to an administrator.
- Administrators can make the workflow definition xml available for use by doing the following:
  - Going to *Menu*→*Control Panel*→*Configuration*→*Workflow Definition*
  - Uploading the xml definition
- Once the definition is available, workflow can be configured on document folders where Students upload their assignments.
- When an assignment is uploaded, Instructors can grade and provide comments.
- Our notification template will take those comments and provide the feedback directly to the students via email.

Notes: