How to Draw ONE Class Diagram for Java, C# and VB?

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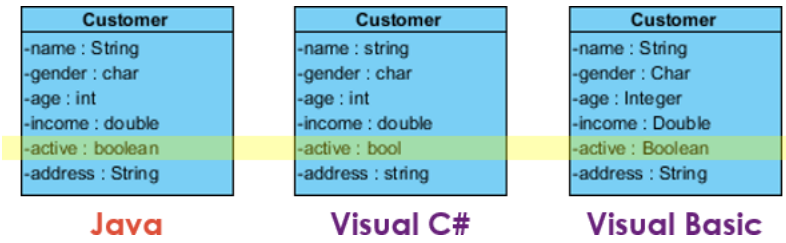


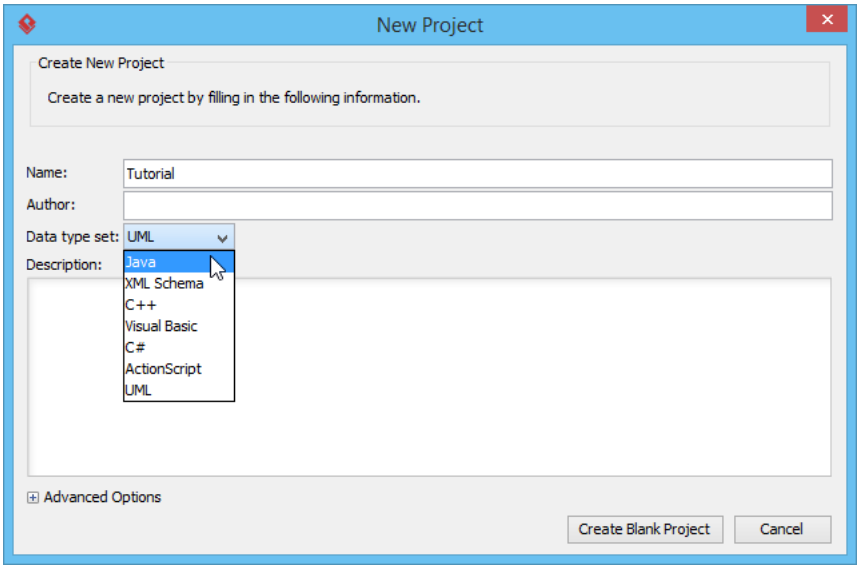
In this tutorial, we will show you how to present a class model in different programming languages.

Creating a Project in a Specific Language

In this section, we will show you how to create a new project in a specific programming language. By doing so, you can easily select language-specific types when constructing a class model. Do not worry if you have not been doing this in your production projects. You can switch between languages any time you want, which we will show you how to do in the next section.

1. Select **Project > New** from the application toolbar.
2. In the **New Project** window, enter *Tutorial* as the Name.

3. By default, **UML** is selected as the **Data type set**, meaning that you can use primitive UML data types when constructing your model. Let's say we are going to draw a class diagram for a Java project. Select **Java** as the **Data type set**.

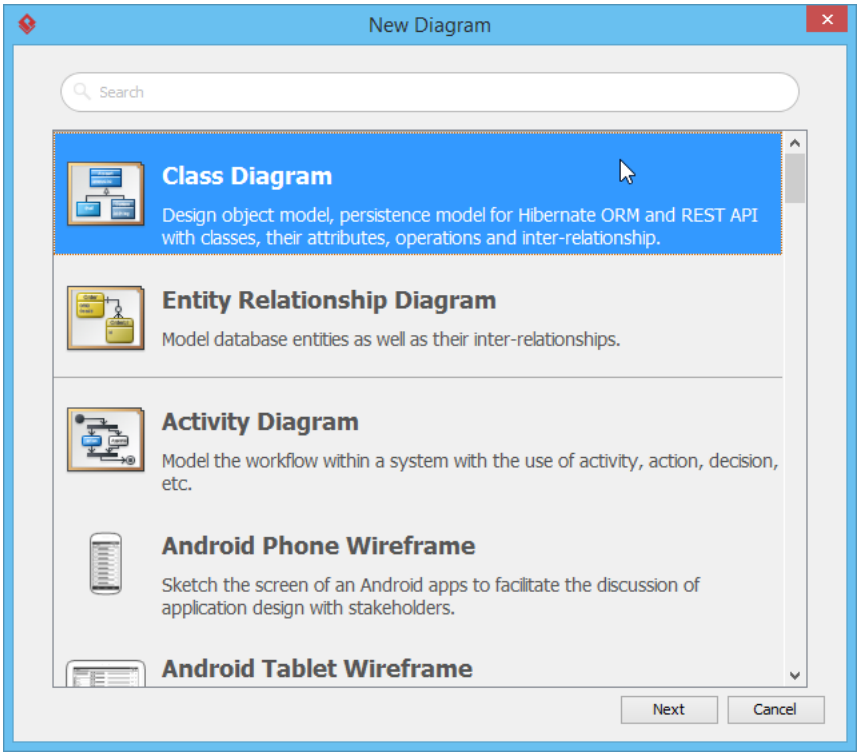


4. Click **Create Blank Project**.

Creating a Simple UML Class Diagram

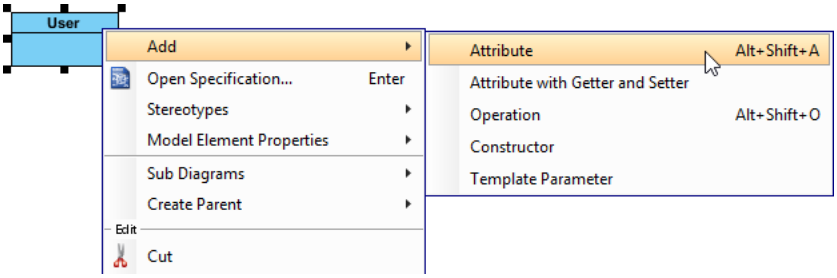
In this section, you will create a class diagram with one class and several attributes. You will be creating the attributes with primitive Java data types.

1. First, create a UML class diagram. You can create a class diagram by selecting **Diagram > New** from the application toolbar. Select **Class Diagram** in the **New Diagram** window and then click **Next**. Click **OK** again to create the diagram.



2. Create a class named *User*.

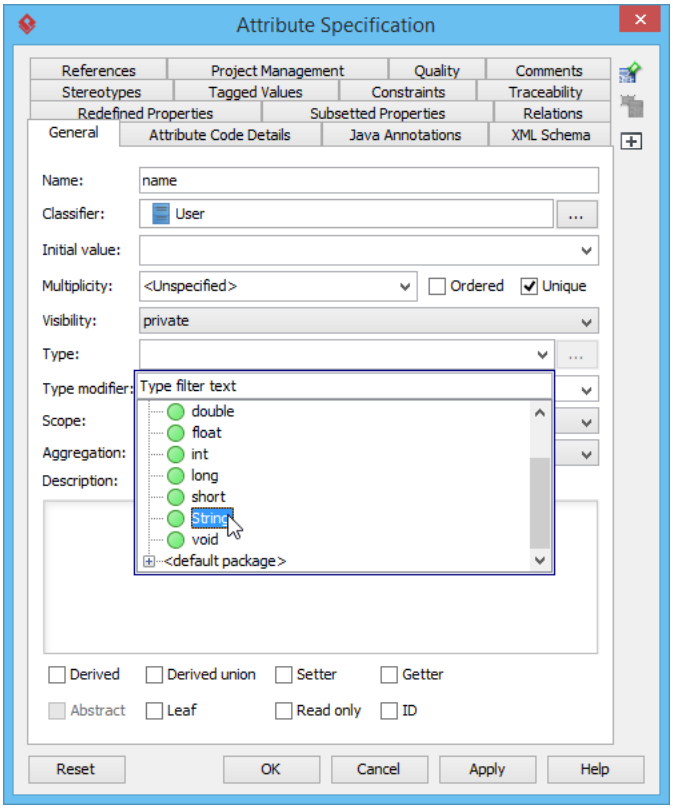
3. Let's add an attribute named `name` to the class. Right-click on the class and select **Add > Attribute** from the popup menu.



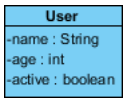
4. The `name` attribute is a (Java) String. You can type `name : String` to create such an attribute, but let's try something different this time. Type `name` and then click on the diagram background to create a typeless attribute.

5. Right-click on the attribute and select **Open Specification...** from the popup menu.

6. Click the dropdown menu next to the **Type** field. You can see a list of primitive Java data types available for selection. Now, select **String** and click **OK** to confirm.



7. Now, create two more attributes: *age : int* and *active : boolean*. To save time, you can type the name and data type inline without going through the specification window.

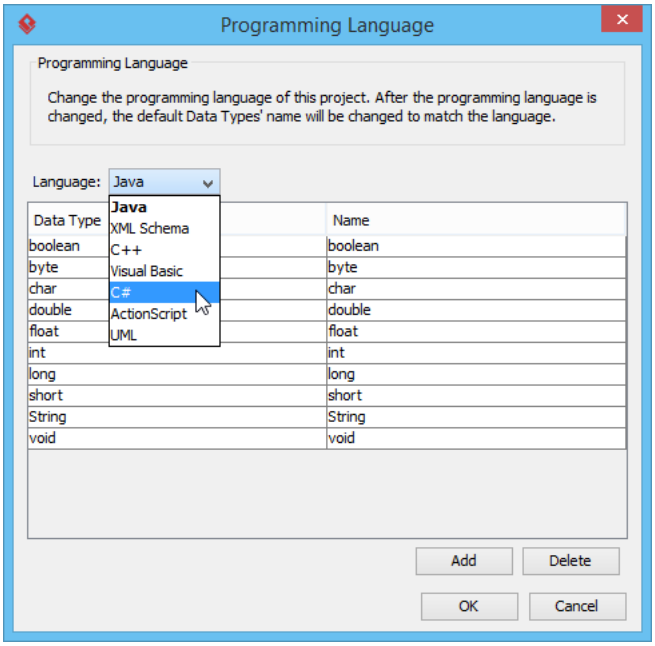


Presenting a Class Model in Another Programming Language

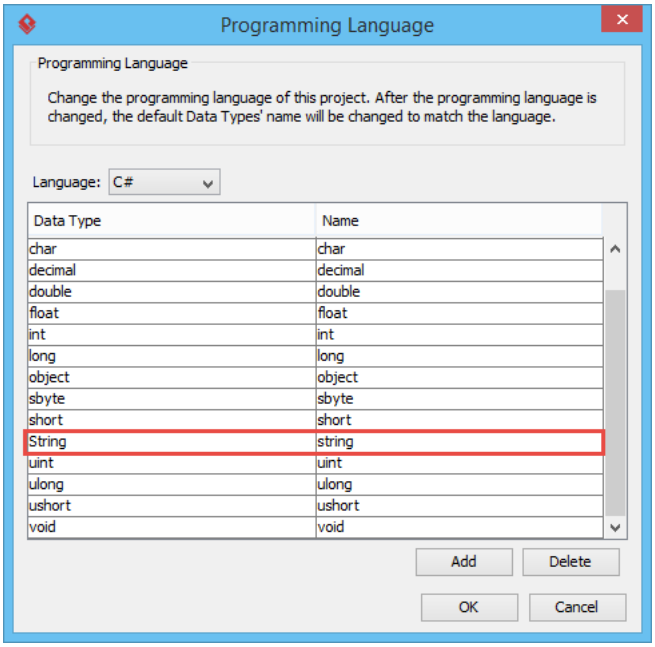
Now you have a class diagram with Java data types used as attribute types. To make the diagram more C#-friendly, you can present the data types in C#.

1. Select **Window > Configuration > Configure Programming Language** from the application toolbar.

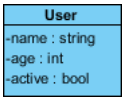
2. The **Programming Language** window shows the currently selected language, its supported data types, and their corresponding display names, which we will describe in more detail in a minute. Now, change the **Language** from **Java** to **C#**.



The list of data types is updated and is now longer than before. If you scroll, you can see some C# types like `uint` and `ulong`, which are not available in Java. So how do you read the two columns? Let's check the row for the String type. The first and second columns show 'String' and 'string', respectively. This means that the original 'String' type (available under Java) will be displayed as 'string' when the language is changed to C#.



3. Click **OK** to confirm the change of programming language. You can now see that the `name` attribute is shown as a C# `string`, while the `active` attribute is now a C# `bool` instead of a Java `boolean`.



Related Links

- User's Guide - Data type options

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