Visual Paradigm

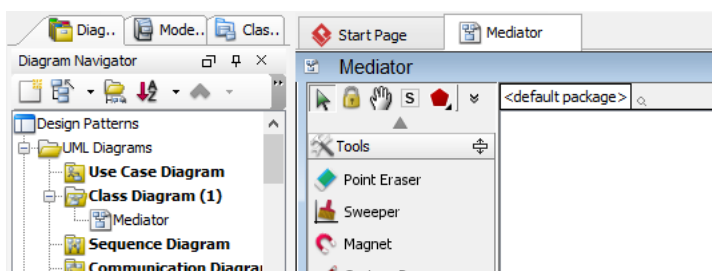# Mediator Pattern Tutorial
Written Date : October 21, 2009

This tutorial is aimed to guide the definition and application of Gang of Four (GoF) mediator design pattern. By reading this tutorial, you will know how to develop a model for the mediator pattern, and how to apply it in practice.

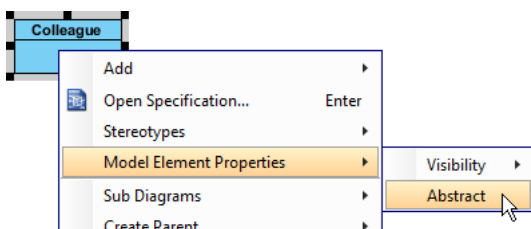## Modeling Design Pattern with Class Diagram
1.   Create a new project *Design Patterns*.

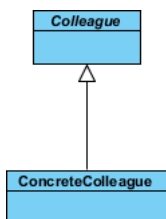2.   Create a class diagram *Mediator*.

3.   Select **Class** from diagram toolbar. Click on diagram to create a class. Name it as *Colleague*.
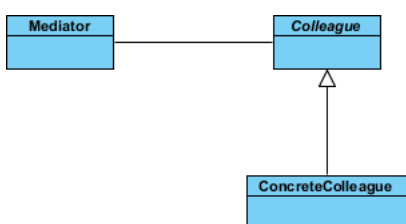

4.   Right-click on *Colleague*, and select **Model Element Properties** > **Abstract** to set it as abstract.
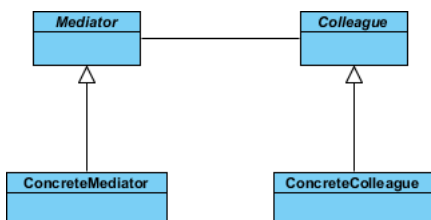
5.   Move the mouse cursor over the *Colleague* class, and drag out **Generalization** > **Class** to create a subclass *ConcreteColleague*.
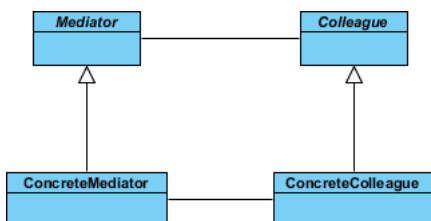
6.   Move the mouse cursor over the *Colleague* class, and drag out **Association** > **Class** to create an associated class *Mediator*.
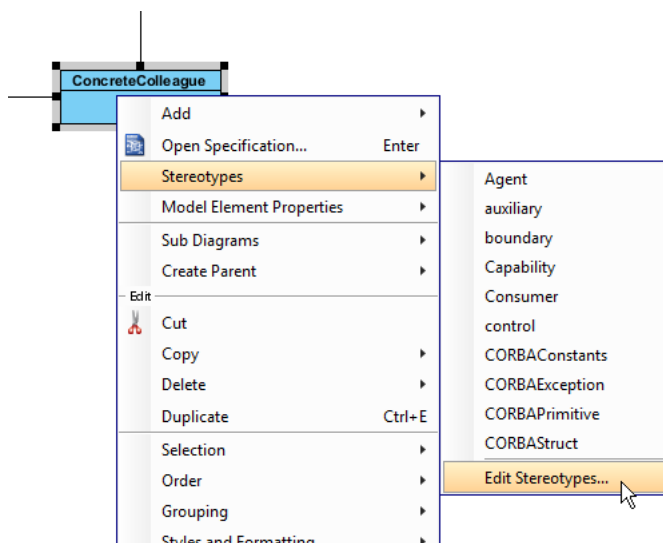
7.   Right-click on *Colleague*, and select **Model Element Properties** > **Abstract** to set it as abstract.

8.   Move the mouse cursor over the *Mediator* class, and drag out **Generalization** > **Class** to create a subclass *ConcreteMediator*.
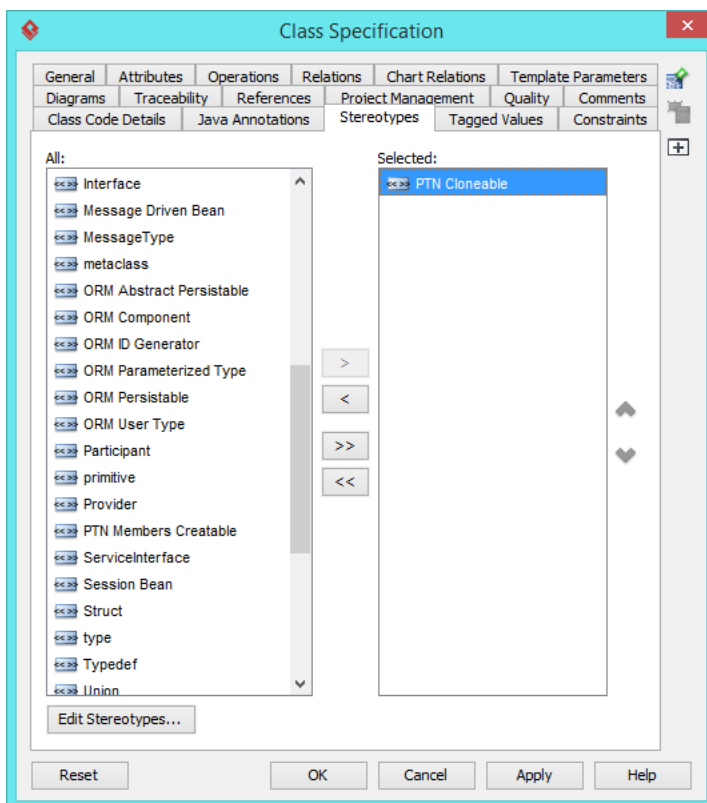
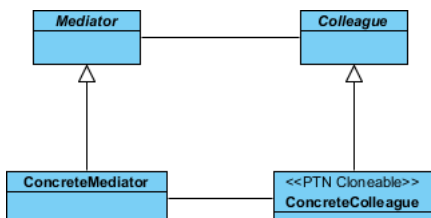9.   Associate *ConcreteMediator* and *ConcreteColleague*.

10. In practice, there may be multiple *ConcreteColleaguie* classes. To represent this, stereotype the *ConcreteColleague* class as **PTN Cloneable**. Right-click on *ConcreteColleague* class and select **Stereotypes** > **Stereotypes...** from the popup menu.

11. In the **Stereotypes** tab of class specification, select **PTN Cloneable** and click > to assign it to the class. Click **OK** to confirm.
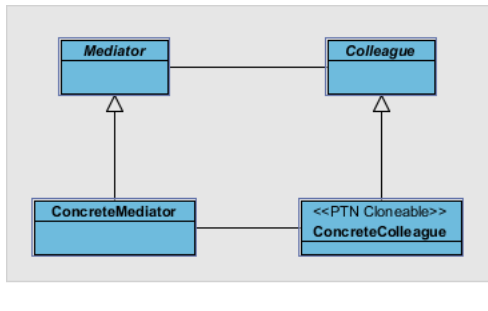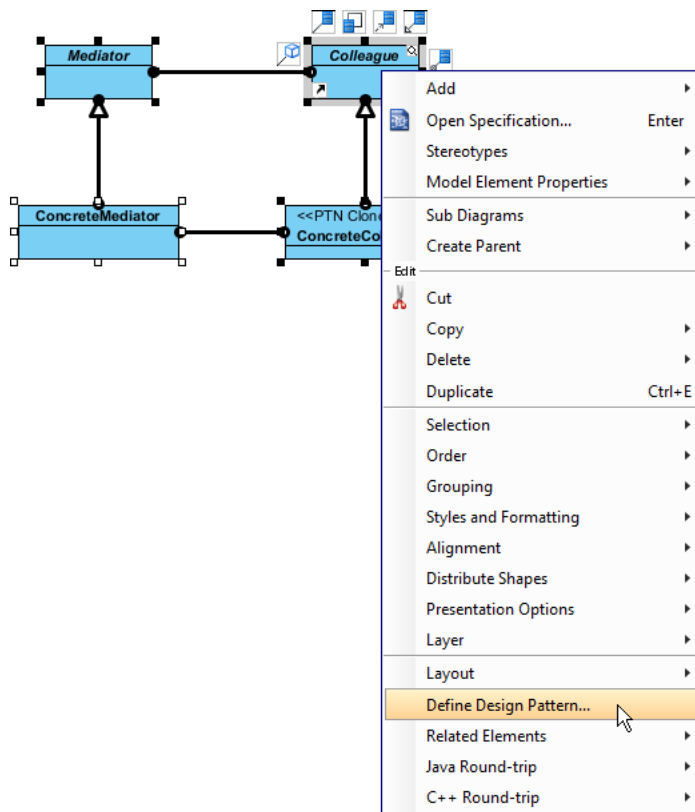

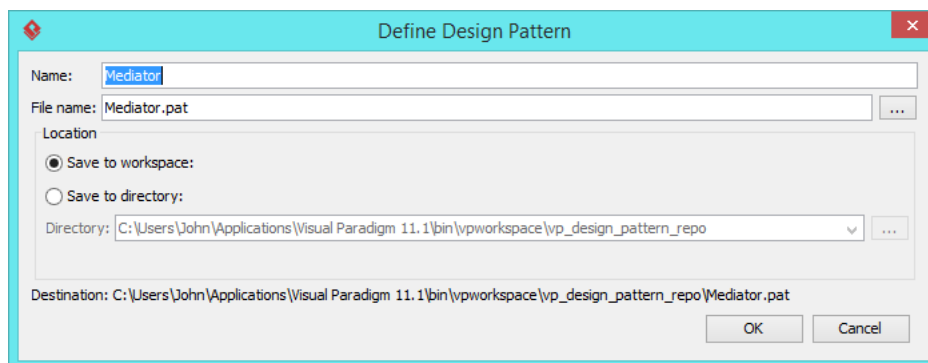The diagram should become:

Defining Pattern

1.   Select all classes on the class diagram.

2.   Right-click on the selection and select **Define Design Pattern...** from the popup menu.
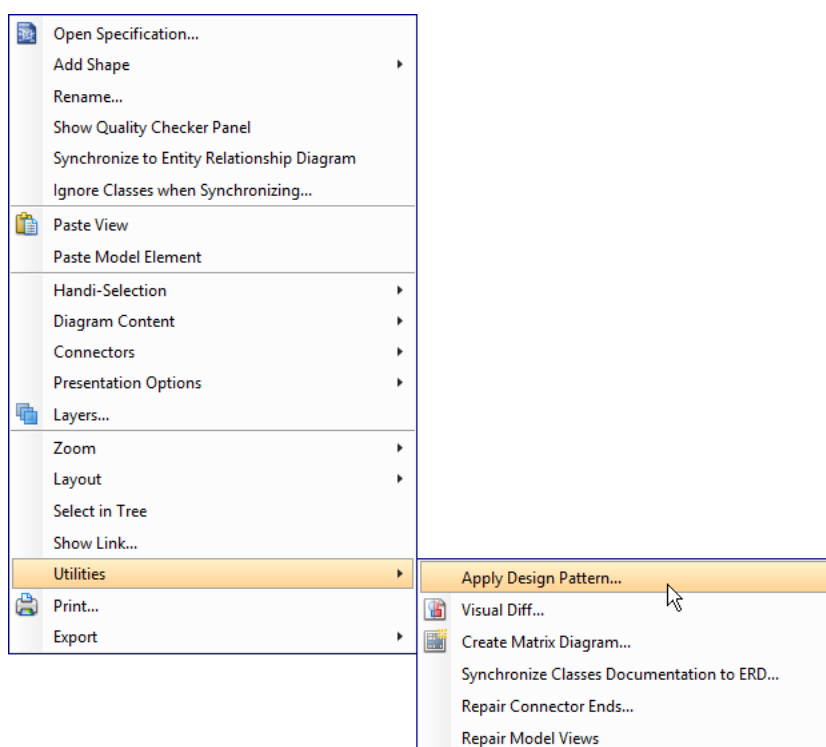
3.   In the **Define Design Pattern** dialog box, specify the pattern name *Mediator*. Keep the file name as is. Click **OK** to proceed.
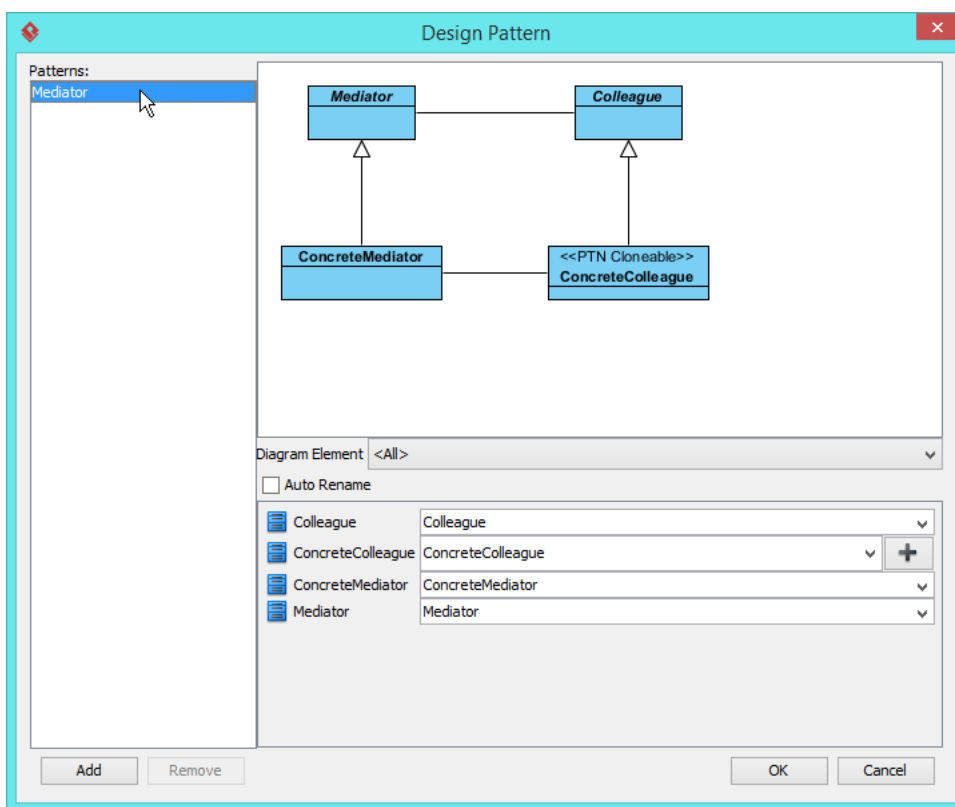

Applying Design Pattern on Class Diagram

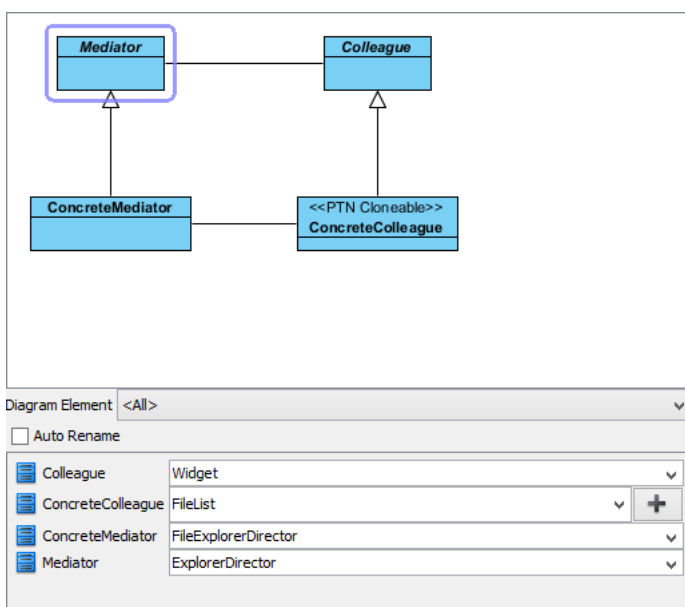In this section, we will try to make use of the mediator pattern to model a part of a file explorer.

1.   Create a new project *File Explorer*.

2.   Create a class diagram *Domain Model*.

3.   Right-click on the class diagram and select **Utilities** > **Apply Design Pattern...** from the popup menu.
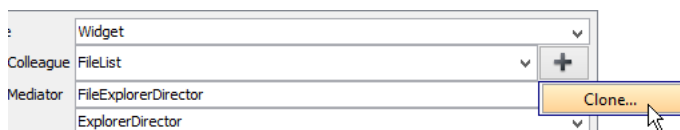
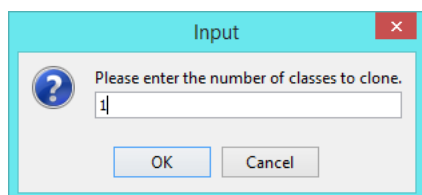4. In the **Design Pattern** dialog box, select *Mediator* from the list of patterns.

5. A the bottom of pane, rename *Colleague*, *ConcreteColleague*, *ConcreteMediator*, *Mediator* to *Widget*, *FileList*, *FileExplorerDirector*, *ExplorerDirector*.
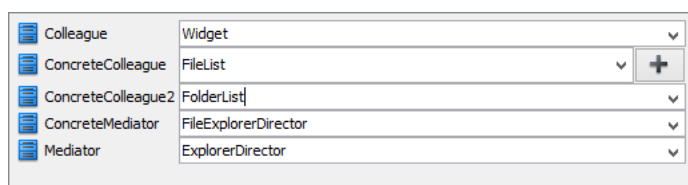
6.   We need one more concrete colleague - *FolderList*. Click on the + button next to *ConcreteColleauge* and select **Clone...** from popup menu.
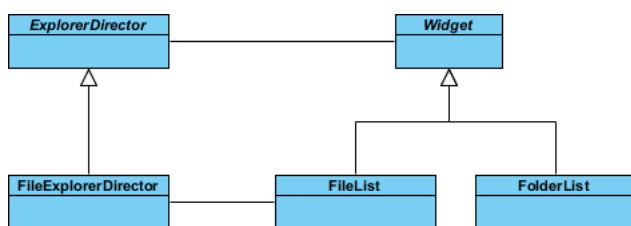

7.   Enter 1 as the number of classes to clone.

8.   Rename *ConcreteColleague2* to *FolderList*.

9.   Click **OK** to confirm editing and apply the pattern to diagram.

10. Tidy up the diagram. It should become:

Resources
1.   Design Patterns.vpp

2.   Mediator.pat

Related Links

- [Full set of UML tools and UML diagrams](#)

Visual **Paradigm**

Visual Paradigm home page
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