

# **Building GUIs for Eclipse**

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# Outline

- **SWT**
  - **Introduction**
  - **BasicWidgets Example**
- **Jface**
  - **Introduction**
  - **JFaceDemo Example**
  - **JFaceViewer Example**
- **Developing Eclipse Plugins**
  - **Introduction into Eclipse Plugin Architecture**
  - **Hello World Plugin Example**

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# Standard Widget Toolkit (SWT)

- Widget Toolkit for the Eclipse platform
- Look and Feel matches the underlying OS
- SWT supports 16 platforms.
  - Examples: Windows / Linux / OSX / Solaris / QNX / AIX / HP – UX/ Pocket PC's

# Standard Widget Toolkit (SWT)

- Standalone application or integrated into the Eclipse editor as a
  - View
  - Editor
  - Plugin

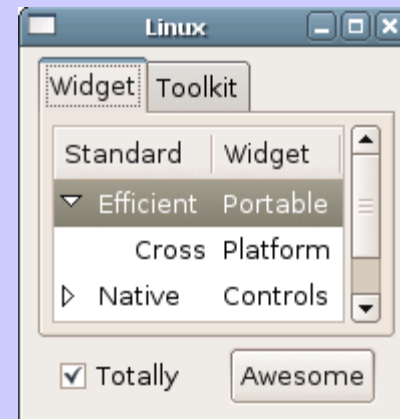
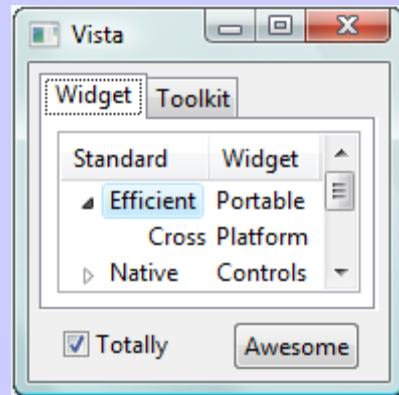
Why SWT ?

# Standard Widget Toolkit (SWT)

- Performs better than Swing by consuming less resources
- Much faster
- Most optimized for Windows platform

How do they look ?

# Standard Widget Toolkit (SWT)



Source: <http://www.eclipse.org/swt/>

# Standard Widget Toolkit (SWT)

## Types of widgets

- Basic (Examples Buttons, Labels)
- Composite (Examples Table, Trees)

Present in `org.eclipse.swt.widgets` package



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  - **com.example.hello Example**

# Standard Widget Toolkit (SWT)

Lets have a look at the code...

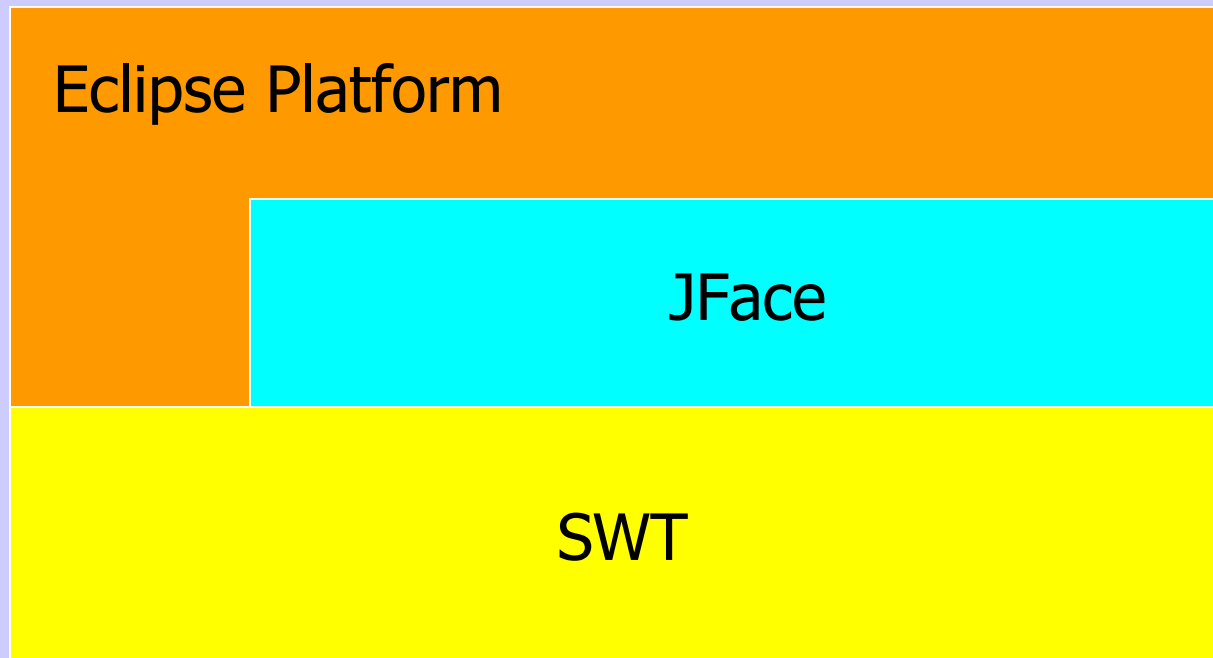
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# JFace

- **Built on top of SWT**
- **Uses the MVC approach**
- **Less code, increases productivity**
- **Examples: Wizards / Tip of the Day's, MessageBox's**

# JFace



# JFace

Important Packages:

```
import org.eclipse.jface.window.*;
```

```
import org.eclipse.swt.widgets.*;
```

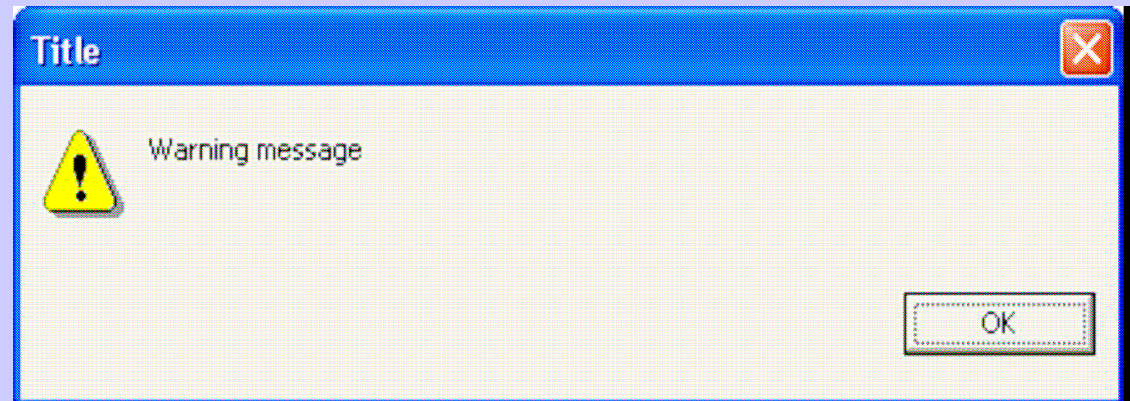
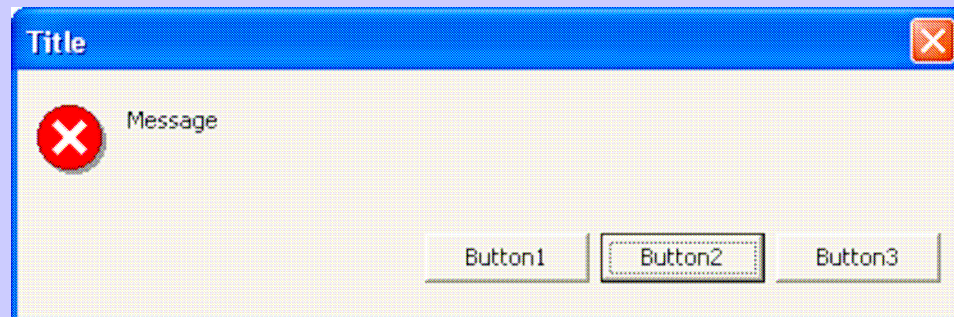
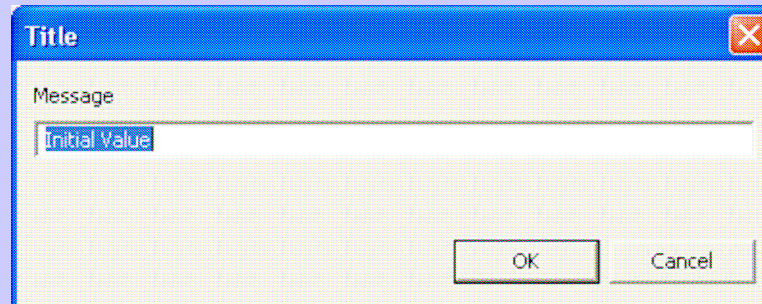
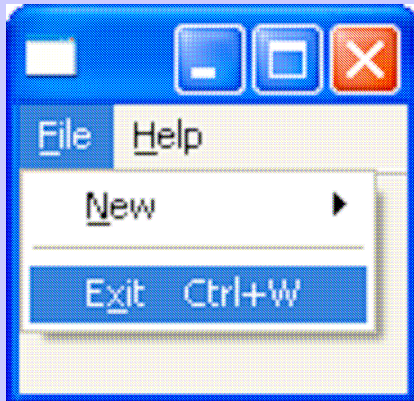
```
import org.eclipse.jface.action.*;
```

```
import org.eclipse.jface.resource.*;
```

```
import java.net.*;
```

```
import org.eclipse.jface.viewers.*;
```

# JFace



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# JFace

Lets have a look at the JFaceDemo code...

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# JFace

Lets have a look at the JFaceViewer code...

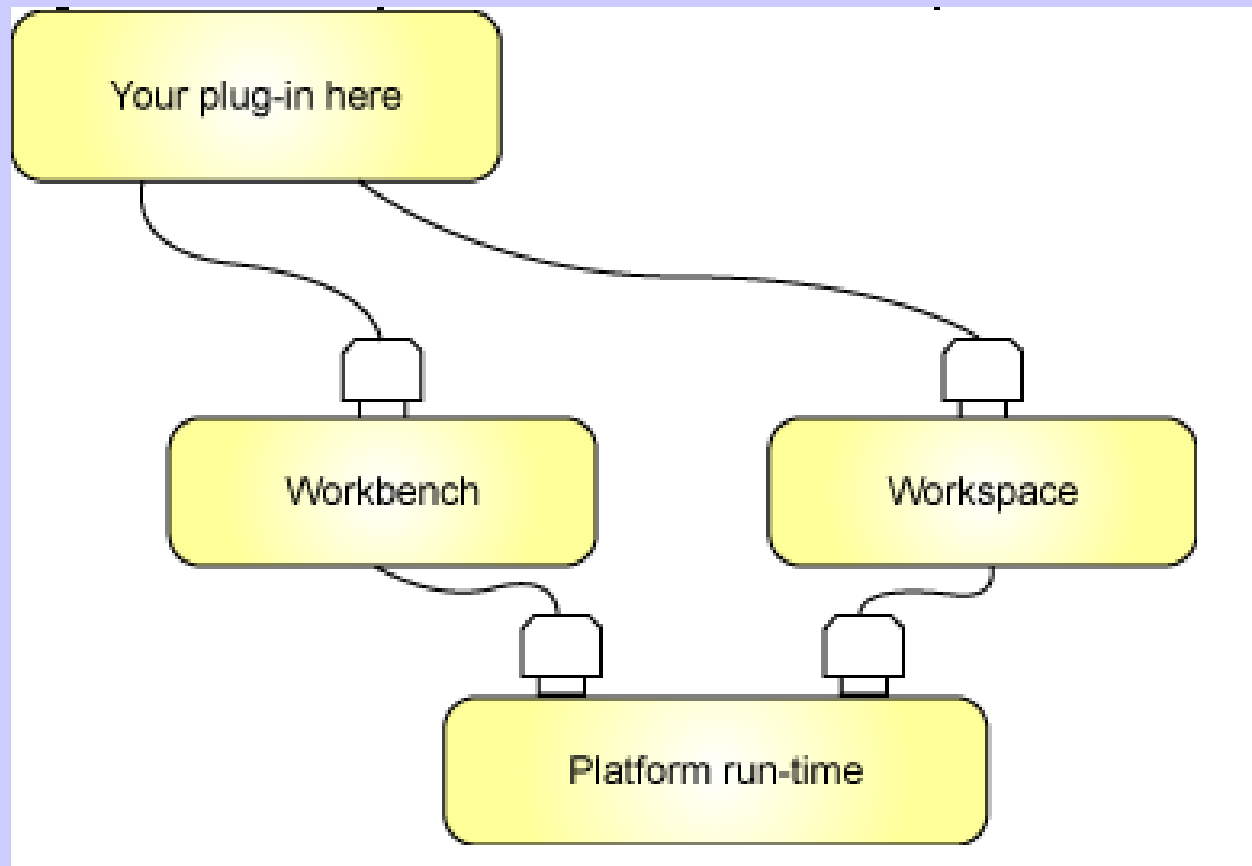
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# Developing Eclipse Plugins

- **Plugins offer a way to provide new functionality to the Eclipse IDE**
- **Extend the feature set of the Eclipse IDE by adding new plugins**
- **The Eclipse platform consists of**
  - **A small runtime kernel**
  - **Workbench and the Workplace Plugins**
  - **The above plugins act as extension points for new plugins**

# Eclipse Plugin Architecture



Source: <http://www.ibm.com/developerworks/opensource/library/os-ecplug/figure1.gif>

# Developing Eclipse Plugins

How do we build plugins ?

Build plugins using the SWT / Jface components that we already studied in our earlier slides

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# Developing Eclipse Plugins

Lets have a look at a simple plugin code in our [Eclipse Plugin Development Environment](#)

Note: You can download the source code from the website and work your way around or follow the cheat sheets in your Eclipse PDE to generate a Hello World Plugin.

# Resources

- <http://www.eclipse.org/>
- <http://www.ibm.com/developerworks/open/source/library/os-ecplug/>
- <http://www.cs.umanitoba.ca/~eclipse/>

Thank you for your time!