IBM Knowledge Center   Search   Content   Products   Help

> Rational Rhapsody > Rational Rhapsody 8.1.2 > Designing and modeling > Creating and designing projects > Designing pro
  Modifying classes by using the Features window > Modeling by using template classes and generic classes > Creating a templ

Creating a template class

Version 8.1.2 ▾

You can use a class to create a template class. In addition, some template parameters can be specified as specific types and a specialized function to create a specialization or new class/function with content that is unrelated to the original template.

About this task

You can useIBM® Rational® Rhapsody® DiffMerge to locate and merge template information.
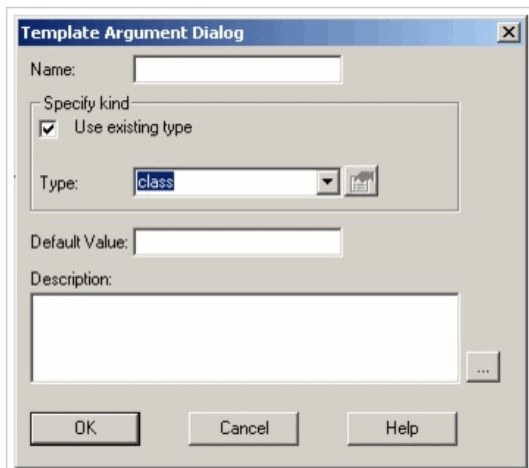
Procedure

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> Rational Rhapsody > Rational Rhapsody 8.1.2 > Designing and modeling > Creating and designing projects > Designing pro
  Modifying classes by using the Features window > Modeling by using template classes and generic classes > Creating a templ

5. Accept the default type or select another one from the **Kind** list.

6. To add arguments for the template, click the Invoke Feature Dialog button ⊞ to open the Template Argument window. Note the following information about the Template Argument window:

    a. If you select the **Use existing type** check box, you can change the type and enter a description. In C++, you can also provide a default value for the template argument.

    b. If you clear the **Use existing type** check box, you can enter code that further refines the argument type, for example a pointer to a type or an array of a certain type. When entering code in the **C++[Java] Declaration** field, you can also see other arguments that have been defined.

    c. Click **OK** to close the Template Argument window and return to the **Template Parameters** tab.

7. Add more templates as needed by clicking **<new>** on the **Template Parameters** tab.

8. To determine the argument order on the **Template Parameters** tab, use the Move Item Up ⬆ and Move Item Down ⬇ buttons.

9. If there is a primary template that you want to use, select it in the **Primary Template** list box. This box contains templates for which this class is a specialization. Its parameters to be instantiated appear in the box below the **Primary Template** list box.

    You can define specialization parameters only if you select a template as a primary class.

    Note: When you try to delete a template that has specialization, the product warns you that the template has references. If you do delete the template, such specialization will generate an error when you check a model.

10. Click **OK**.

    The template is listed in the browser in the **Classes** category.

Results

Once you have created the template class, you can begin using it directly in your code.

You can create templates in other situations. For example, you can:

- Reuse any type defined for a template parameter as a type within the template.
- Use the template class as a generalization, as described in Using template classes as generalizations.
- Create an operation template, as described in Creating an operations template.
- Create a function template, as described in Creating functions templates.

See also Instantiating a template class.

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> Rational Rhapsody > Rational Rhapsody 8.1.2 > Designing and modeling > Creating and designing projects > Designing pro
Modifying classes by using the Features window > Modeling by using template classes and generic classes > Creating a templ