Tutorial

Project Generator

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Tutorial	Actifsource Tutorial – Project Generator
Required Time	• 30 Minutes
Prerequisites	• Actifsource Tutorial – Installing Actifsource • Actifsource Tutorial – Simple Service
Goal	• Generate Eclipse Projects using actifsource
Topics covered	• Create a project to generate eclipse projects • Generate the project settings • Create and distribute non-generated files • Generate .projectconfig files to enable project creation
Notation	↳ To do ⓘ Information • **Bold**: Terms from actifsource or other technologies and tools • **Bold underlined**: actifsource Resources • Underlined: User Resources • *UnderlinedItalics*: Resource Functions • `Monospaced`: User input • *Italics*: Important terms in current situation
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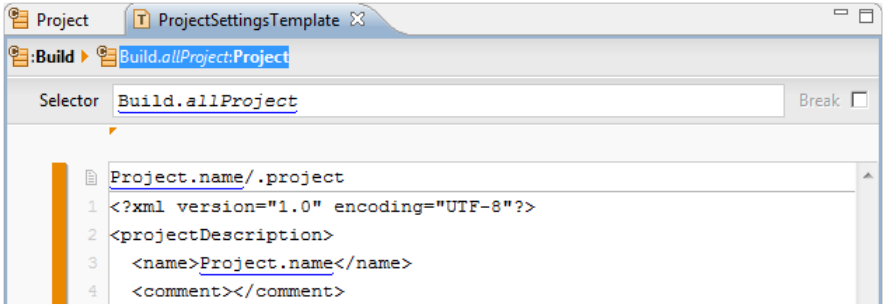
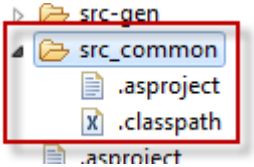
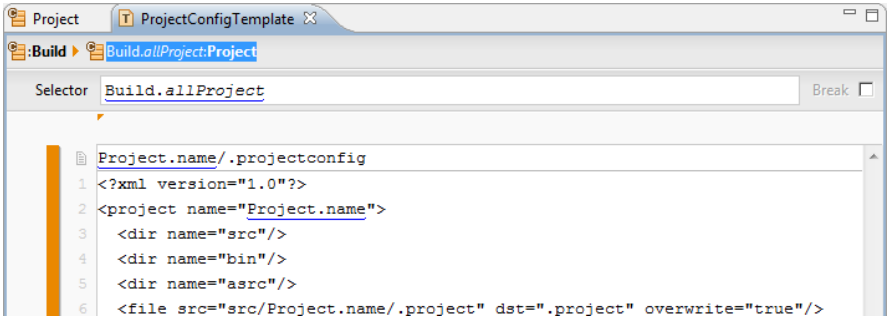
- Create an eclipse project generator project
- Generate the project settings



- Place non-generated files



- Generate .projectconfig files to enable project creation



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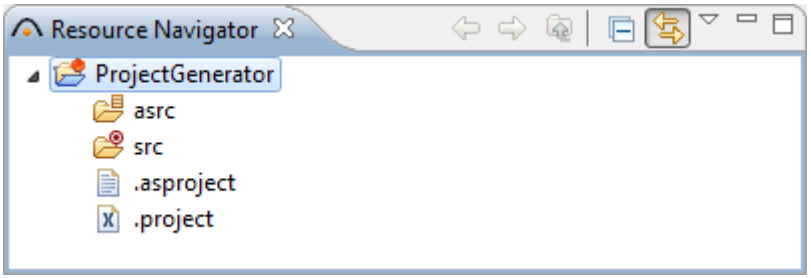
Part I: Preparation



- Prepare a new **actifsource Project** as seen in the *Actifsource Tutorial – Simple Service*
  - Setup the Target Folder *src*

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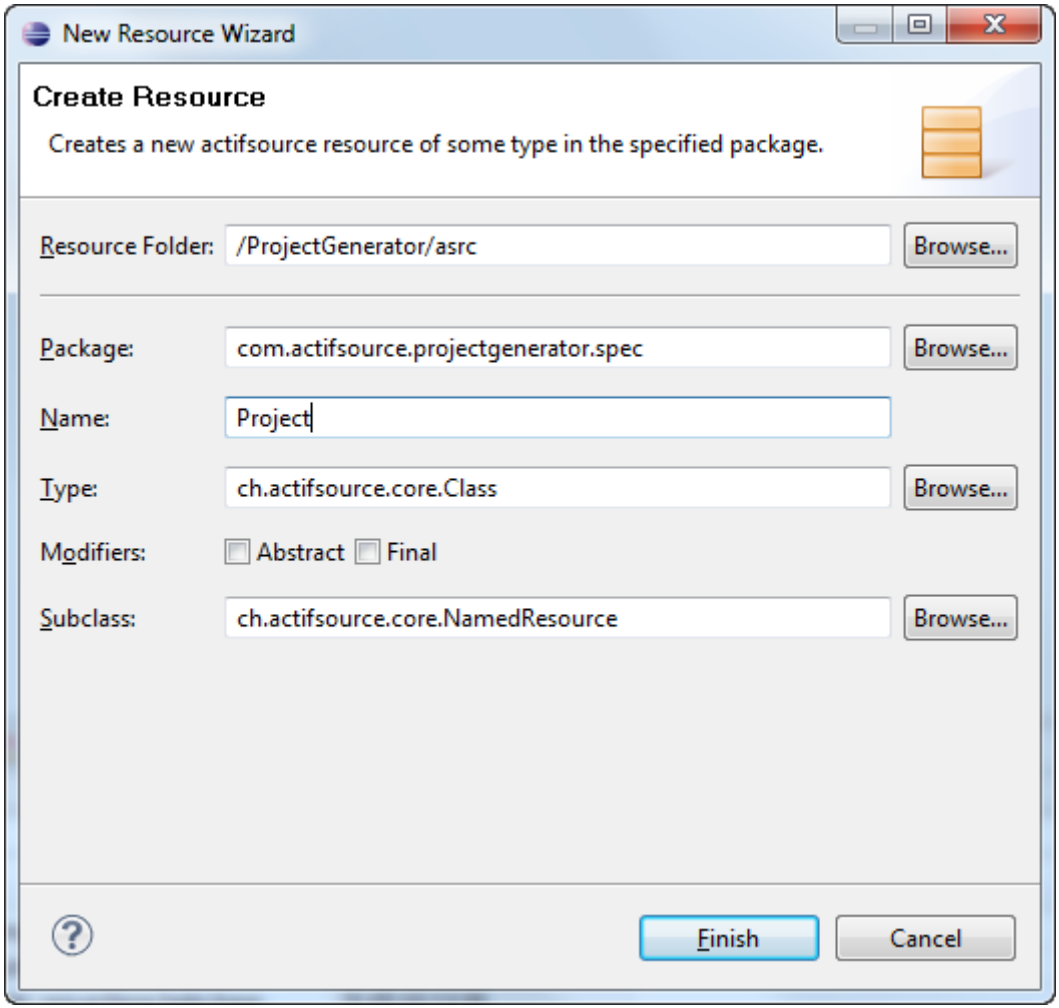
Part I: Create Project Data



↳ Create a new **Class** named "Project" in the *package* "com.actifsource.projectgenerator.spec" using the *New Resource Wizard*

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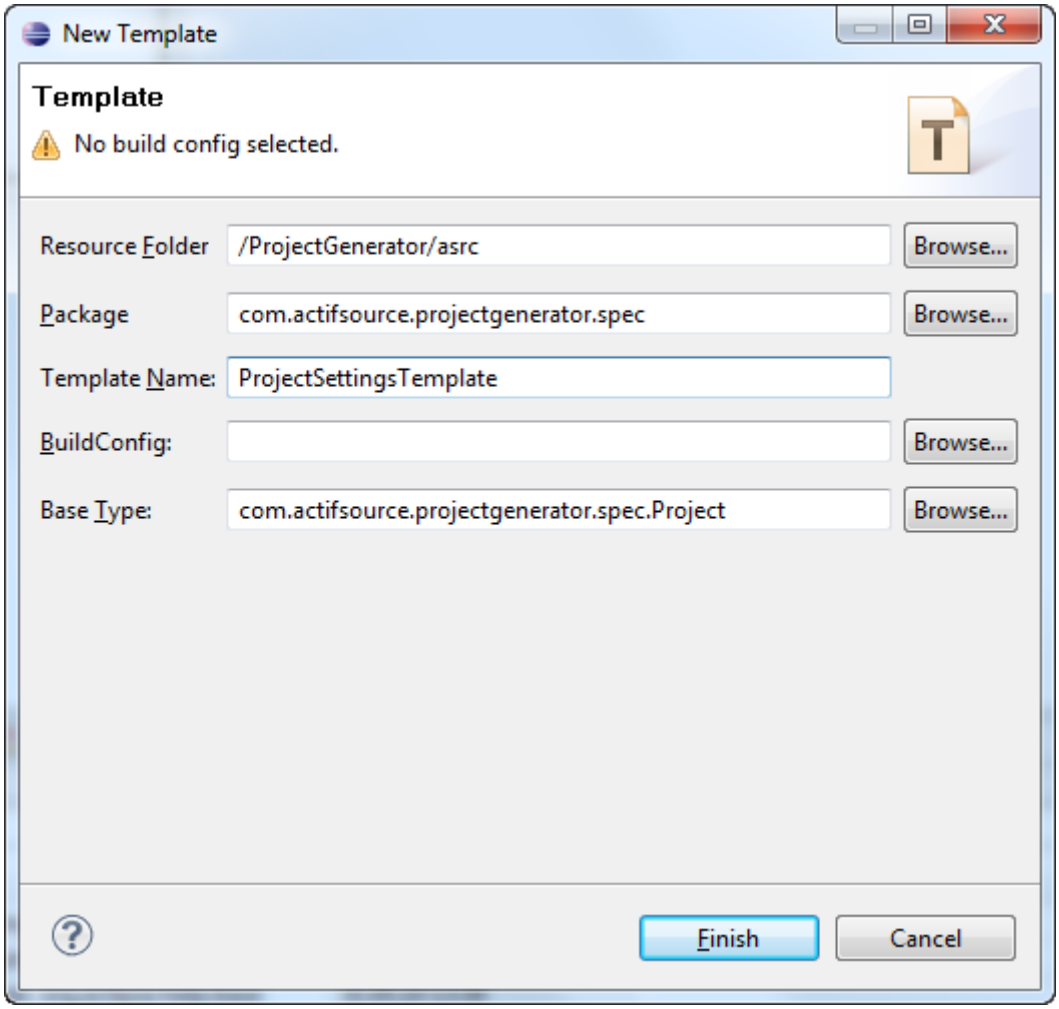

↳ Create a new **Template** named "ProjectSettingsTemplate" by right clicking the newly created class Project and selecting the *New Template Wizard*.

- Since you clicked on the resource Project actifsource automatically fills in the *base type*, meaning the template is executed for each *instance* of the class Project.

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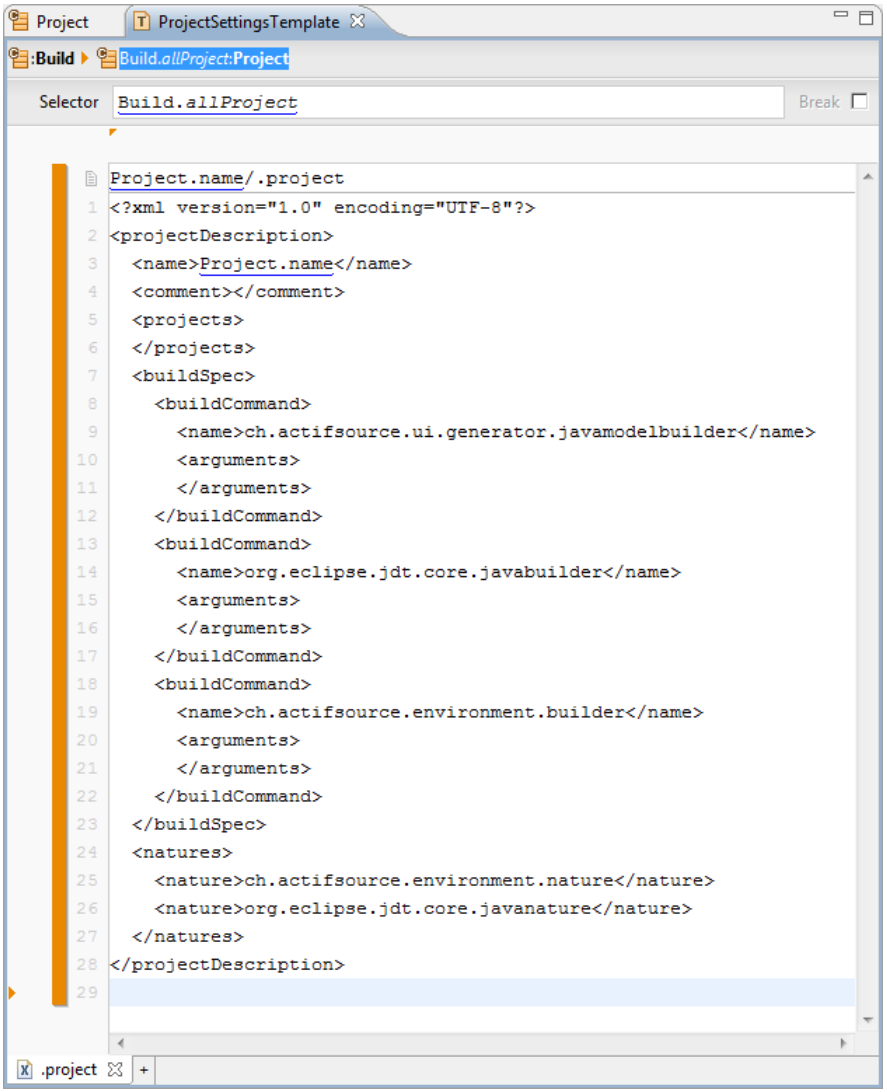

- Write the content of the *.project* file or copy it from one of your existing eclipse project.
- Replace the variable information by linking to the actifsource model (Use Content Assist: Ctrl+Space).
- Use the project name to create a subdirectory for each project in the *target folder*.
- In this example we only generate the project name from the model, feel free to extend the model to fit your needs.

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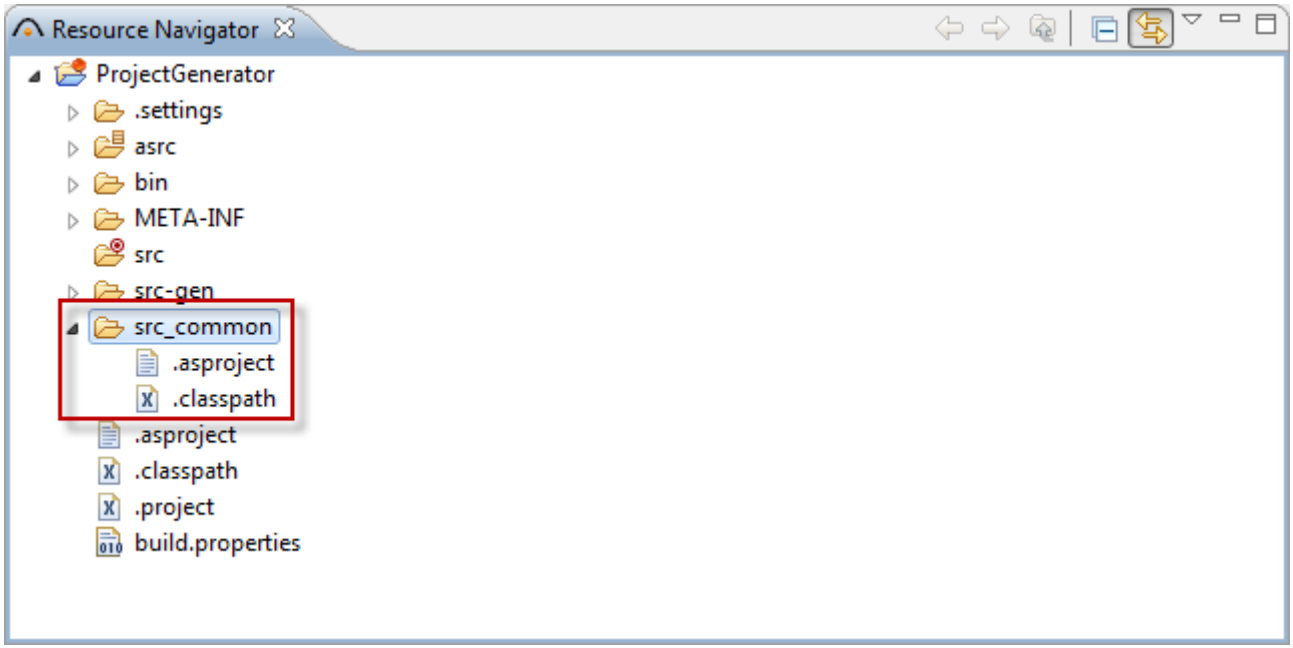
Part II: 8
Add non generated files



- Sometimes you may have configuration files equal for all projects, in this case just put them into a folder in the generator project.

↳ Create a “src_common” folder and copy the .asproject and the .classpath file of a preconfigured project into it or use the ones on the following page.

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Add non generated files

Project | ProjectSettingsTemplate | .asproject | .classpath

```
<?xml version="1.0" encoding="UTF-8"?>
<projectSettings>
  <version format="4.2.0" />
  <resourcepaths>
    <path>asrc</path>
    <builtin>core</builtin>
    <builtin>diagram</builtin>
    <builtin>ecore</builtin>
  </resourcepaths>
  <templatepaths />
  <targetpaths>
    <targetpath>
      <path>src</path>
    </targetpath>
  </targetpaths>
</projectSettings>
```

Project | ProjectSettingsTemplate | .asproject | .classpath

```
<?xml version="1.0" encoding="UTF-8"?>
<classpath>
  <classpathentry kind="con" path="org.eclipse.jdt.launching.JRE_CONTAINER/org.eclipse.jdt.internal.debug.ui.launcher.StandardVMType/JavaSE-1.6"/>
  <classpathentry kind="src" path="src"/>
  <classpathentry kind="output" path="bin"/>
</classpath>
```

Design | Source

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Part III: 10
Create Project Configuration

- Now after you generated and copied all project files, like the *.project*, *.classpath* and *.asproject*, you need to generate a *.projectconfig* file.
- You need to create a *.projectconfig* file for each *project*. The *.projectconfig* defines the eclipse name of the project and the initial file structure. Since all settings are stored inside the projects file structure as setting-files, this also defines the initial project setup.

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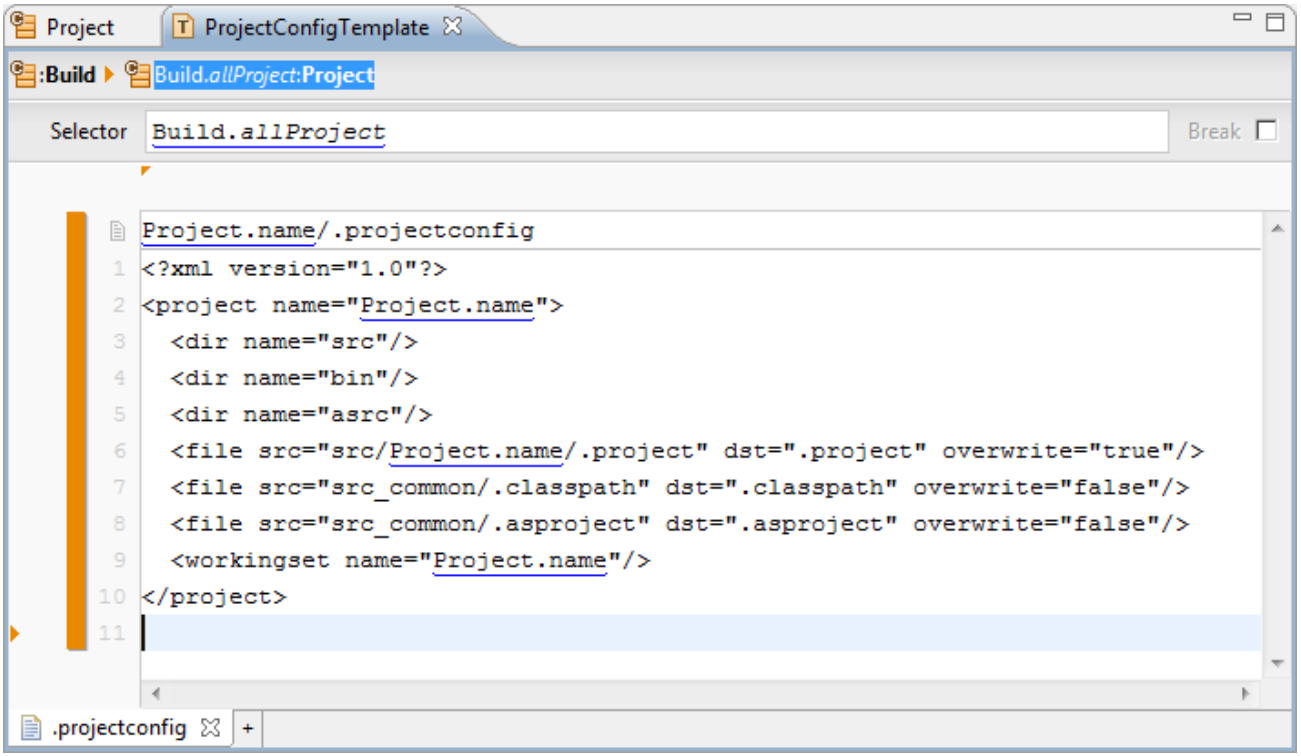

- Write a template for the *.projectconfig* file, as before use the projectname from the model.
- Actifsource provides the following elements inside the project-element.

dir	with attribute **name** to create a directory in project root
file	with attribute **src** and **dst** to copy a file from the generator project to the generated project use the **overwrite** attribute to specify if the file is overwritten each time generator runs again
workingset	with attribute **name** to add the project to a specific workingset

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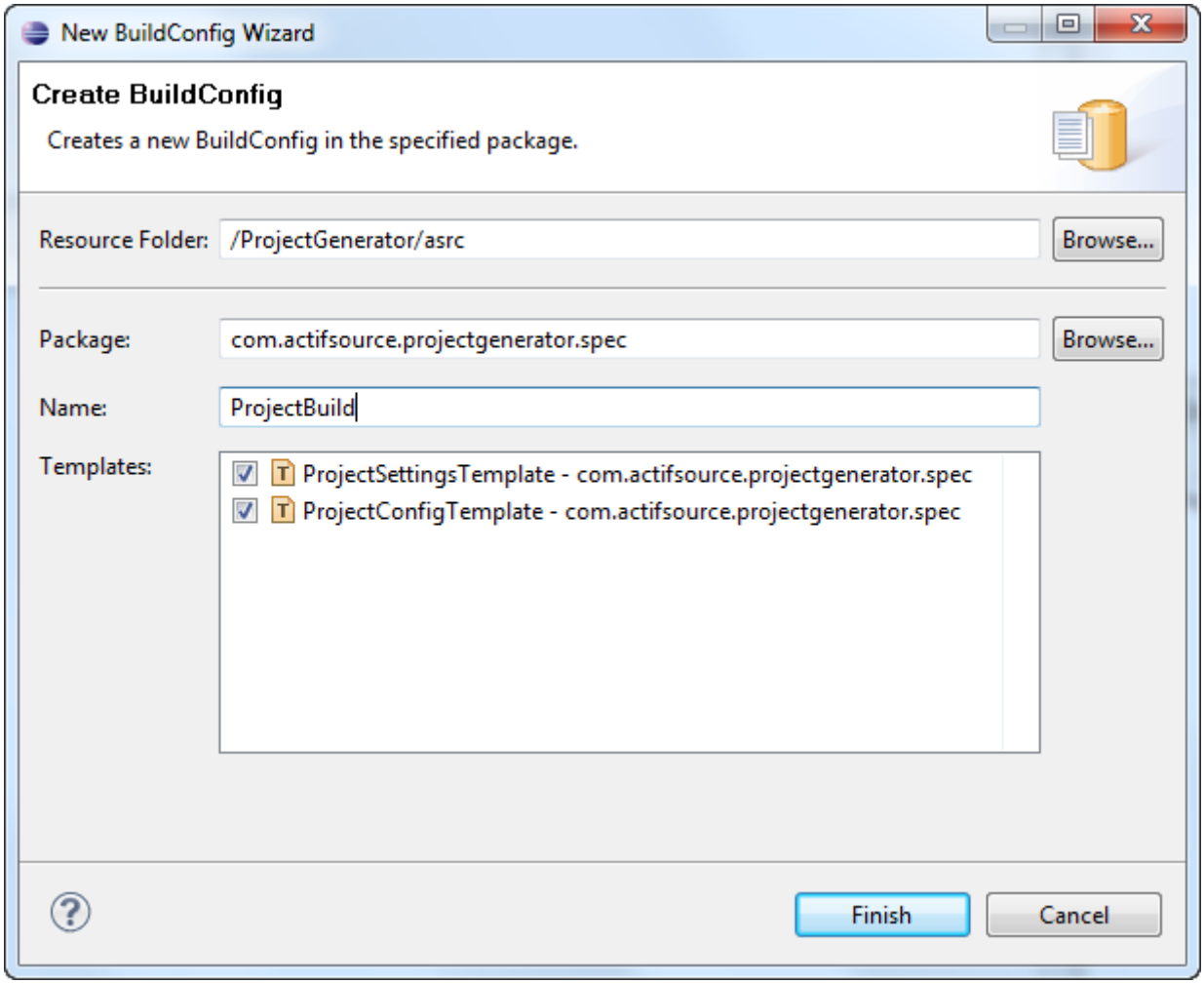
Part IV: 12
Setup BuildConfig and Targetfolder



↳ Create a **BuildConfig** named “ProjectBuild” using the *New BuildConfig Wizard* and including all templates.

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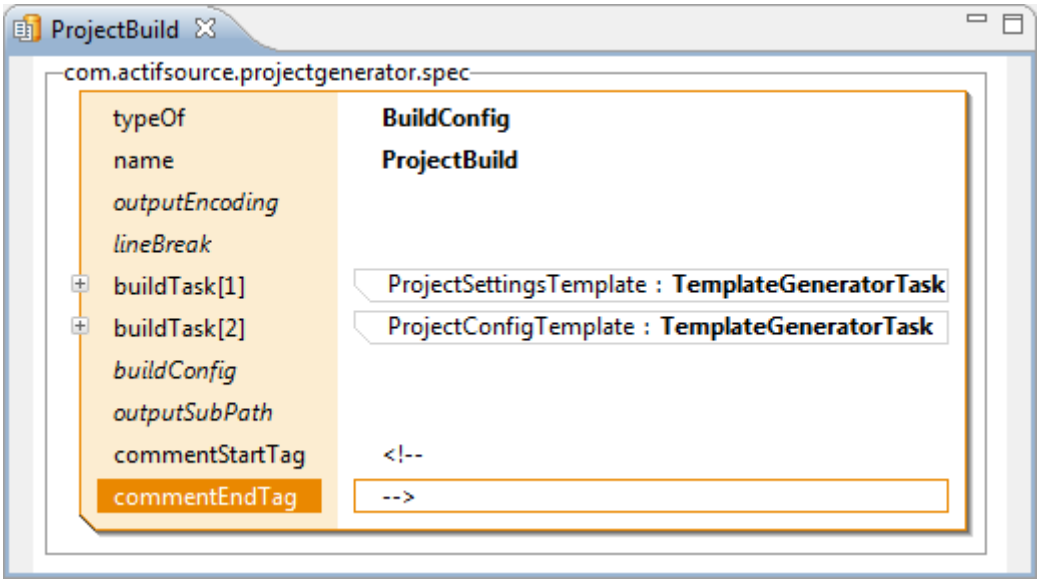

↳ Set the **commentStartTag** and **commentEndTag** as defined by xml.

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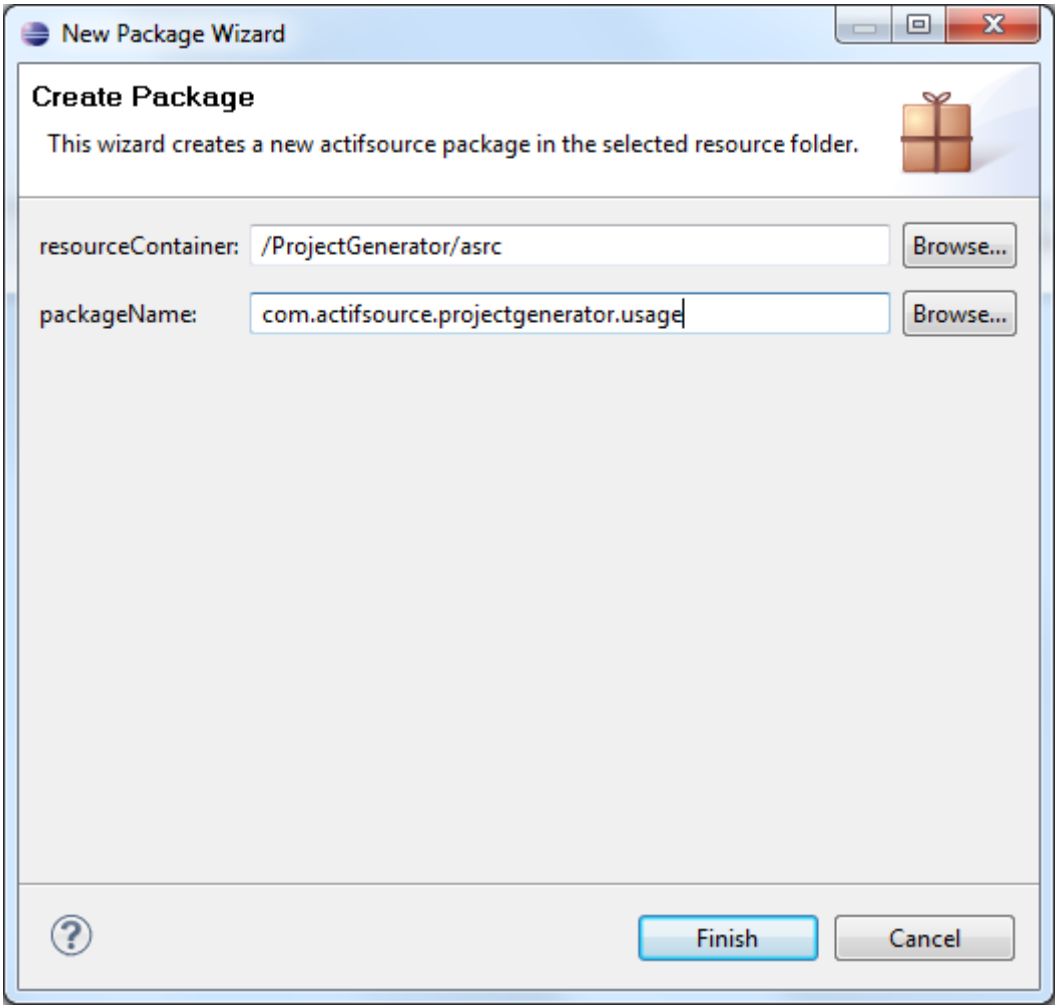

- Create a new *package* “com.actifsource.projectgenerator.usage”.

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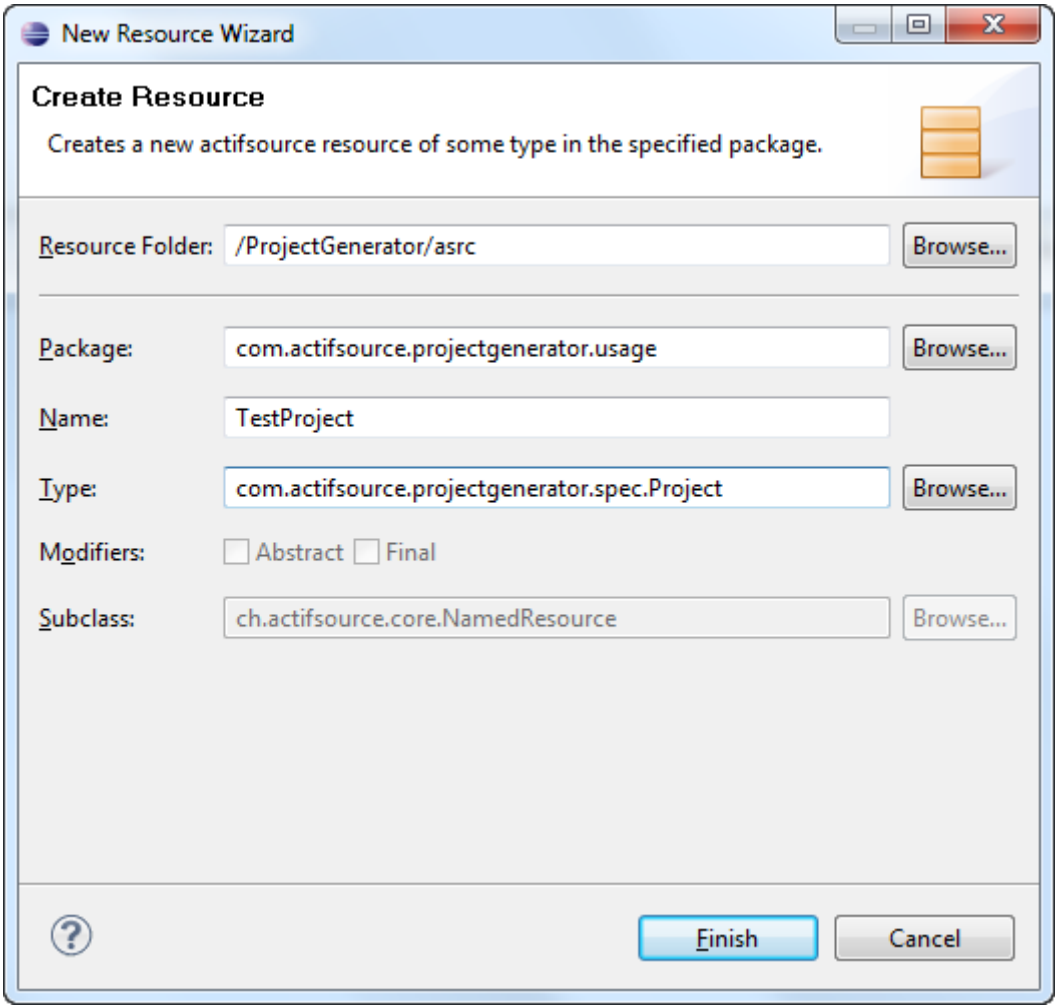

- Create an instance of the Project class in the *package* com.actifsource.projectgenerator.usage named "TestProject".
- This step will result in the first try to generate the project, but fails due to missing the buildconfig setup.

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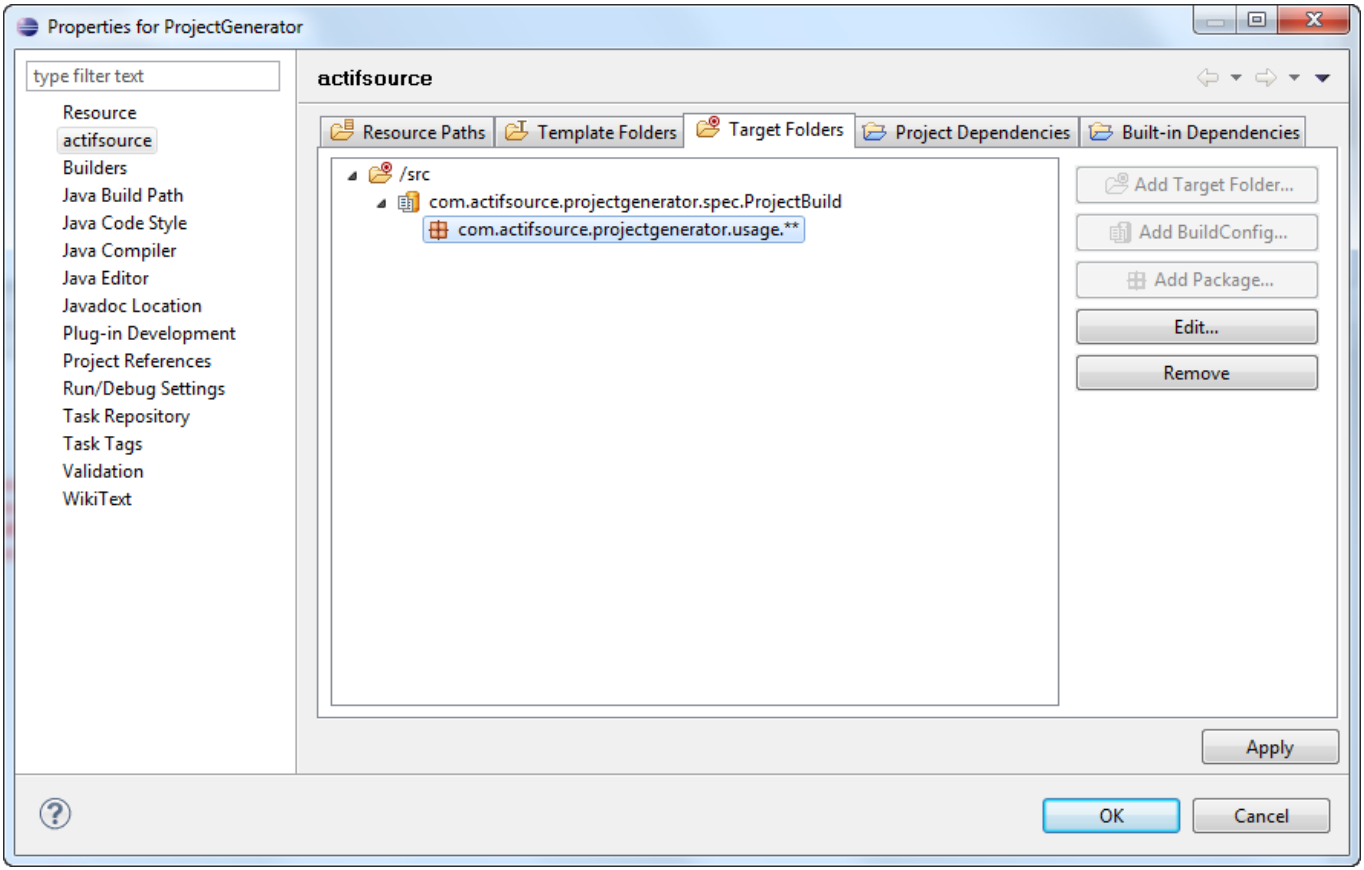

- Right click on the project and select properties
- Click on the category “actifsource”
- Goto the target folder tab and click on the src-folder
- Add the buildconfig ProjectBuild
- Add the package com.actifsource.projectgenerator.usage.
- Now actifsource will generate the xml files with current xml-comment and the project builder creates a new project.

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Part IV: Conclusion

- As you have seen generating projects is very similar to generating any other file, except that you have to generate the project type specific settings files and a project configuration file.
- Depending on your needs you may define the builders listed in .project files or the required libraries listed in .classpath files based on your models information.

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