

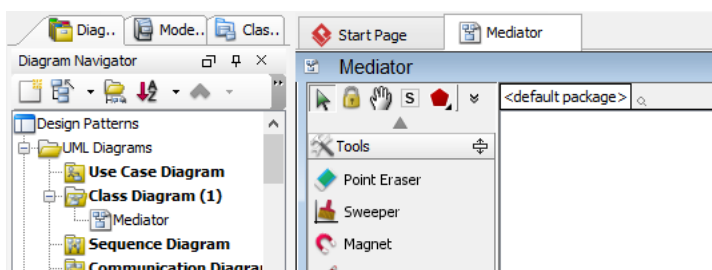


Mediator Pattern Tutorial

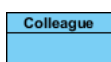
Written Date : October 21, 2009

Modeling a Design Pattern with a Class Diagram

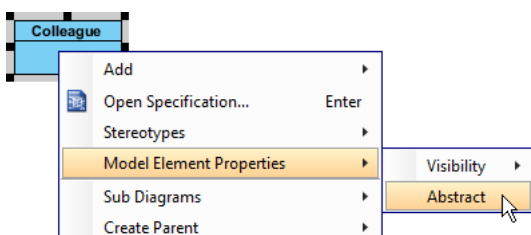
1. Create a new project named *Design Patterns*.
2. Create a class diagram named *Mediator*.



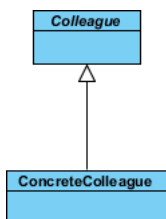
3. Select **Class** from the diagram toolbar. Click on the diagram to create a class. Name it *Colleague*.



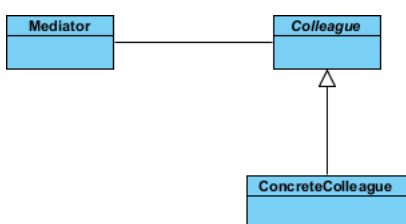
4. Right-click on *Colleague* and select **Model Element Properties > Abstract** to set it as abstract.



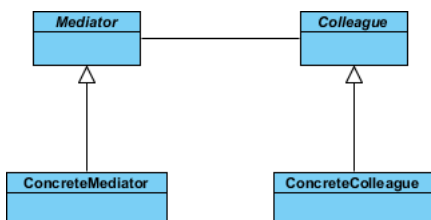
5. Move the mouse cursor over the *Colleague* class and drag out **Generalization > Class** to create a subclass *ConcreteColleague*.



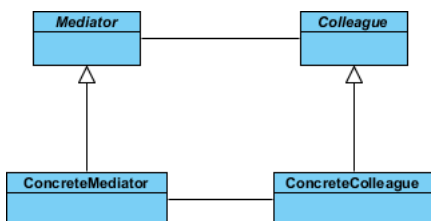
6. Move the mouse cursor over the *Colleague* class and drag out **Association > Class** to create an associated class *Mediator*.



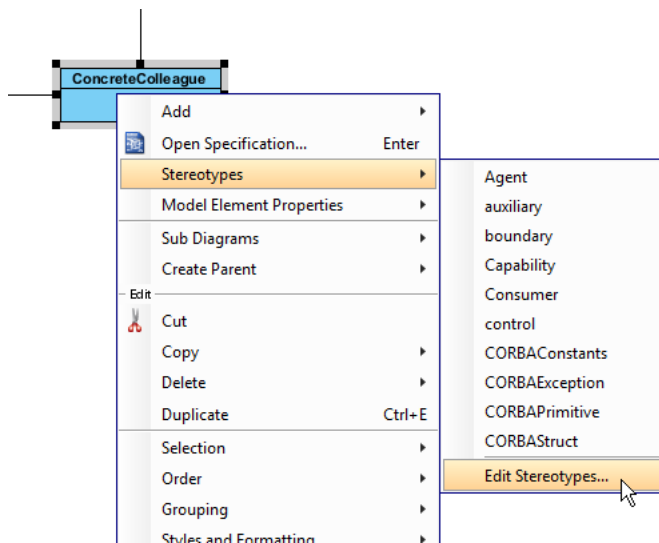
7. Right-click on *Mediator* and select **Model Element Properties > Abstract** to set it as abstract.
8. Move the mouse cursor over the *Mediator* class and drag out **Generalization > Class** to create a subclass *ConcreteMediator*.



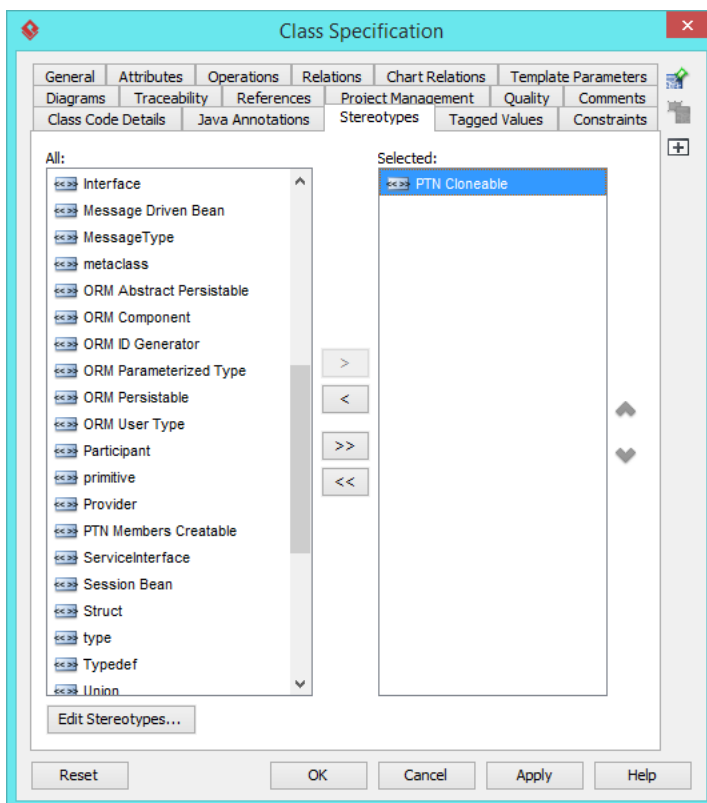
9. Associate *ConcreteMediator* and *ConcreteColleague*.



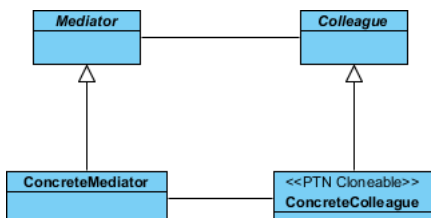
10. In practice, there may be multiple *ConcreteColleague* classes. To represent this, stereotype the *ConcreteColleague* class as **PTN Cloneable**. Right-click on the *ConcreteColleague* class and select **Stereotypes > Stereotypes...** from the popup menu.



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

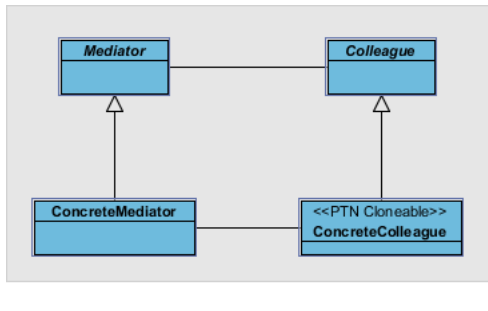


The diagram should become:

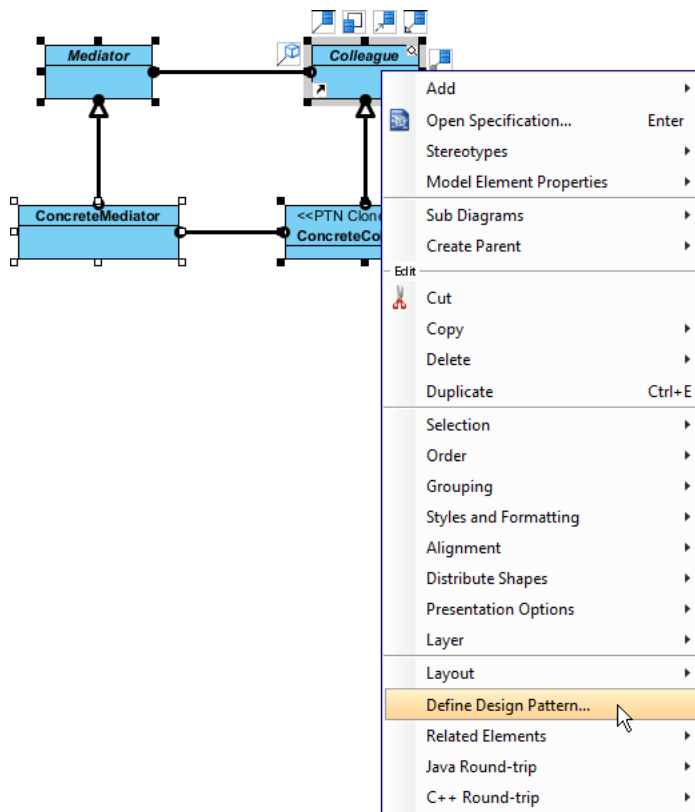


Defining a Pattern

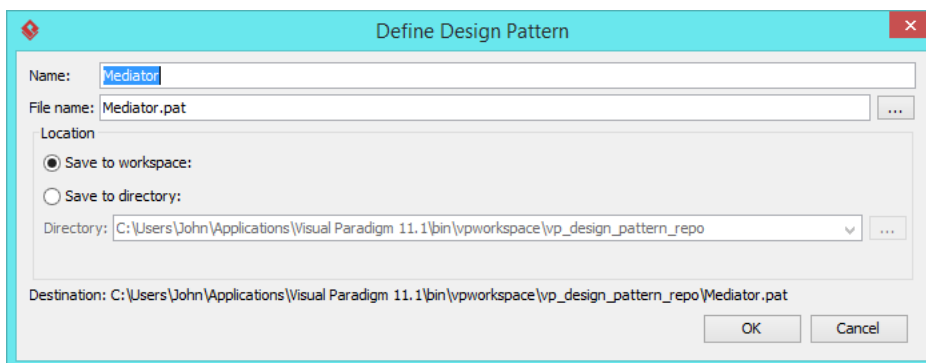
1. Select all classes on the class diagram.



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



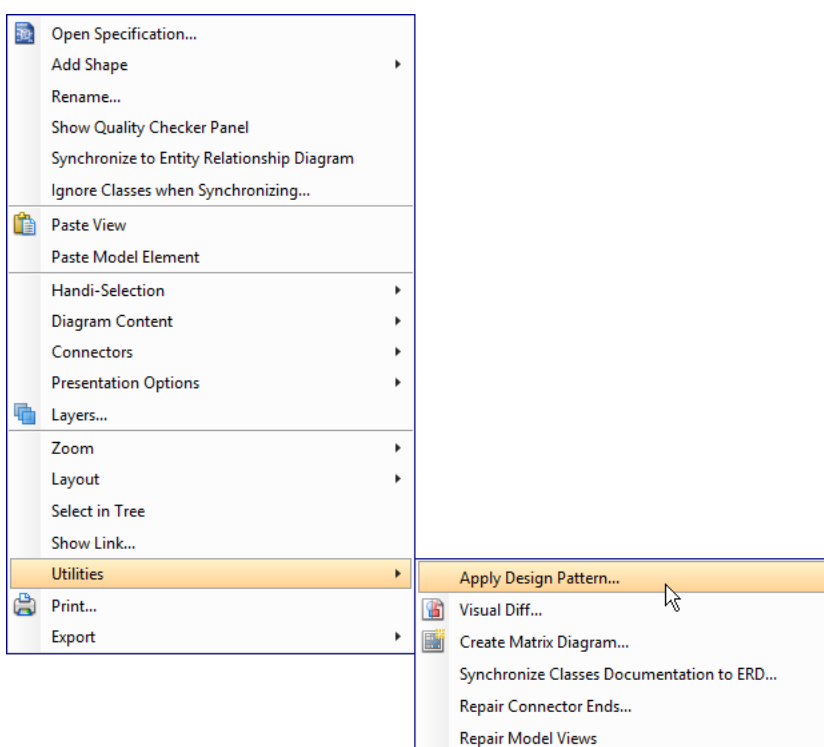
3. In the **Define Design Pattern** dialog box, specify the pattern name *Mediator*. Keep the file name as is. Click **OK** to proceed.



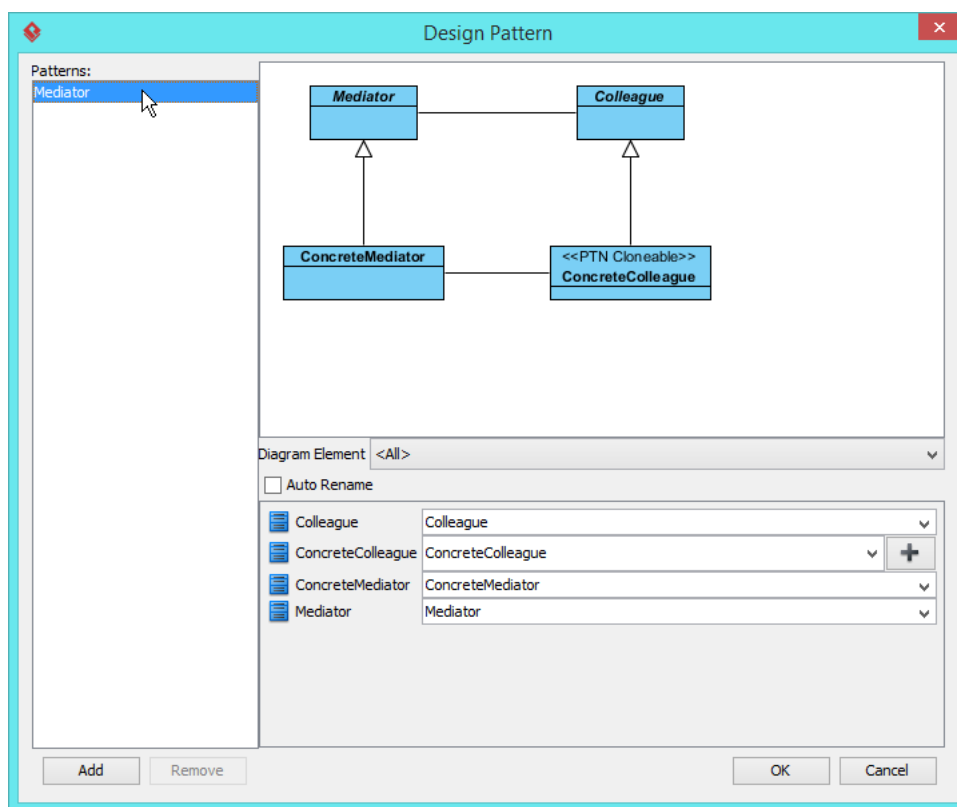
Applying a Design Pattern on a Class Diagram

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

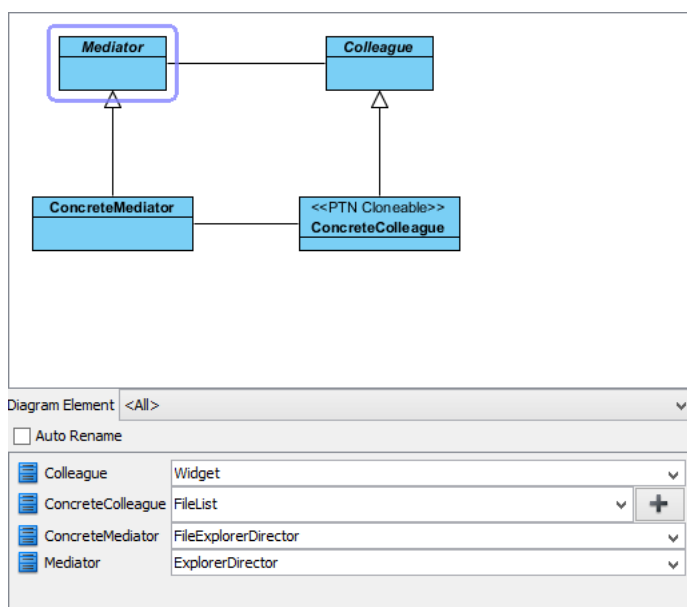
1. Create a new project *File Explorer*.
2. Create a class diagram *Domain Model*.
3. Right-click on the class diagram and select **Utilities > Apply Design Pattern...** from the popup menu.



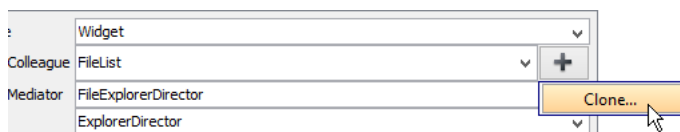
- In the **Design Pattern** dialog box, select *Mediator* from the list of patterns.



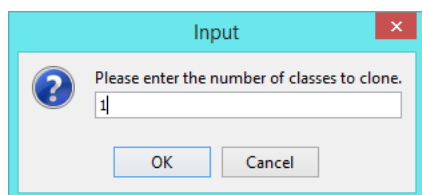
- At the bottom of the pane, rename *Colleague*, *ConcreteColleague*, *ConcreteMediator*, *Mediator* to *Widget*, *FileList*, *FileExplorerDirector*, *ExplorerDirector*.



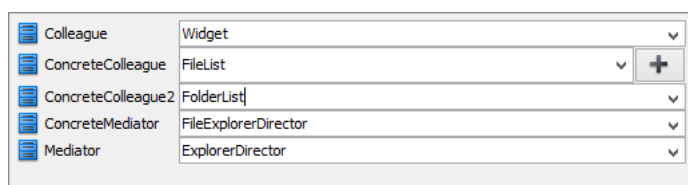
- We need one more concrete colleague - *FolderList*. Click on the + button next to *ConcreteColleague* and select **Clone...** from the popup menu.



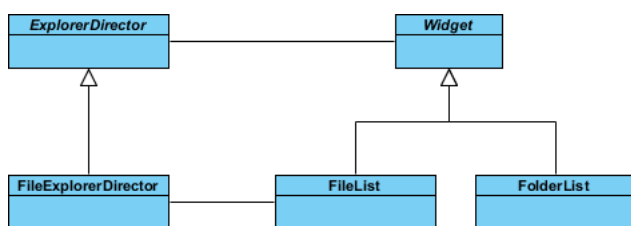
- Enter 1 as the number of classes to clone.



- Rename *ConcreteColleague2* to *FolderList*.



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



Resources

- [Design Patterns.vpp](https://www.design-patterns.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
(<https://www.visual-paradigm.com/tutorials/>)