



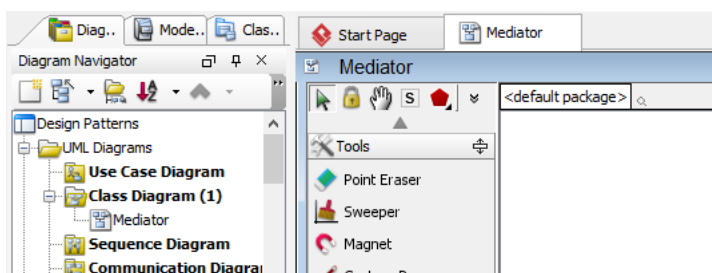
## Mediator Pattern Tutorial

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

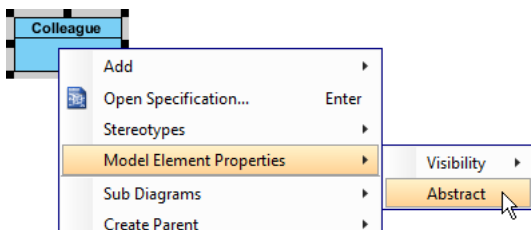
1. Create a new project *Design Patterns*.
2. Create a class diagram *Mediator*.



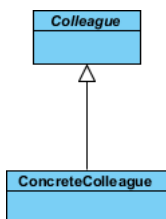
3. Select **Class** from diagram toolbar. Click on diagram to create a class. Name it as *Colleague*.



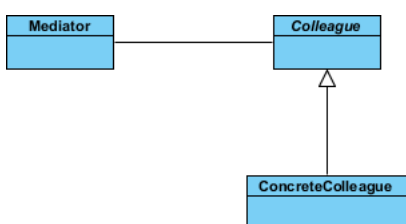
4. Right click on *Colleague*, and select **Model Element Properties** > **Abstract** to set it as abstract.



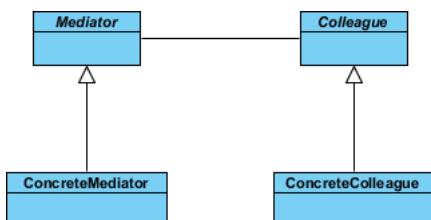
5. Move the mouse cursor over the *Colleague* class, and drag out **Generalization > Class** to create a subclass *ConcreteColleague*.



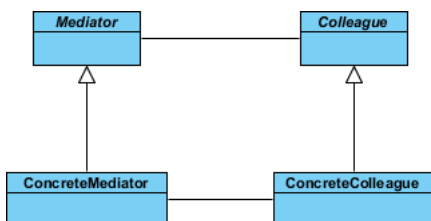
6. Move the mouse cursor over the *Colleague* class, and drag out **Association > Class** to create an associated class *Mediator*.



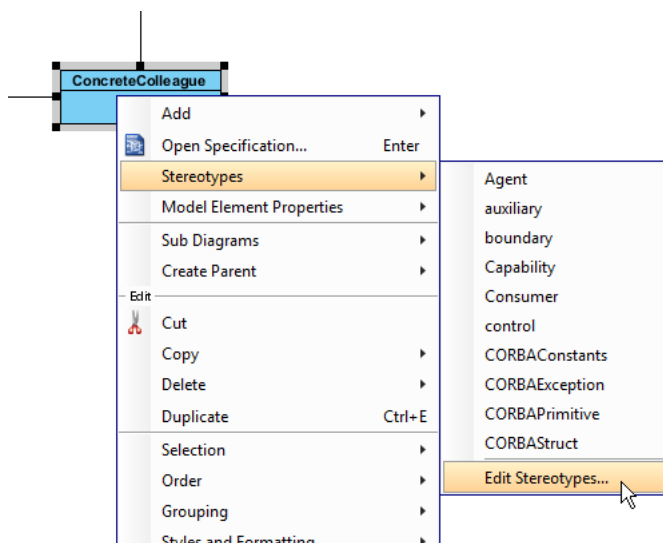
7. Right click on *Colleague*, and select **Model Element Properties > Abstract** to set it as abstract.
8. Move the mouse cursor over the *Mediator* class, and drag out **Generalization > Class** to create a subclass *ConcreteMediator*.



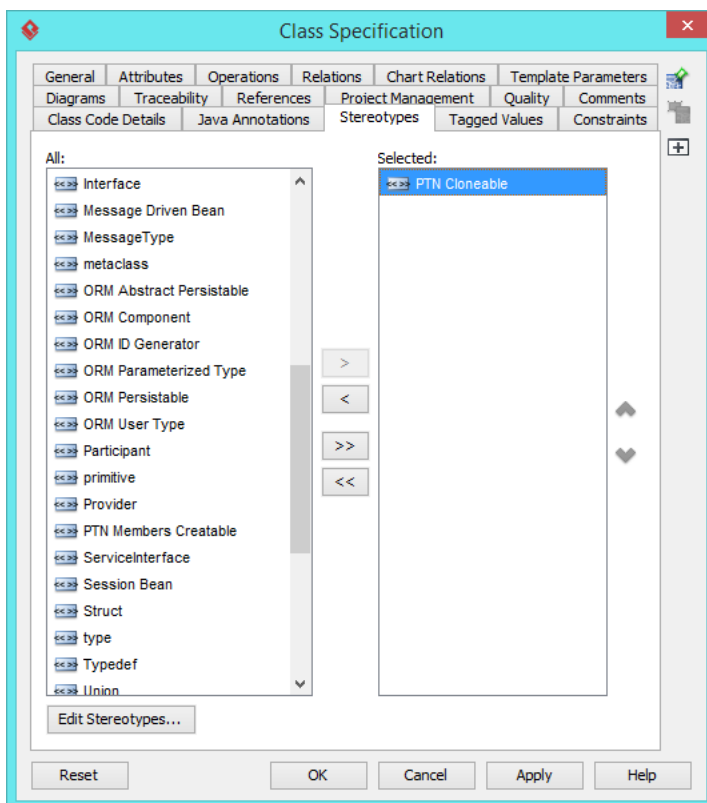
9. Associate *ConcreteMediator* and *ConcreteColleague*.



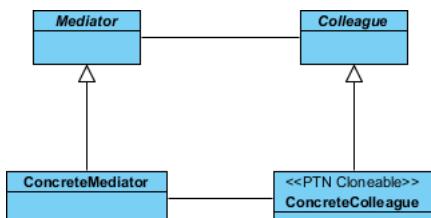
10. In practice, there may be multiple *ConcreteColleague* classes. To represent this, stereotype the *ConcreteColleague* class as **PTN Cloneable**. Right click on *ConcreteColleague* class and select **Stereotypes > Stereotypes...** from the popup menu.



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

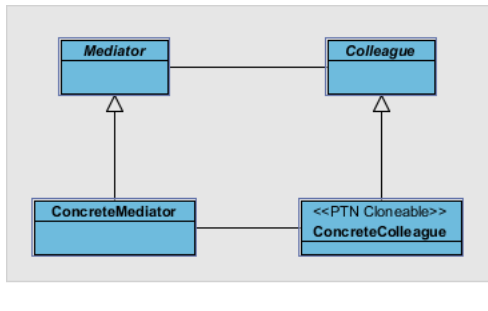


The diagram should become:

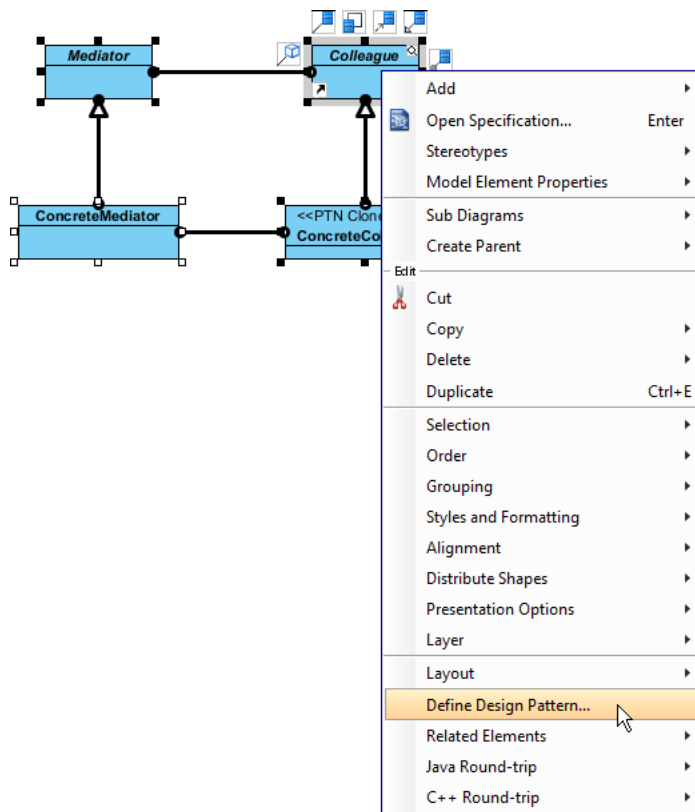


## Defining Pattern

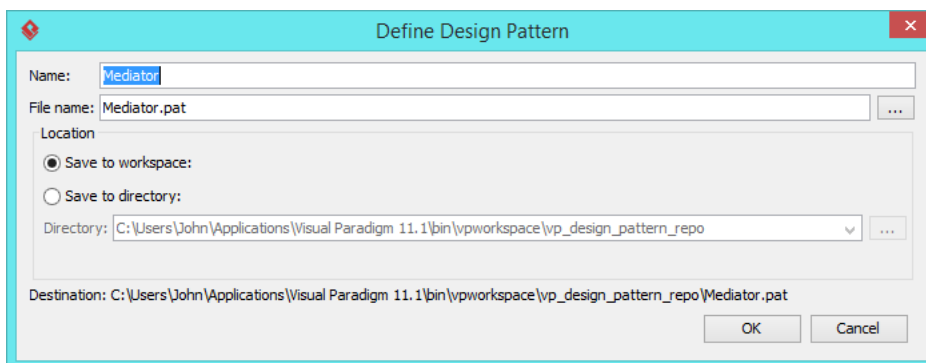
1. Select all classes on the class diagram.



2. Right click on the selection and select **Define Design Pattern...** from the popup menu.



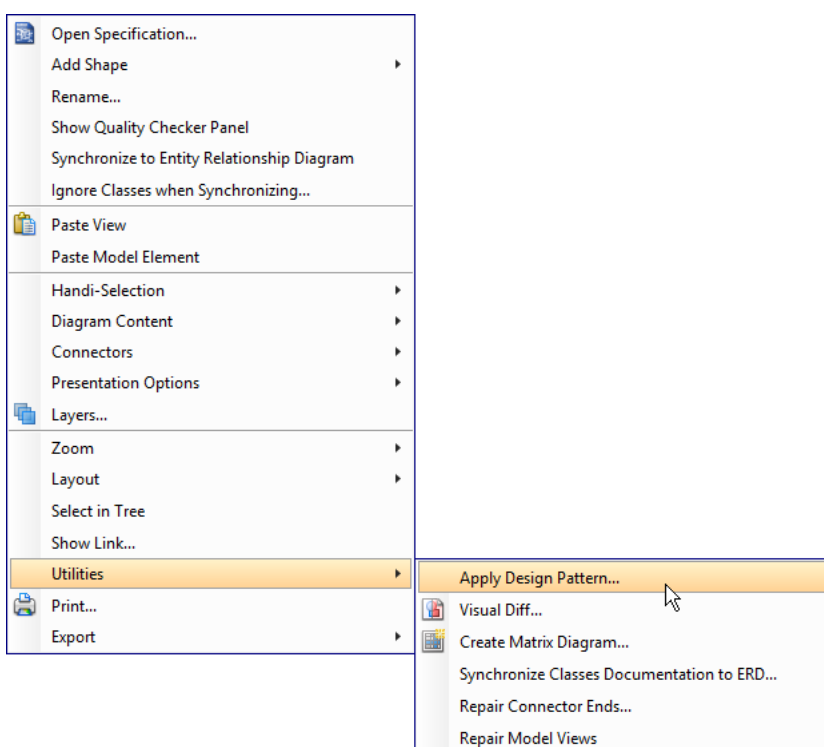
3. In the **Define Design Pattern** dialog box, specify the pattern name *Mediator*. Keep the file name as is. Click **OK** to proceed.



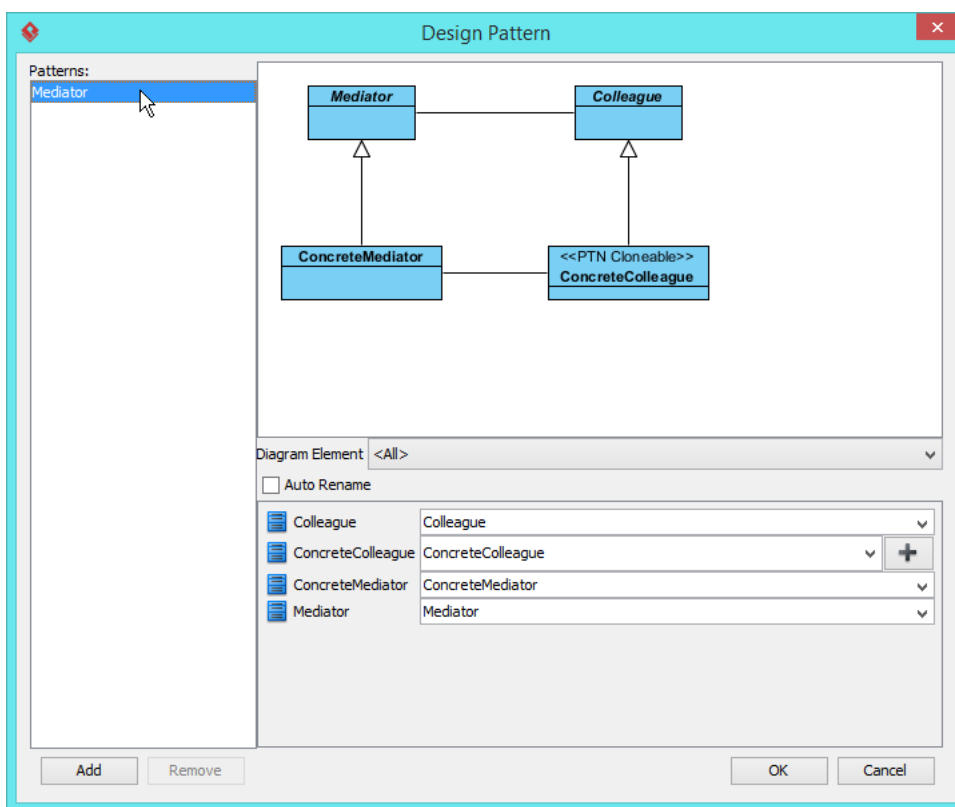
## Applying Design Pattern on Class Diagram

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

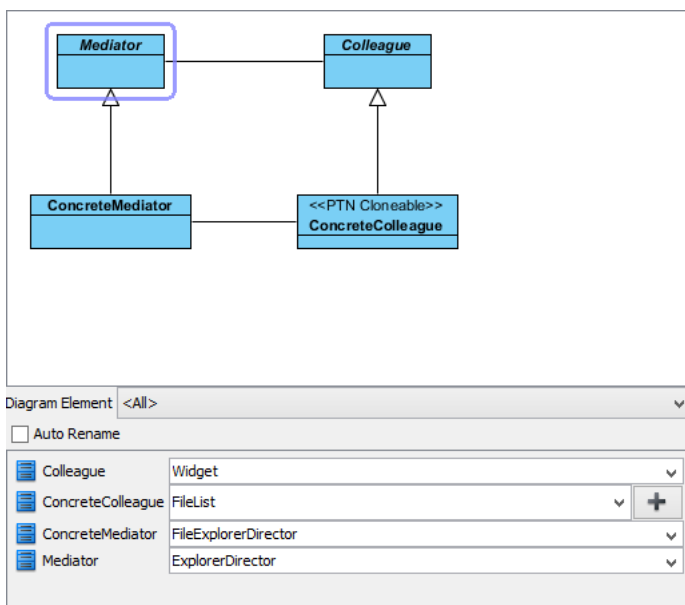
1. Create a new project *File Explorer*.
2. Create a class diagram *Domain Model*.
3. Right click on the class diagram and select **Utilities > Apply Design Pattern...** from the popup menu.



- In the **Design Pattern** dialog box, select *Mediator* from the list of patterns.



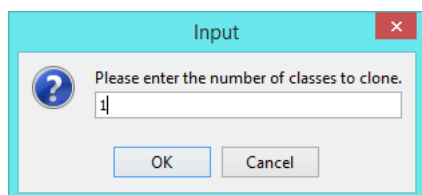
- At the bottom of pane, rename *Colleague*, *ConcreteColleague*, *ConcreteMediator*, *Mediator* to *Widget*, *FileList*, *FileExplorerDirector*, *ExplorerDirector*.



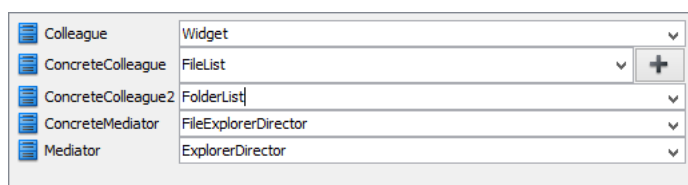
- We need one more concrete colleague - *FolderList*. Click on the + button next to *ConcreteColleauge* and select **Clone...** from popup menu.



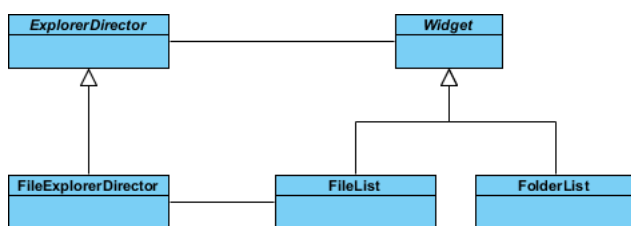
- Enter 1 as the number of classes to clone.



- Rename *ConcreteColleauge2* to *FolderList*.



- Click **OK** to confirm editing and apply the pattern to diagram.
- Tidy up the diagram. It should become:



#### Resources

- [Design Patterns.vpp](http://www.designpatterns.vpp.com)
- [Mediator.pat](http://www.designpatterns.vpp.com/mediator.pat)

#### Related Links



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



Visual Paradigm home page  
(<https://www.visual-paradigm.com/>)

Visual Paradigm tutorials  
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