



## How to Link with Classes in Use Case Flow of Events

Written Date : March 07, 2012

The [flow of events](#) tool is very helpful in describing and documenting user flows. In many cases, you probably would include references to [data structures](#) in your flows of events. As you can imagine, a common way to do it would be typing them in, manually.

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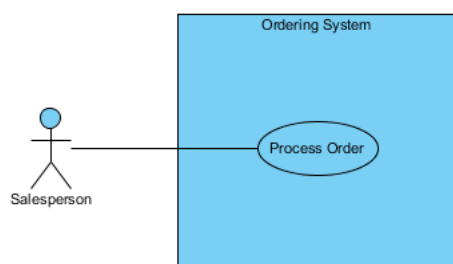
However, as your project takes shapes, there could be changes made to the data structures during the process. Such changes would make your references in the flows of events outdated, knowingly or unknowingly. If it does come to your attention, a remedy might be to search all the outdated entries and update them. Again, manually. In addition to the time you would have to spend, there is also accuracy issue that comes with high volume of manual input. Or what if you missed one of the flows of events in your collection of [use case diagrams](#)?

Only if there's a way to synch the changes automatically... and yes, there is.

### What will we do in this tutorial?

In this tutorial, we will show you how to add classes and attributes to a flow of events such that the flow of events will stay up-to-date with any changes made to the data structures being referenced.

We will be using a simple use case diagram example below.



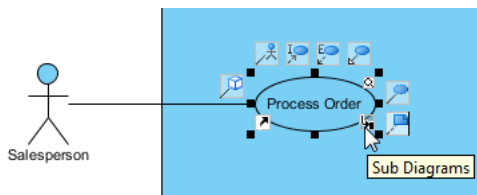
### Software We'll Be Using

As for the software tool, we will be using [Visual Paradigm](#). You are welcome to download a **free 30-day evaluation copy of Visual Paradigm** to walk through the example below. No registration, email address or obligation is required.

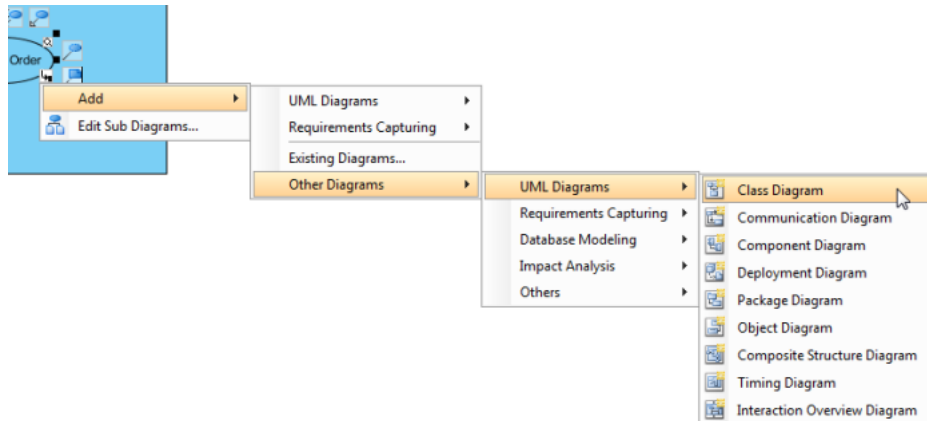
### Steps to Create a Class Diagram

We will now create a class diagram to document our data structure that elaborates the use case **Process Order**.

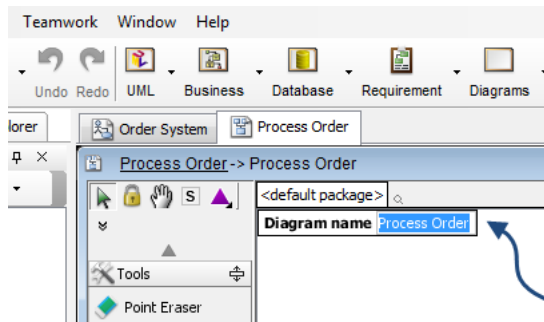
1. In the use case diagram, select the use case **Process Order** and click the **Sub Diagrams** icon.



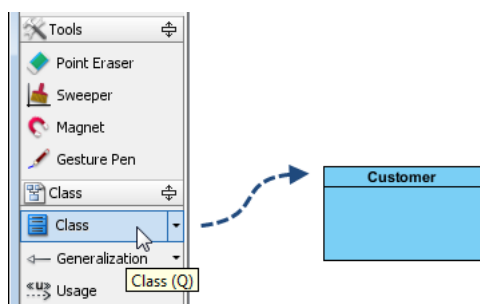
Select **Add > Other Diagrams > UML Diagrams > Class Diagram**.



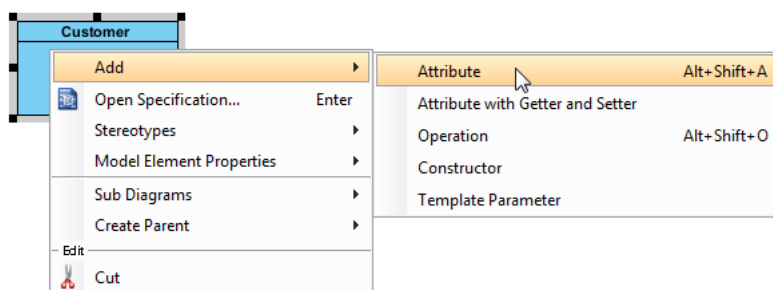
2. In the new class diagram, click on any white space and you will see that the diagram is initially named **Process Order** after the use case. If you like, you can change it to something else. For now, we will just leave it as it is.



- From the **Diagram Toolbar**, drag **Class** over to the diagram. Name it *Customer*.



- To add an attribute, right-click **Customer** and select **Add > Attribute**.



- Name it *name*. Press ENTER.

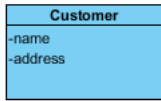


### Drawing Tips

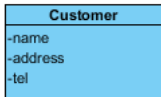
When you press ENTER after entering the attribute's name, a new row is inserted below your current row for the next attribute. If you do not need it, you can hit the ESC key to delete it. The focus will go back to the previous row in dark red. If you click on the diagram background, the highlight will go away.



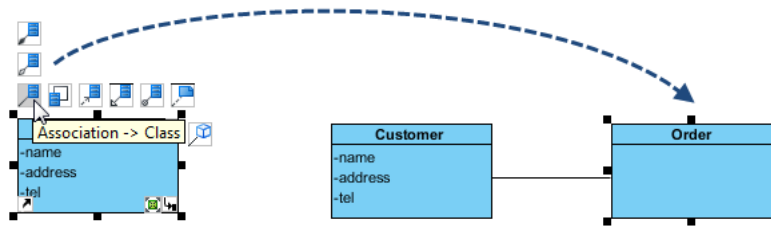
6. Add another attribute named *address*.



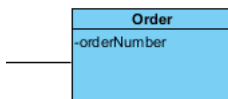
7. Add another attribute named *tel*.



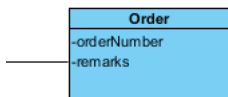
8. We will now create a relationship between **Customer** to a new class. Click **Customer** and drag the **Association -> Class** icon over to the right. At where you want to draw the new class, release your mouse button.



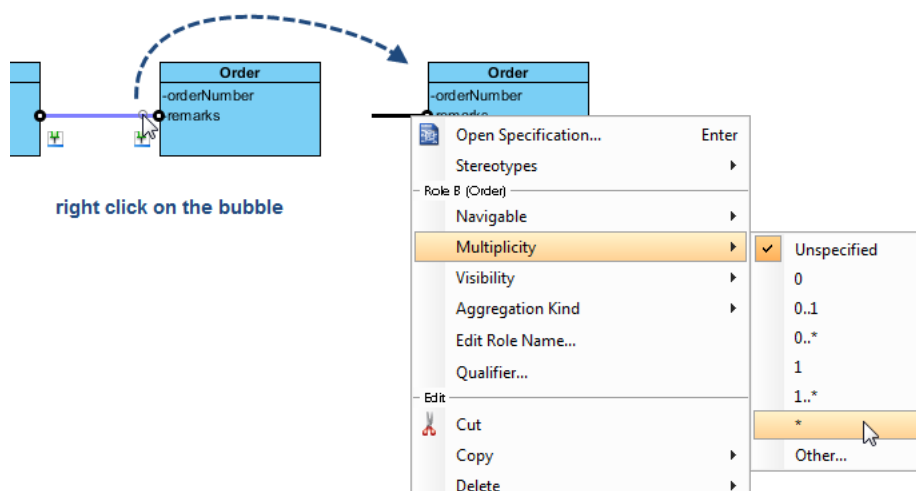
9. Add an attribute called *orderNumber*.



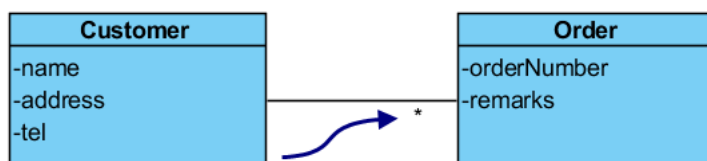
10. Add an attribute called *remarks*.



11. A customer may place more than one order. To depict that, we will make the relationship one-to-many. Place your mouse pointer on the right end of the association (near the **Order** class) and right click on the bubble. Select **Multiplicity** and then \* (the asterisk).



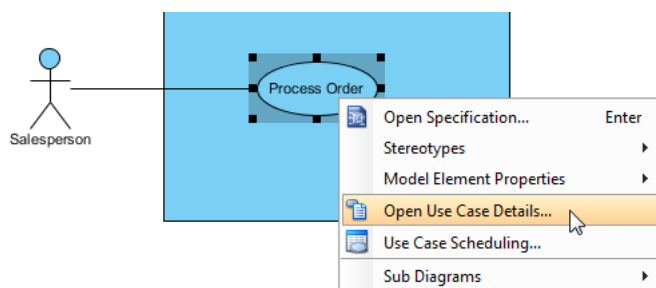
An asterisk will be displayed to depict the multiplicity.



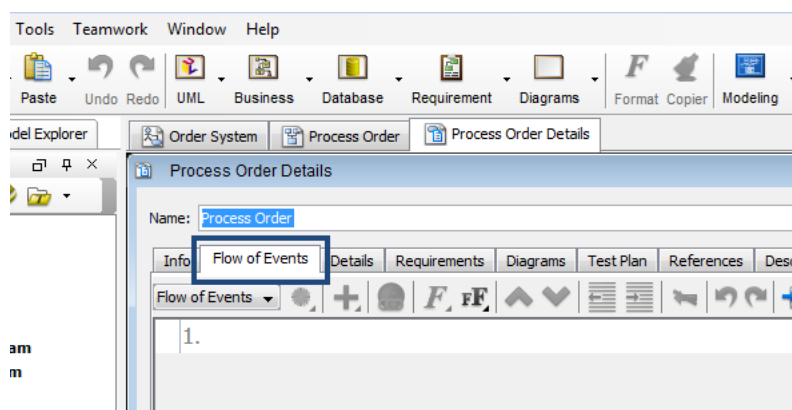
## Steps to Create a Flow of Event

We will now create a flow of events to document user flows for the use case **Process Order**.

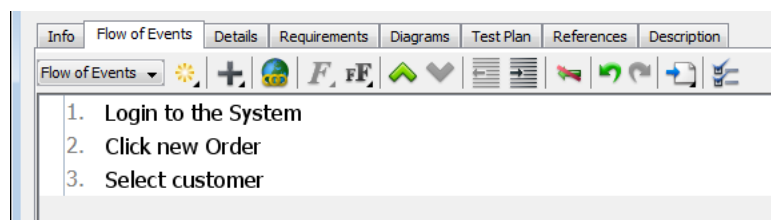
1. Right-click on the use case **Process Order**.



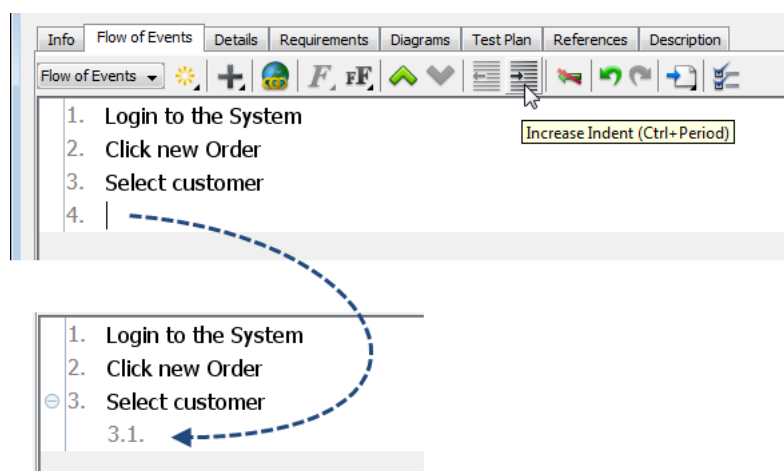
2. In the **Process Order Details** window opened, select the **Flow of Events** tab.



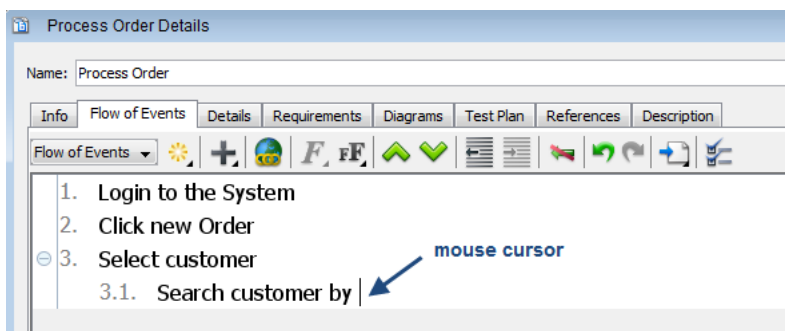
3. Click on the first row (in white space). Type in *Login to the System*. Press ENTER. Type in *Click new Order*. Press ENTER. Type in *Select customer*. Press ENTER.



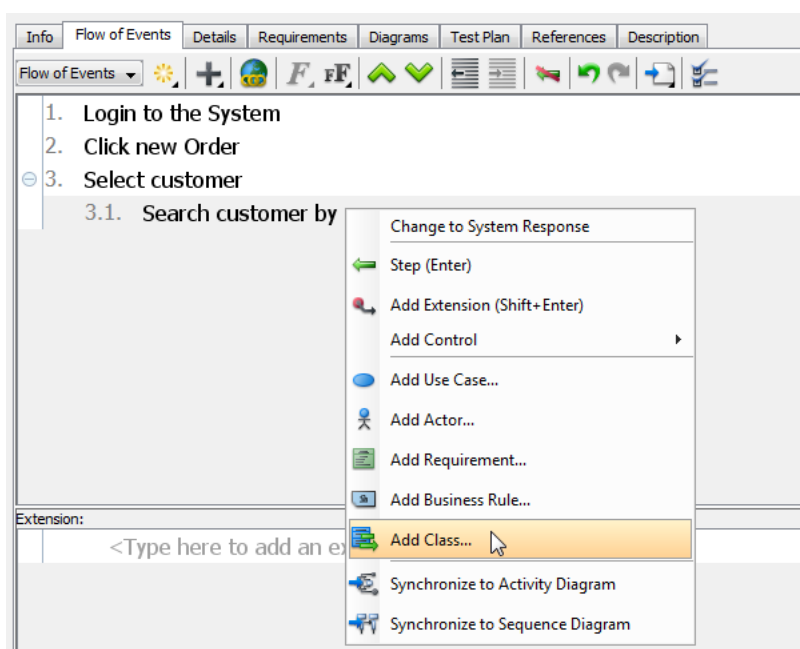
4. To further elaborate step 3, we will now indent the fourth row which will become step 3.1. Click **Increase Indent**.



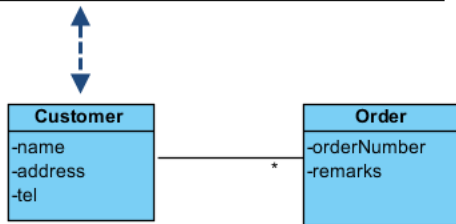
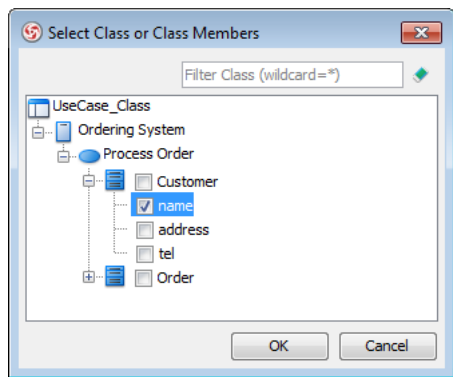
5. Type in *Search customer by* (leave a space at the end after 'by').



6. At the mouse cursor shown above, right-click and select **Add Class...**



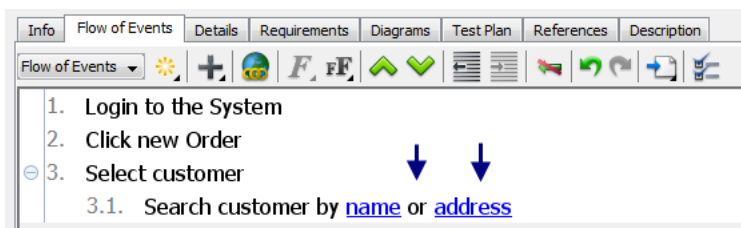
7. A dialog box will open displaying associated classes. Expand to **Ordering System > Process Order > Customer**. Select name under **Customer**. Click **OK**.



Upon clicking **OK**, the attribute's name will then appear in the flow of events.



8. Type in ' or ' after the newly added attribute **name**. Similarly, add another attribute **address**.



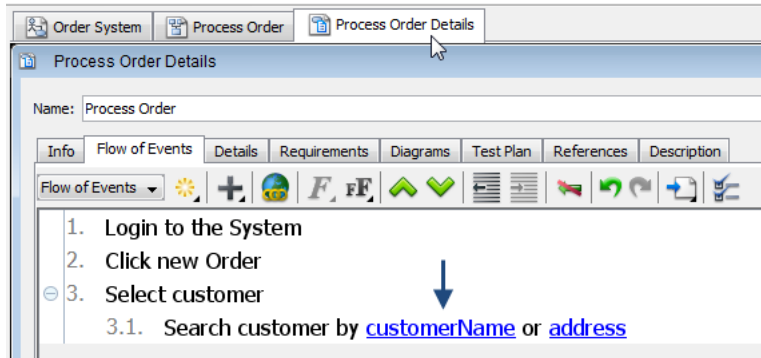
### What happens if we change the data structure?

In the **Customer** class, let's say we want to change the attribute **name** to **customerName**. In the class diagram, double click on **name** and rename it to **customerName**.





If you go back to the flow of events, you will see that the attribute change has already been reflected automatically.



#### Resources

1. [UseCase\\_Class\\_before.vpp](#)
2. [UseCase\\_Class\\_after.vpp](#)

#### Related Links

- [YouTube Video: How to Define a Custom Property for Use Case](#)
- [YouTube Video: How to Generate Class Diagram from Existing Classes](#)
- [Know-how: Organize Data Models Under Use Cases](#)
- [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/>)