How to Use Stereotypes and Tagged Values?
Written Date : March 19, 2012

What are stereotypes and tagged values
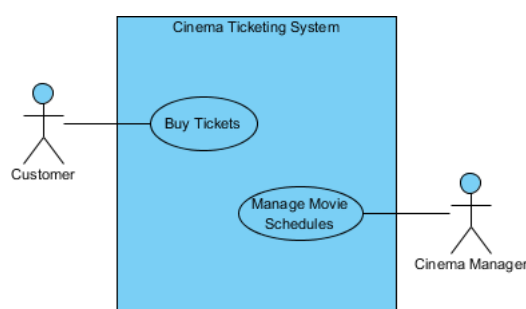
UML is designed to be a general-purpose language for diverse usage. Therefore, at times, it may not be able to serve some of the specific needs in describing your model elements. After all, one cannot be both general and specific at the same time. In such cases, you can make use of stereotypes, a UML extension mechanism, to characterize model elements. For example, you can create a stereotype and name it "External User" for users outside the system and add your own custom properties for domain-specific attributes by adding **tag definitions**. When applying a stereotype to your model element, you will specify the tag values to describe its characteristics.

Graphically, a stereotype is represented by a name enclosed by guillemets << >>. As shown in the example below, the stereotype **External User** is applied to a model element (i.e. actor) called *Customer*.
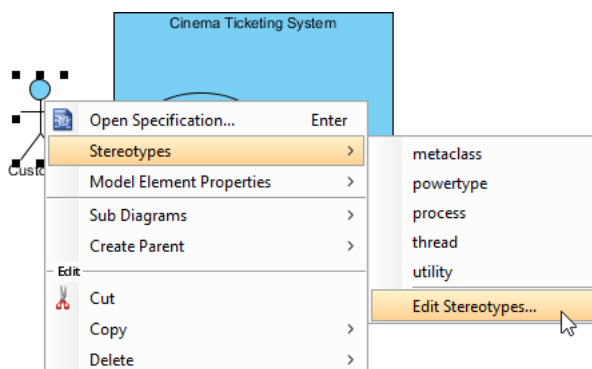

What this tutorial is about

In this tutorial, we will show you how to apply stereotypes to the actors (i.e. Customer, Cinema Manager) and add tag definitions, in the use case diagram below.

Steps to create stereotypes and add tag definitions

1. Download Use-Case-Stereotype.vpp. You can also find this file at the bottom of this tutorial.

2. Open the downloaded .vpp file in Visual Paradigm. To open a project, select **Project > Open** from the application toolbar.

3. Open the only use case diagram in the project
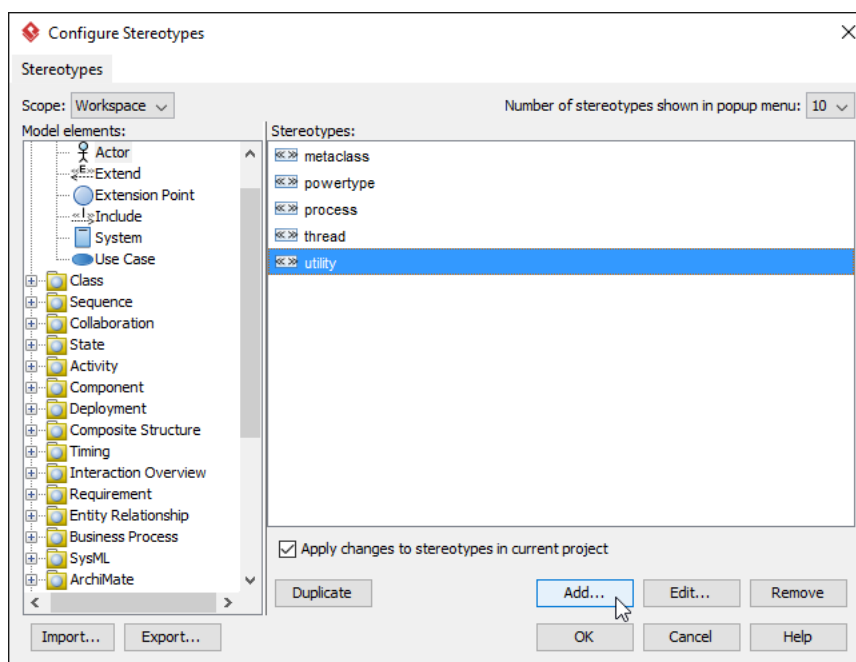
4.   Right-click on *Customer*. Select **Stereotypes > Edit Stereotypes...** from the popup menu.
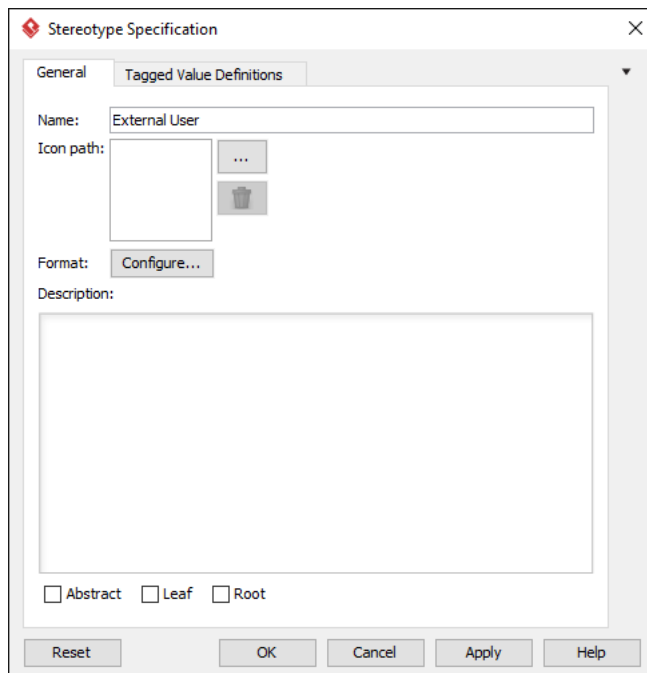

5.   In the window opened, click **Edit Stereotypes...** under the **Stereotypes** tab.
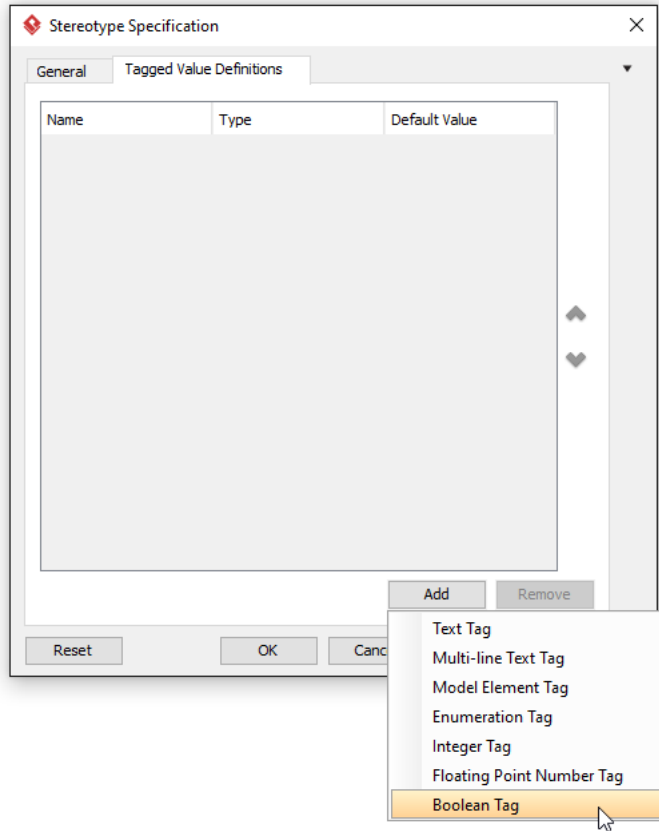

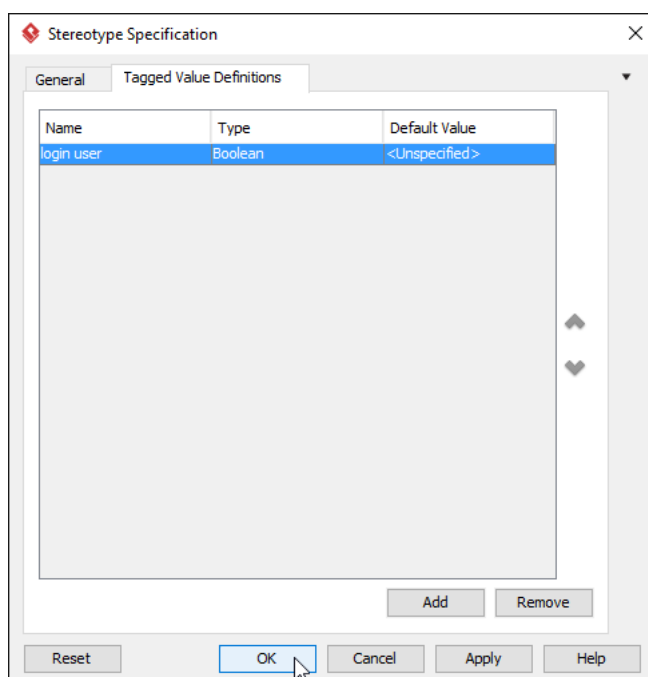6.   In the **Configure Stereotypes** window, click **Add...**

7.   In the **Stereotype Specification** window, select the **General** tab. Enter *External User* as the
name of stereotype.

8. Now let's just say that we want to have a way to describe whether an external user is using the ticketing system as a guest or a login user. So we are going to add a tag definition for actors that will apply this stereotype to specify the tagged value then Select the **Tagged Value Definitions** tab. Then click **Add** and select **Boolean Tag**.
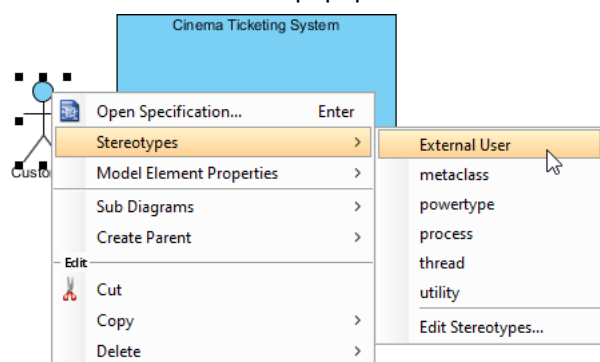
9. A new row will be inserted into the table for the new tag. Name it *login user* under the **Name** column. The type should be automatically filled in for you (i.e. Boolean). Click **OK** to close the **Stereotype Specification** window.
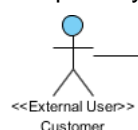

10. In the **Configure Stereotypes** window, click **OK**. A window will open to ask you to confirm applying the changes. Click **Yes** to proceed.

11. We are now finished with the stereotype definition. Click **OK** to close the **Actor Specification** window.

Apply stereotypes to model elements

Next we will apply the stereotype to a model element. Right-click *Customer* and select **Stereotypes > External User** from the popup menu.
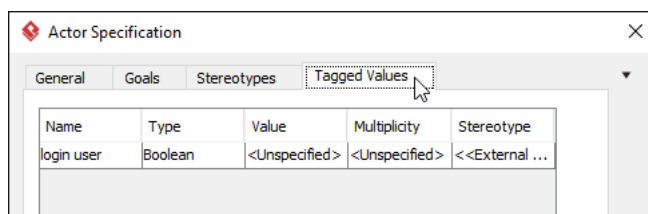

Graphically, the actor *Customer* will now appear with the text <<**External User**>> above its name.
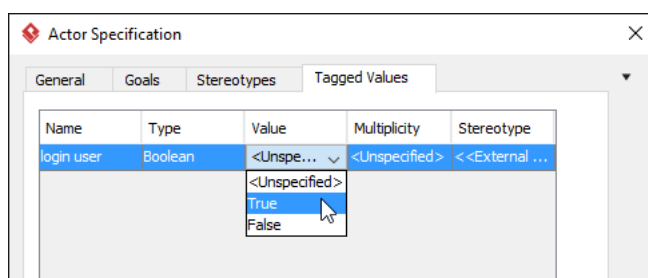
Steps to set tagged values

We will now look at how to set the tagged values after we apply a stereotype (**External User**) to a model element (*Customer*).

1. Right-click on *Customer* and select **Stereotypes > Edit Stereotypes...** from the popup menu.

2. In the **Actor Specification** window, select the **Tagged Values** tab.

3. Click the cell under the **Value** column. Select the appropriate value for your need.
    Note: After clicking a value cell, you may or may not get a list of values to choose from. It all depends on the type of the tag. For example, if the tag is of integer type, you would need to manually enter a number yourself.
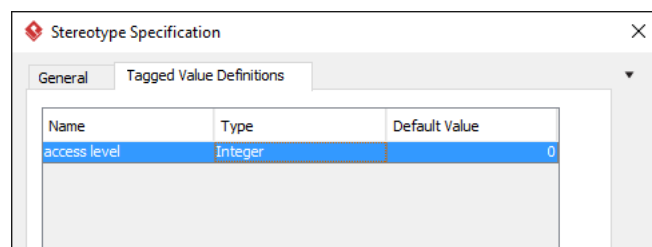

4. Click **OK** to accept the changes and close the window.
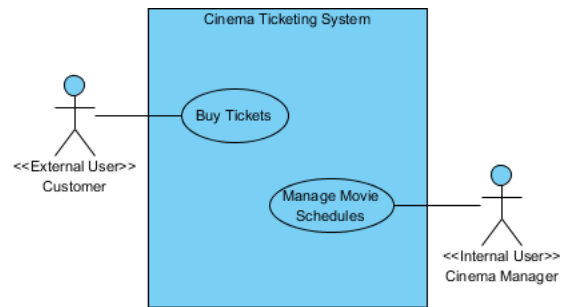
Create another stereotype

Follow the previous steps to create a stereotype off from *Cinema Manager* (actor) and name it *Internal User*.

As for the tag definitions, (instead of a boolean tag called "login user") let's add one of integer type to store the access level.

Then apply *Internal User* (stereotype) to *Cinema Manager* (actor). Simply right click on *Cinema Manager* and select **Stereotypes > Internal User** from the popup menu.

The text <<**Internal User**>> should now appear above the actor's name, *Cinema Manager*.

Resources

1. Use-Case-Stereotype.vpp

Related Links

*   Know-how - How to define stereotype and tagged values using Open API

*   YouTube Video - How to Reassign a Stereotype to a Requirement

*   YouTube Video - How to Define a Custom Property for Use Case

*   Know-how - How to remove user defined tagged values for all model elements using Open API

Visual Paradigm

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

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