



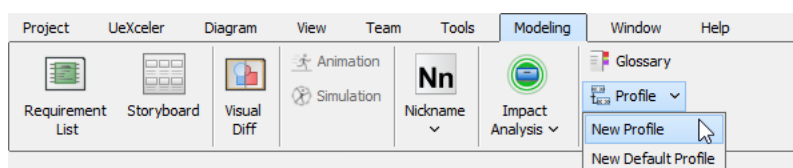
How to Use Profile Diagram to Manage Stereotypes?

Written Date : March 6, 2016

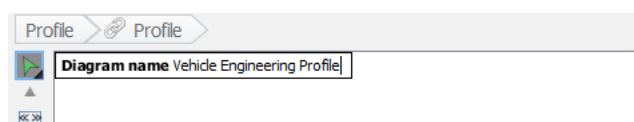
[Unified Modeling Language \(UML\)](#) is a general purpose modeling language which is widely used in modeling software systems. In some occasions, UML may not be precise enough for modeling specific problem domain. The [UML Profile](#) is an extension mechanism to customize the models for specific domains or platforms. This tutorial will teach you how to create customized profile in [Visual Paradigm](#).

Drawing a UML Profile Diagram

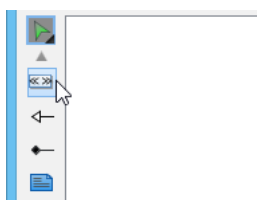
1. Create a profile by selecting **Modeling > Profile > New Profile** from the application toolbar.



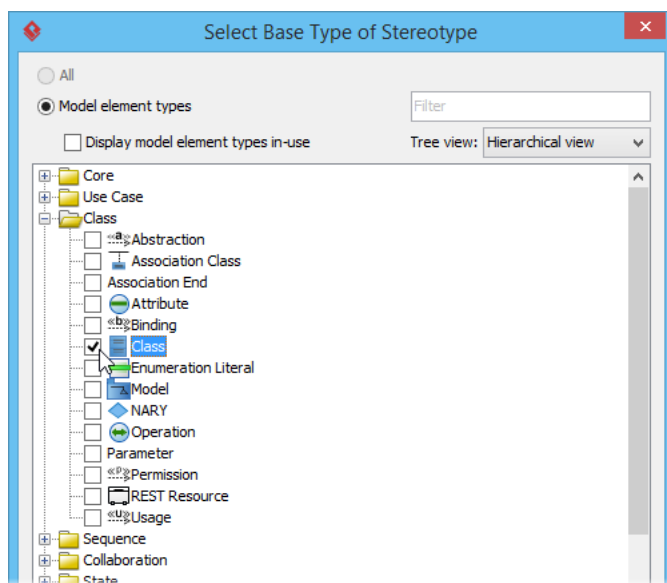
2. A new profile diagram is created and you are prompted to enter a name. Enter *Vehicle Engineering Profile* as name and press **Enter** to confirm.



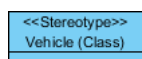
3. You are going to model your profile in this diagram. Let's create a stereotype first. Select the **Stereotype** tool from the diagram toolbar.



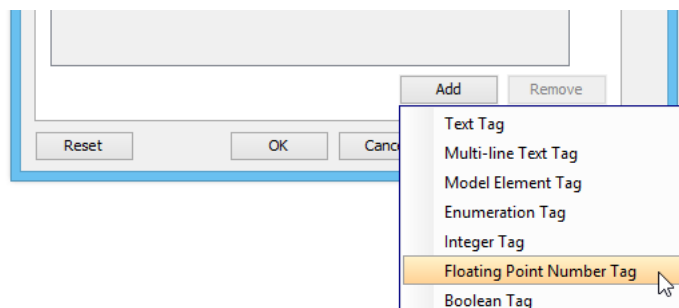
- Click on the diagram to create a stereotype. You are immediately prompted to choose the base type of this stereotype, which is the type of element for which the creating stereotype will be used. Expand the **Class** node and select **Class**.



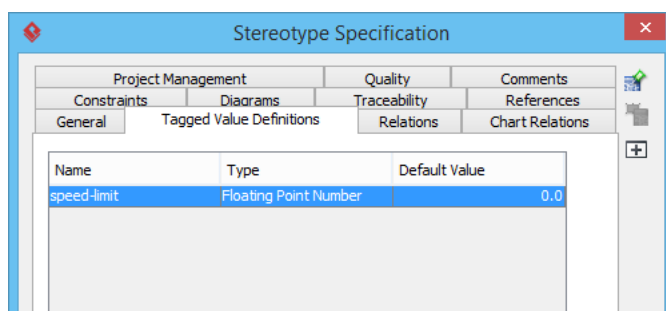
- Click **OK** to confirm.
- A stereotype is created in the diagram. Enter *Vehicle* as its name and **Enter** to confirm.



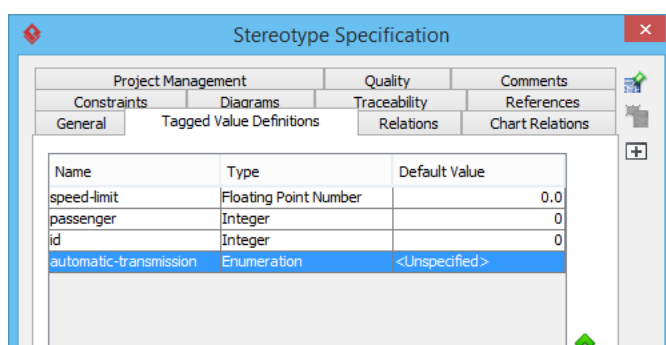
- Let's define some tags associated with this stereotype. Right-click on the *Vehicle* stereotype and select **Open Specification...** from the popup menu.
- Open the **Tagged Value Definitions** tab.
- At the bottom of the tab, click **Add** and then select **Floating Point Number Tag** from the popup menu.



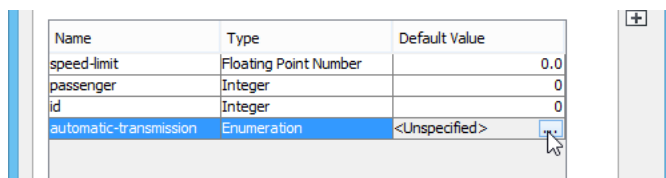
10. Enter *speed-limit* as tag name and press **Enter** to confirm.



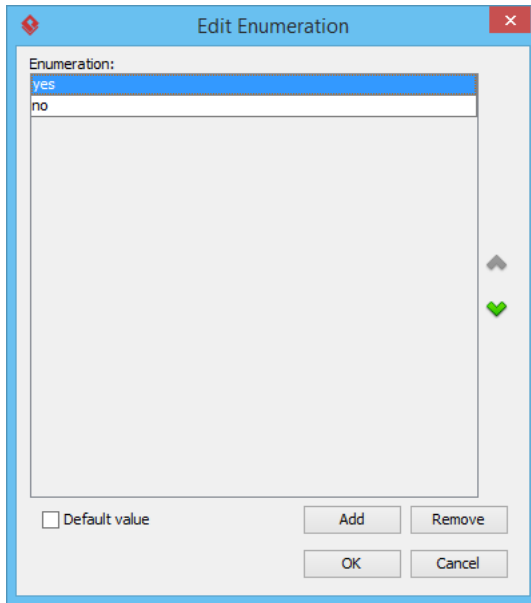
11. Create two integer tags *passenger* and *id*, and one enumeration tag *automatic-transmission*.



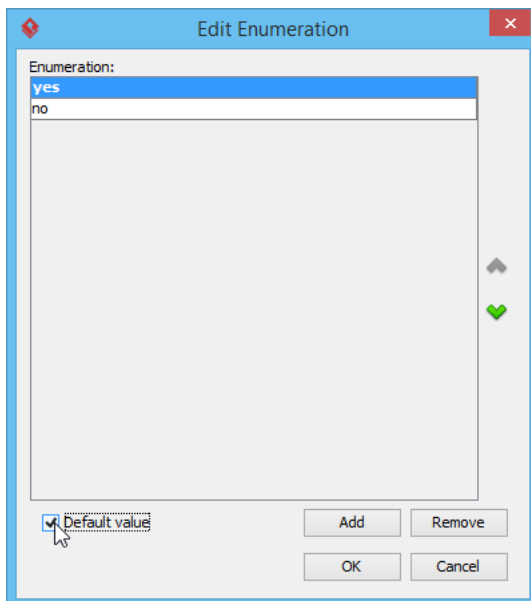
12. Let's configure the possible values for the enumeration tag *automatic-transmission*. Click on the ... button in its **Default Value** cell.



13. In the **Edit Enumeration** window, click **Add** to add and then enter *yes* as value. Add another value *no*.

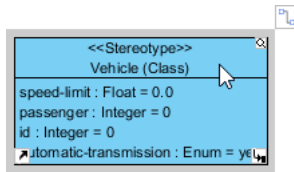


14. Select *yes* and check **Default value** to make it the default option.

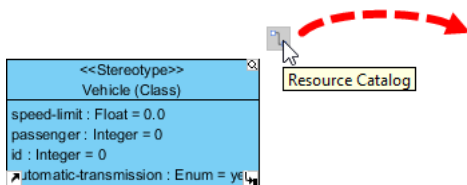


15. Click **OK** to confirm and return to the specification window.
16. Click **OK** in the specification window to return to the diagram.

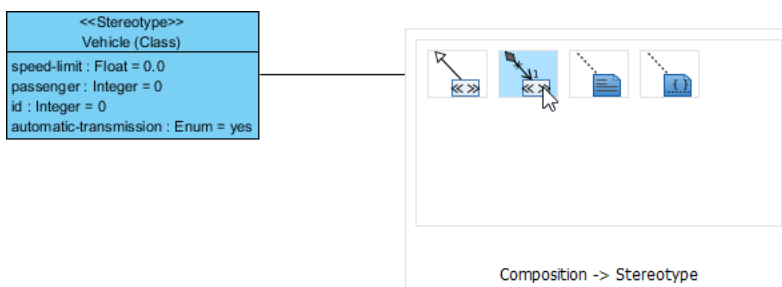
17. Let's create the other stereotypes in this profile. Move your mouse pointer over the *Vehicle* stereotype.



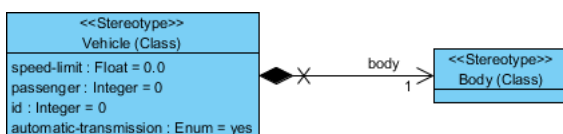
18. Press on the **Resource Catalog** button that appear at the top right of shape. Drag it out.



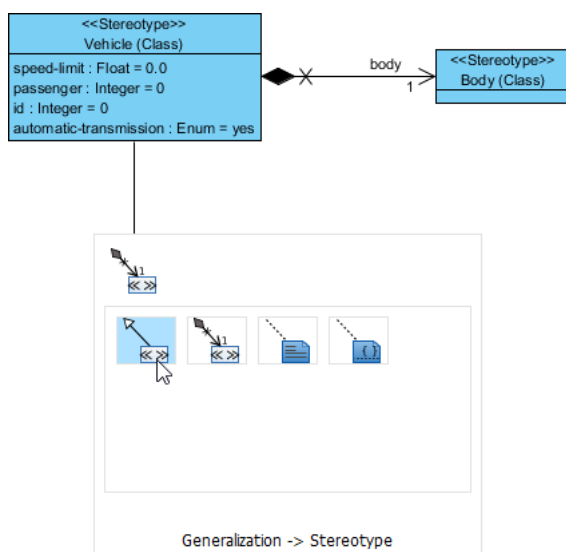
19. Release the mouse button in empty space. Select **Composition -> Stereotype** from Resource Catalog.



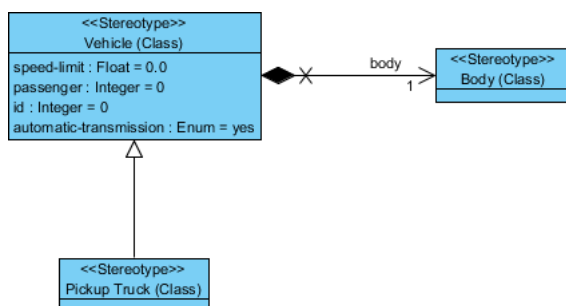
20. A new stereotype is created and has **Class** automatically chosen as base type. Enter *Body* as name and press **Enter** to confirm.



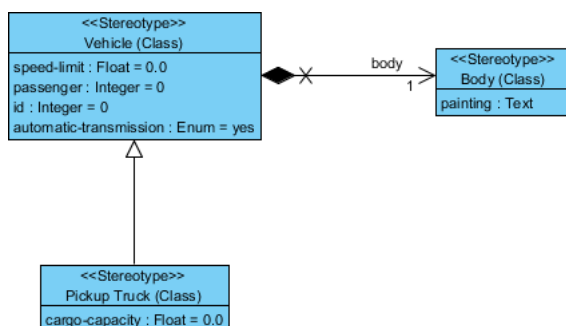
21. Besides composition, you can also create specialized stereotypes. Let's create a stereotype *Pickup Truck* which is a specialized type of vehicle, using Resource Catalog. This time, choose the resource **Generalization -> Stereotype**.



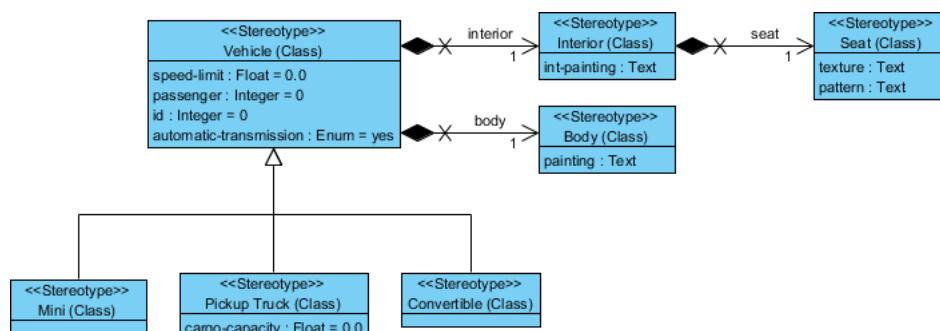
22. Up to now, your profile diagram should look like this:



23. Apply the techniques taught above to add tags to the new stereotypes. Add a text tag *painting* to *Body* and a floating point number tag *cargo-capacity* to *Pickup Truck*.



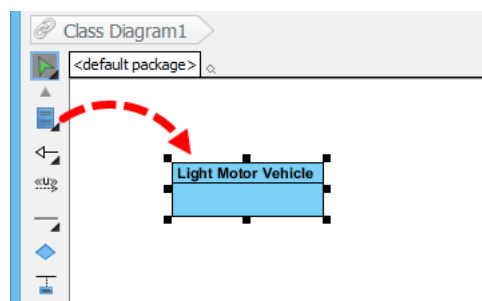
24. Draw two more specialized stereotypes *Mini* and *Convertible* from *Vehicle*. Draw another composite stereotype *Interior* from *Vehicle*, and another composite stereotype *Seat* from *Interior*. Add a text tag *int-painting* to *Interior* and two text tags *texture* and *pattern* to *Seat*. Your diagram should look like this:



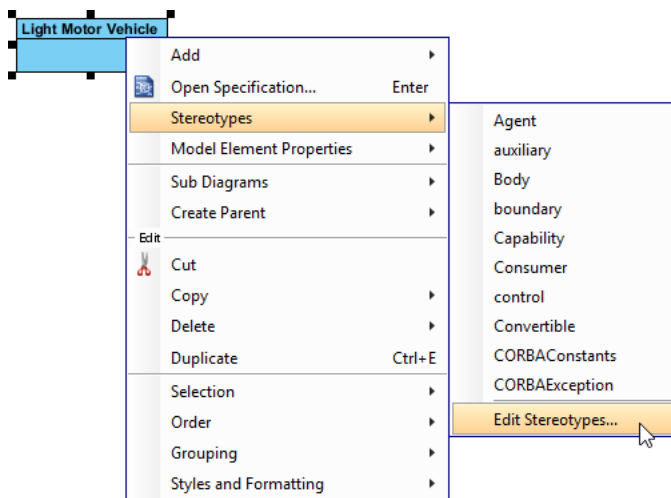
Creating a Class with Stereotype

The profile is now ready to use. Let's create a [class diagram](#) with the stereotype defined in Profile Diagram.

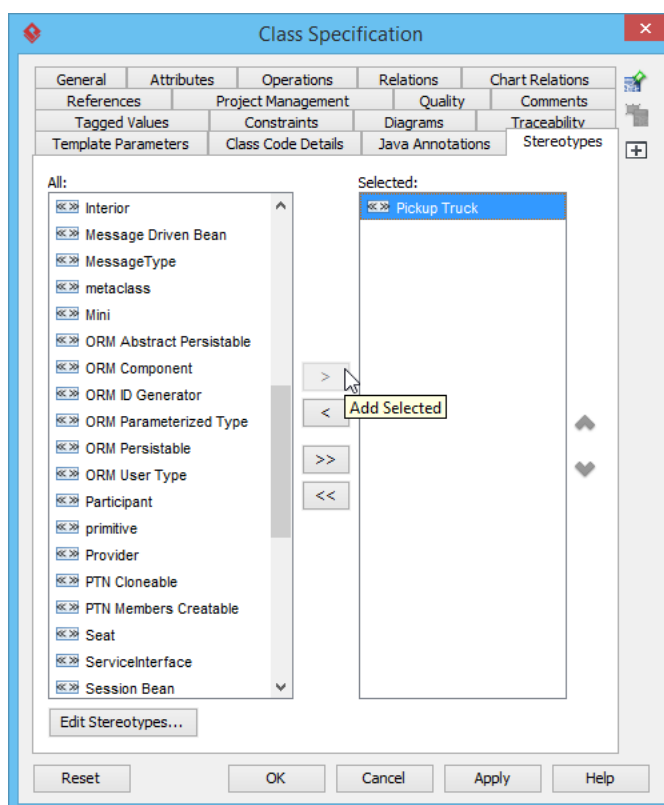
1. Create a class diagram by selecting **Diagram > New** from the application toolbar. Select **Class Diagram** in the **New Diagram** window and click **Next**. Keep the diagram name as provided and click **OK** to confirm.
2. Create a class *Light Motor Vehicle*.



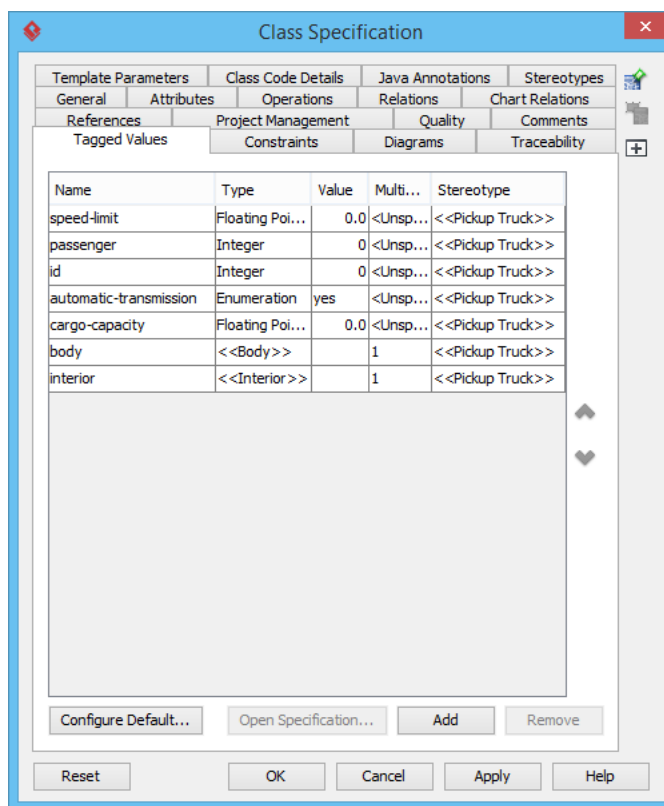
3. Right-click on *Light Motor Vehicle* and select **Stereotypes > Edit Stereotypes** from the popup menu.



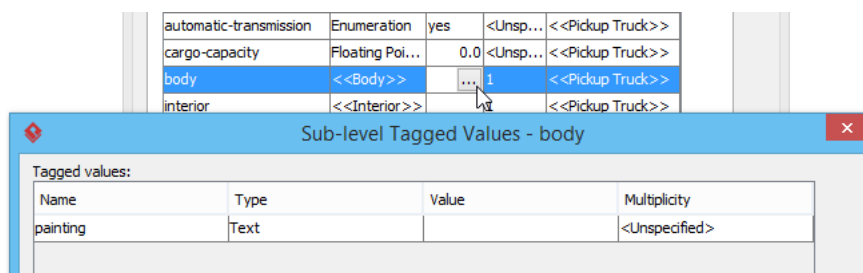
4. Select **Pickup Truck** on the left hand side and then click > to add it.



- Open the **Tagged Values** tab. The tags defined in the stereotypes are listed. Besides the tag defined in <<Pickup Truck>>, there are tags defined under its generalized stereotype <<Vehicle>> and its composited stereotypes.



- Click the ... button in the **Value** cell of *Body* tag. The **Sub-level Tagged Values** window is shown. You can specify the tagged values of the *Body* stereotype there.



Related Links

- [What is Profile Diagram in UML?](#)
- [Know-how: Define and specify stereotype in BPD](#)



[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/>)