

# Eclipse 4's Modeled UI less sweating over workbench APIs more grinning over simple POJOs

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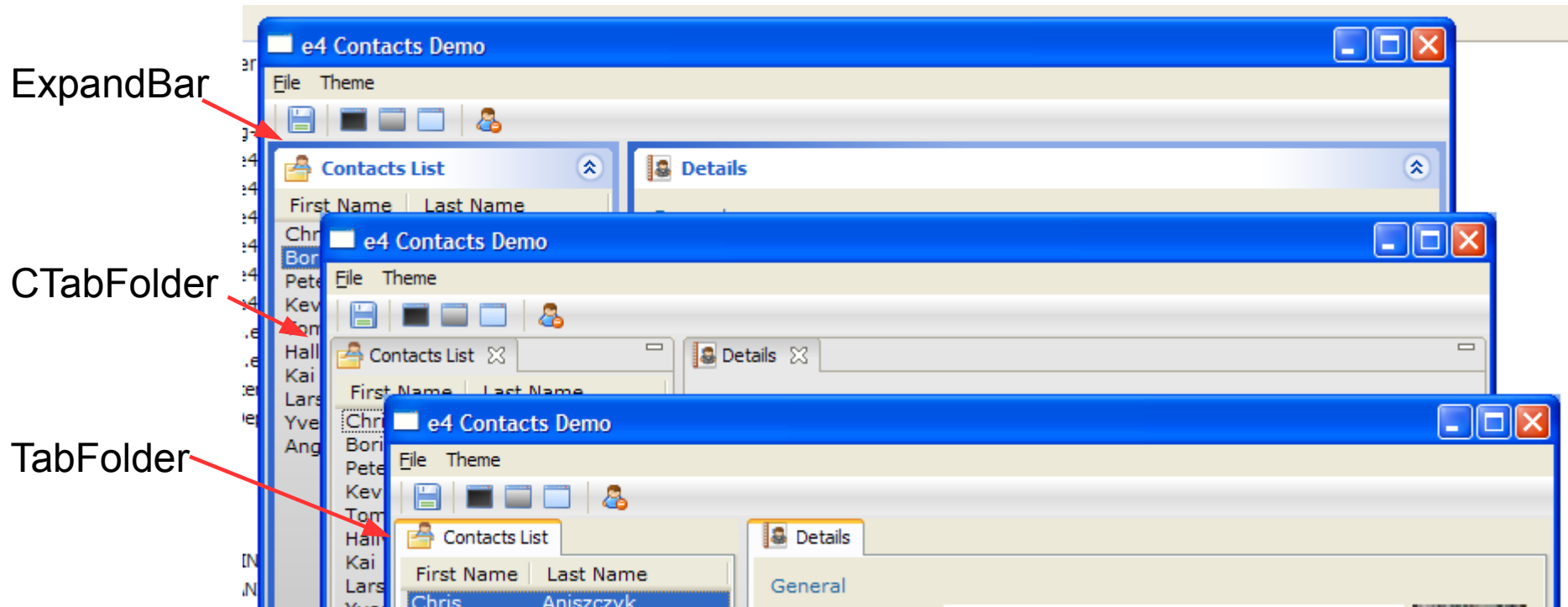


# What is the modeled UI?

- An Eclipse 4 application is now backed by a model
- No more `IWorkbenchWindow` and `IWorkbenchPage`
  - ...which then suddenly became `IWorkbenchParts`...
  - ...not clear where the stacks or sashes came from...
- The model merely describes the structure of the user interface
  - This is similar to the `org.eclipse.ui.menus` extension point in a way

# How is the model represented to the user?

- The renderers define the look
  - You can place the same XML snippet of an `org.eclipse.ui.menus` contribution into a menu or in a tool bar, the workbench would've sorted out the rest

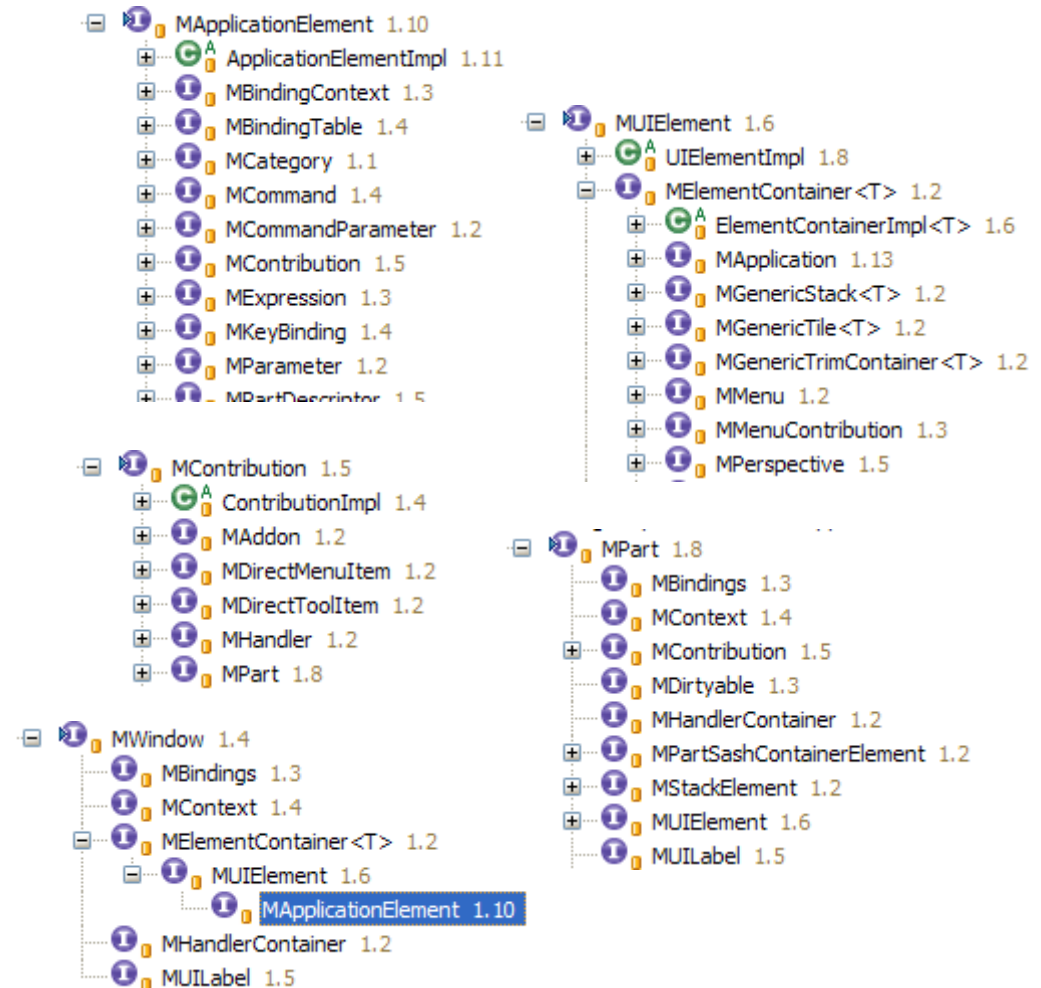


# What's in? What's not?

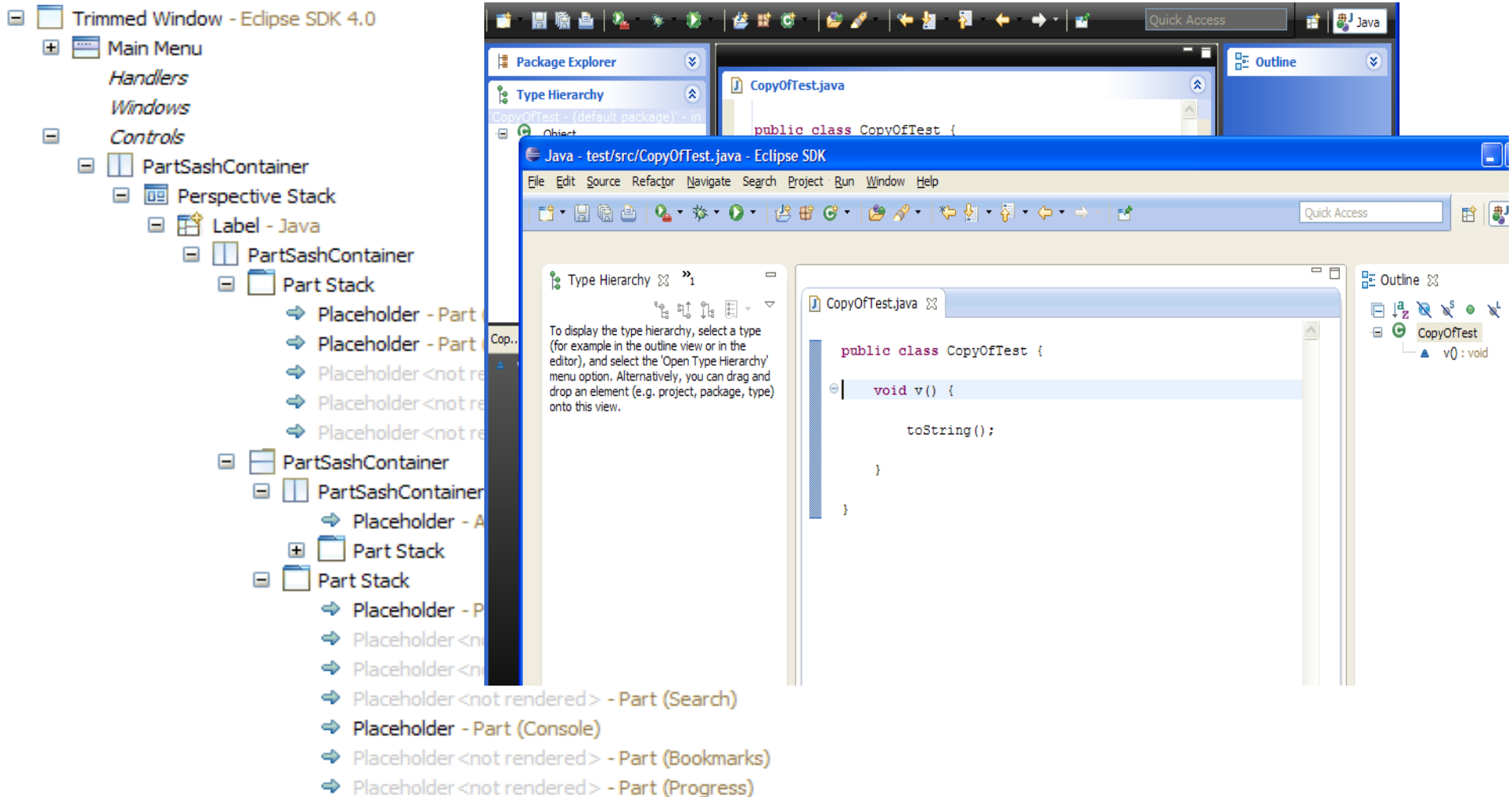
- Pretty much anything you see right now in a regular Eclipse workbench window
  - Windows
  - Perspectives
  - Parts
  - Menu items
  - Tool bars
- Some things are not modeled though
  - Wizards
  - Dialogs
  - Preferences
    - There is a map for storing data though

# How is the model constructed?

- Everything in the model is an `ApplicationElement`
- Data layer of abstract interfaces
  - A `UILabel` has an icon, textual string, and a tooltip
  - An `ElementContainer` has a list of children
  - A `Contribution` has an implementing object and a map for storing data
- Physical layer of concrete implementations
  - A `Part` extends `UILabel` and `Contribution`
  - A `Window` extends `UILabel` and `ElementContainer`

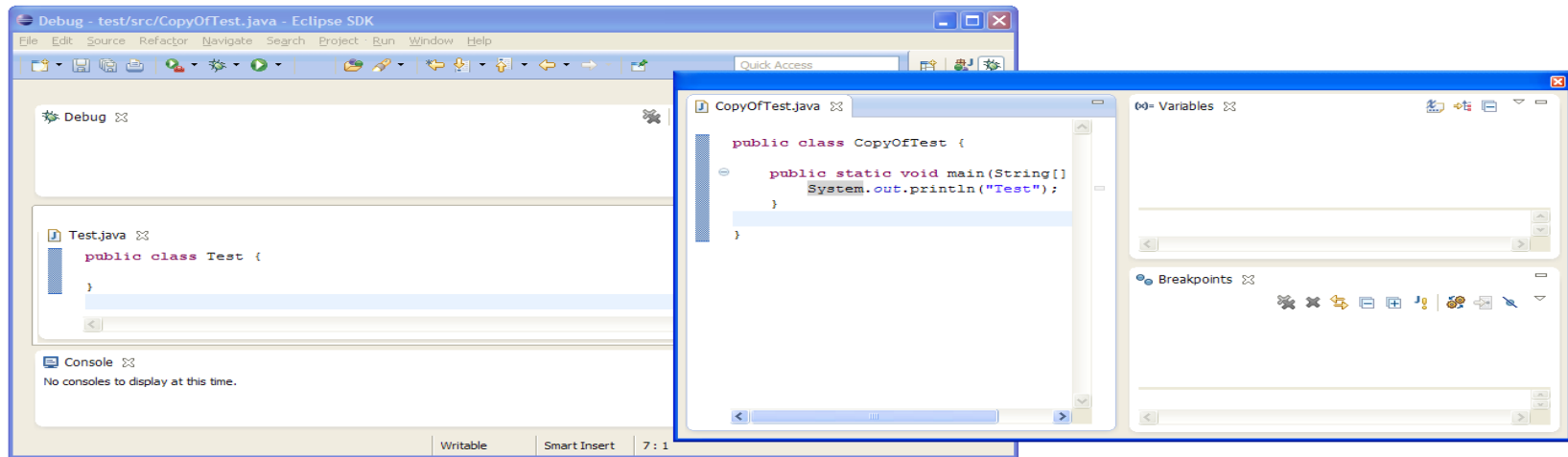


# What does the model for the SDK look like?



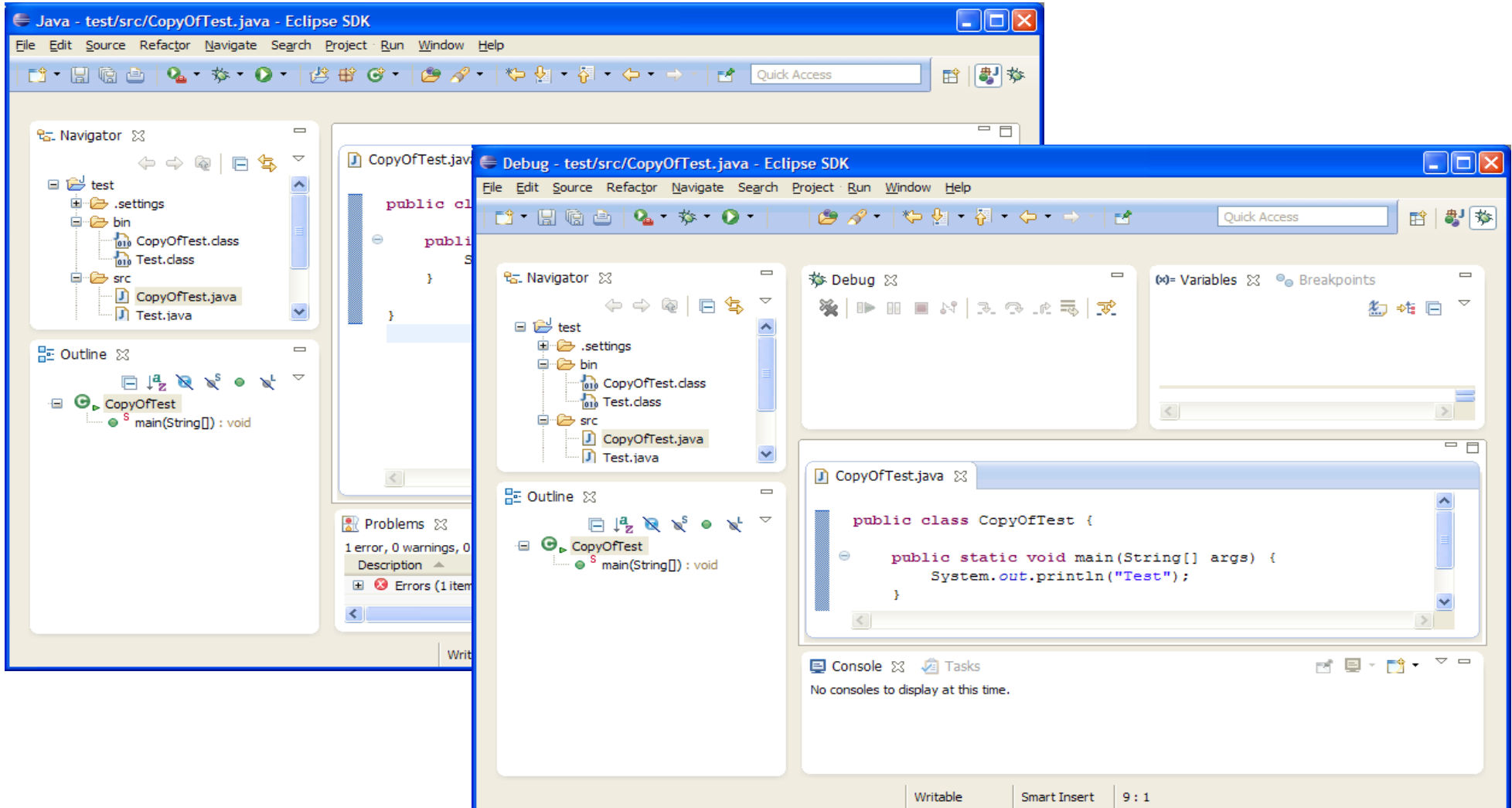
# What's in it for me here?

- The previous diagram seemed to look like the same old, same old
- Users can now detach things that couldn't be detached
  - And likewise create shapes inside those detached windows that were not possible before



- Don't feel bound by perspectives
  - Perspectives have traditionally defined a containment model for parts and stacks
  - Elements can now physically reside outside of the perspective

# What do you mean by having elements outside of the perspective?



# How clean is the code?

- How would I have a stack show the 'Console' view?

```
bottomStack.setSelectedElement(consolePart);
```

- How do I move a part into another stack?

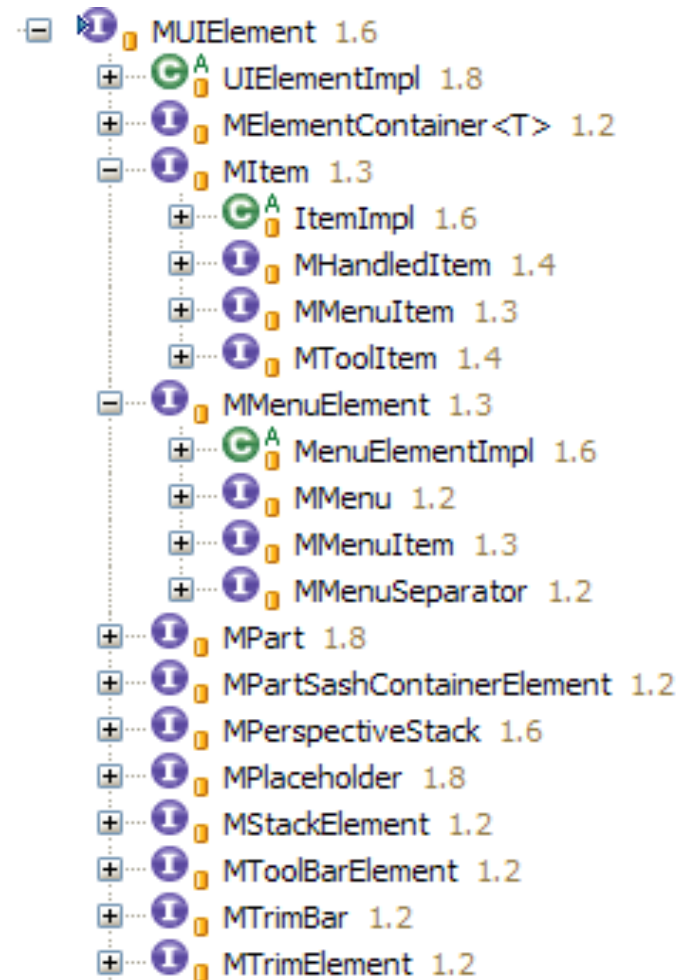
```
otherStack.getChildren().add(consolePart);
```

- How do I close all my parts in a stack?

```
bottomStack.setToBeRendered(false);
```

# Wouldn't these new shapes get me tied up in a knot?

- An ElementContainer can contain a list of UIElements...
  - ...that sounds rather open-ended and a recipe for disaster...
- Generics and modified code helps prevent invalid elements from being added to a container's list of children
  - Can't add a Window into a PartStack
  - Can't add a MenuItem into a Toolbar
- Can't set the selected element of a container to an element that hasn't been rendered



# Q&A

# Where do I go for more information?

- Ask questions on the forums or the mailing list
  - [http://www.eclipse.org/forums/index.php?t=thread&frm\\_id=12](http://www.eclipse.org/forums/index.php?t=thread&frm_id=12)
  - <https://dev.eclipse.org/mailman/listinfo/e4-dev> (e4-dev@eclipse.org)
- Find us on IRC
  - irc.freenode.net at #eclipse-e4

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