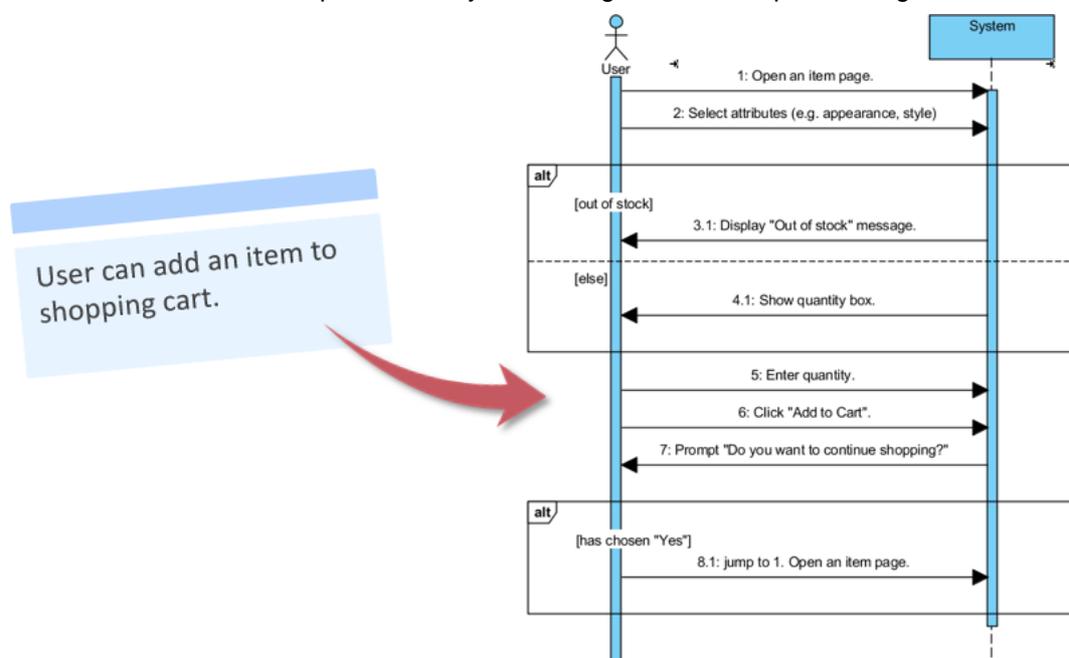




How to Generate Sequence Diagram from User Story?

Written Date : April 29, 2016

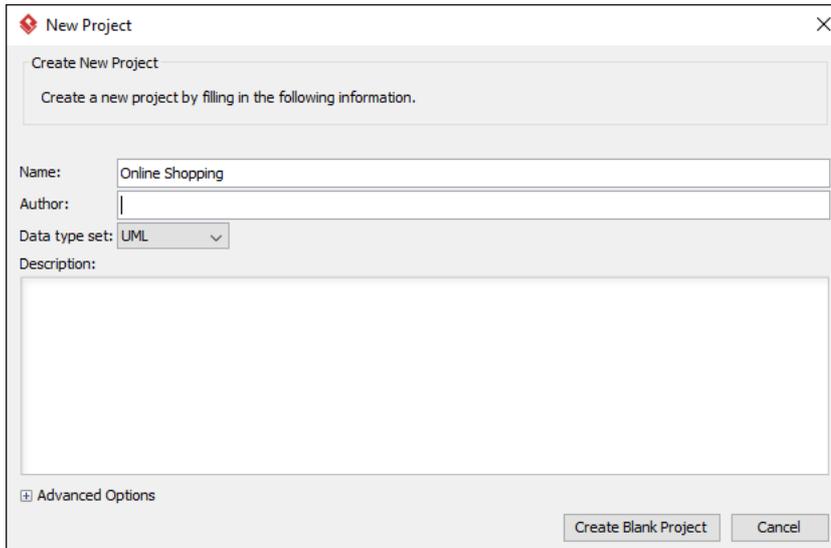
For stakeholders and the project team to read the steps more easily, you can optionally generate a [UML sequence diagram](#) from the scenario to visualize the steps. In this tutorial, we will write a simple user story and then generate a sequence diagram from it.



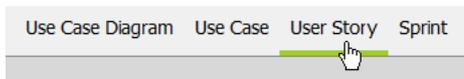
Writing a User Story Scenario

1. Create a new project with [Visual Paradigm](#). Select **Project > New** from the application toolbar.

2. In the **New Project** window, enter *Online Shopping* as the project name. Click the **Create Blank Project** button.



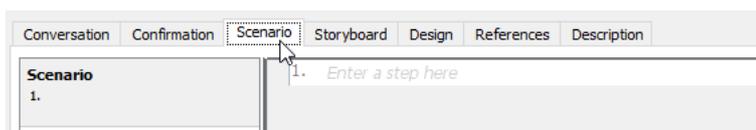
3. Open the **User Story** page in UeXceler. If UeXceler is not already open, select **UeXceler > UeXceler** from the application toolbar and then open the **User Story** page.



4. Create a general user story. Click on **Add a feature that can...** and enter *User can add an item to shopping cart.* as the name.



5. Double-click on the user story to open it.
6. Open the **Scenario** page.



7. Enter the steps to accomplish this user story. Click on the first step and enter *Open an item page*.

```
1. Open an item page.
```

8. Press **Enter** and enter step 2: *Select attributes (e.g. appearance, style)*.

```
1. Open an item page.  
2. Select attributes (e.g. appearance, style)
```

9. A quantity box will be displayed when the item the user selected is still available for purchase. Let's write an if-then-else for this. Press **Enter** to go to the third step, then press **Ctrl+Space** to toggle the **Statement Control** list.

```
1. Open an item page.  
2. Select attributes (e.g. appearance, style)  
3.   
Statement Control  
System Response  
If  
While  
For each  
Loop until
```

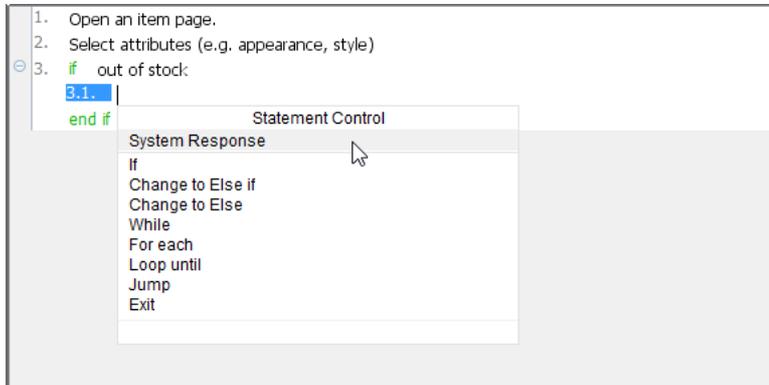
10. Select **If** from the **Statement Control** list.

```
Statement Control  
System Response  
If  
While  
For each  
Loop until
```

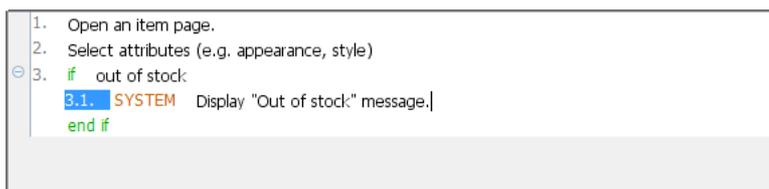
11. Enter *out of stock*.

```
1. Open an item page.  
2. Select attributes (e.g. appearance, style)  
3. if out of stock  
end if
```

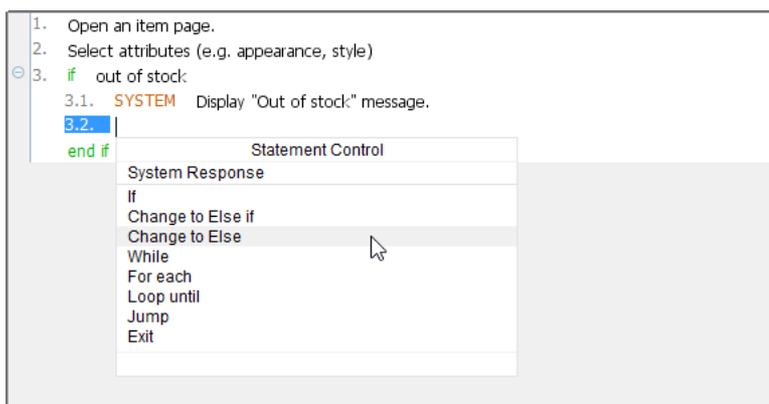
12. Let's say the system will display an 'out of stock' message in this situation. Press **Enter** to go into the 'if' condition, then press **Ctrl+Space** again.
13. This step is performed by the system. Let's create a System Response. Select **System Response** from the **Statement Control** list.



14. Enter *Display "Out of stock" message*.



15. A quantity box will be displayed in the 'else' case. Now, press **Enter** and press **Ctrl+Space** to toggle the **Statement Control** list.
16. Select **Change to Else** from the **Statement Control** list.



17. Press **Enter**.

- Toggle the **Statement Control** list by pressing **Ctrl+Space**. Select **System Response** from the list and enter *Show quantity box*.

```
1. Open an item page.
2. Select attributes (e.g. appearance, style)
3. if out of stock
  3.1. SYSTEM Display "Out of stock" message.
4. else
  4.1. SYSTEM Show quantity box.
end if
```

- Press the **Down** arrow key to go to the 'end if'. Then, press **Enter** to go to step 5.
- The customer will then enter the quantity of the item and add the item to the cart. Enter *Enter quantity* and *Click "Add to Cart"* as steps 5 and 6, respectively.

```
1. Open an item page.
2. Select attributes (e.g. appearance, style)
3. if out of stock
  3.1. SYSTEM Display "Out of stock" message.
4. else
  4.1. SYSTEM Show quantity box.
end if
5. Enter quantity.
6. Click: "Add to Cart".
```

- Once the item is added to the cart, the system will prompt if the customer wants to continue shopping. Press **Enter** to create a new step. Enter the system response *Prompt "Do you want to continue shopping?"* as step 7.

```
1. Open an item page.
2. Select attributes (e.g. appearance, style)
3. if out of stock
  3.1. SYSTEM Display "Out of stock" message.
4. else
  4.1. SYSTEM Show quantity box.
end if
5. Enter quantity.
6. Click: "Add to Cart".
7. SYSTEM Prompt "Do you want to continue shopping?"
```

22. If the customer has chosen "Yes", the system will then reopen the item page. Use the **Statement Control** list to add an `if` condition: *has chosen "Yes"*.

```
1. Open an item page.
2. Select attributes (e.g. appearance, style)
3. if out of stock:
  3.1. SYSTEM Display "Out of stock" message.
4. else
  4.1. SYSTEM Show quantity box.
end if
5. Enter quantity.
6. Click: "Add to Cart".
7. SYSTEM Prompt "Do you want to continue shopping?"
8. if has chosen "Yes"
end if
```

23. Press **Enter** to go into the `if` condition. Press **Ctrl+Space** to toggle the **Statement Control** list. This time, select **Jump**.

```
1. Open an item page.
2. Select attributes (e.g. appearance, style)
3. if out of stock:
  3.1. SYSTEM Display "Out of stock" message.
4. else
  4.1. SYSTEM Show quantity box.
end if
5. Enter quantity.
6. Click: "Add to Cart".
7. SYSTEM Prompt "Do you want to continue shopping?"
8. if has chosen "Yes"
  8.1.
end if
```

Statement Control

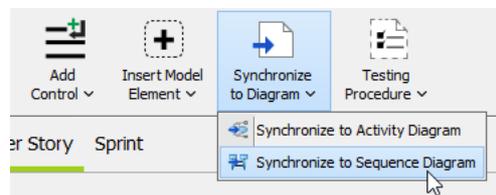
- System Response
- If
- Change to Else if
- Change to Else
- While
- For each
- Loop until
- Jump
- Exit

24. Click on the tiny arrow button next to step 1 to represent jumping to step 1.

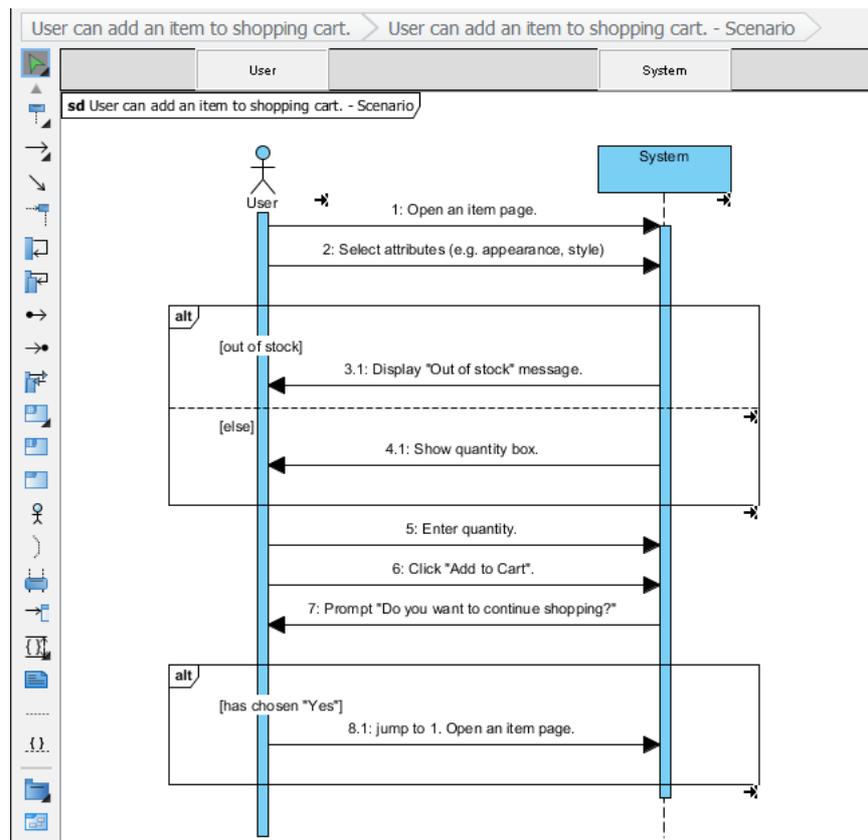
```
1. Open an item page.
2. Select attributes (e.g. appearance, style)
3. if out of stock:
  3.1. SYSTEM Display "Out of stock" message.
4. else
  4.1. SYSTEM Show quantity box.
end if
5. Enter quantity.
6. Click: "Add to Cart".
7. SYSTEM Prompt "Do you want to continue shopping?"
8. if has chosen "Yes"
  8.1. jump to
end if
```

Generating a Sequence Diagram from a User Story

We have just completed the scenario. Let's generate a UML sequence diagram from it. Select **Synchronize to Diagram > Synchronize to Sequence Diagram** from the toolbar.



A UML sequence diagram is generated from the scenario in seconds.



If necessary, press **Ctrl+Tab** to go back to the user story.

Related Links

- [Generate Activity Diagram from User Story](#)
- [Drawing sequence diagrams - Visual Paradigm User's Guide](#)



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

[Visual Paradigm tutorials](https://www.visual-paradigm.com/tutorials/)
(<https://www.visual-paradigm.com/tutorials/>)