

Java GUI Programming

AWT/SWING - GUI

AWT, SWING AND OBJECTDRAW PACKAGES

ERIC Y. CHOU, PH.D.

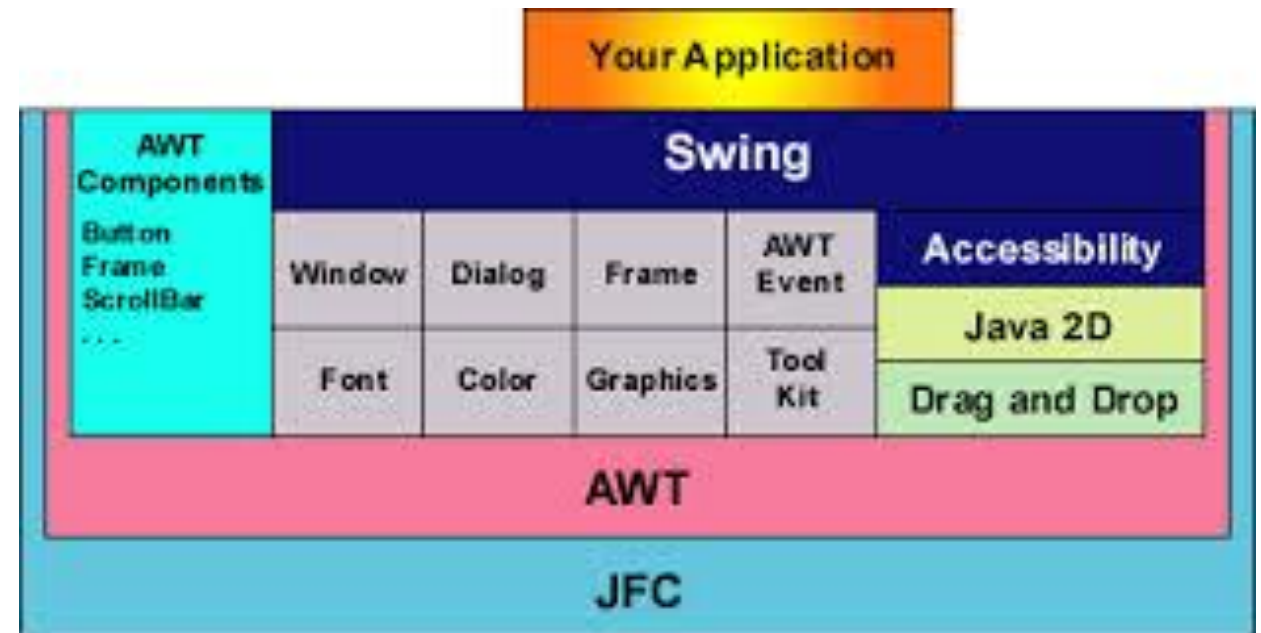
IEEE SENIOR MEMBER



Graphics User Interface for Java

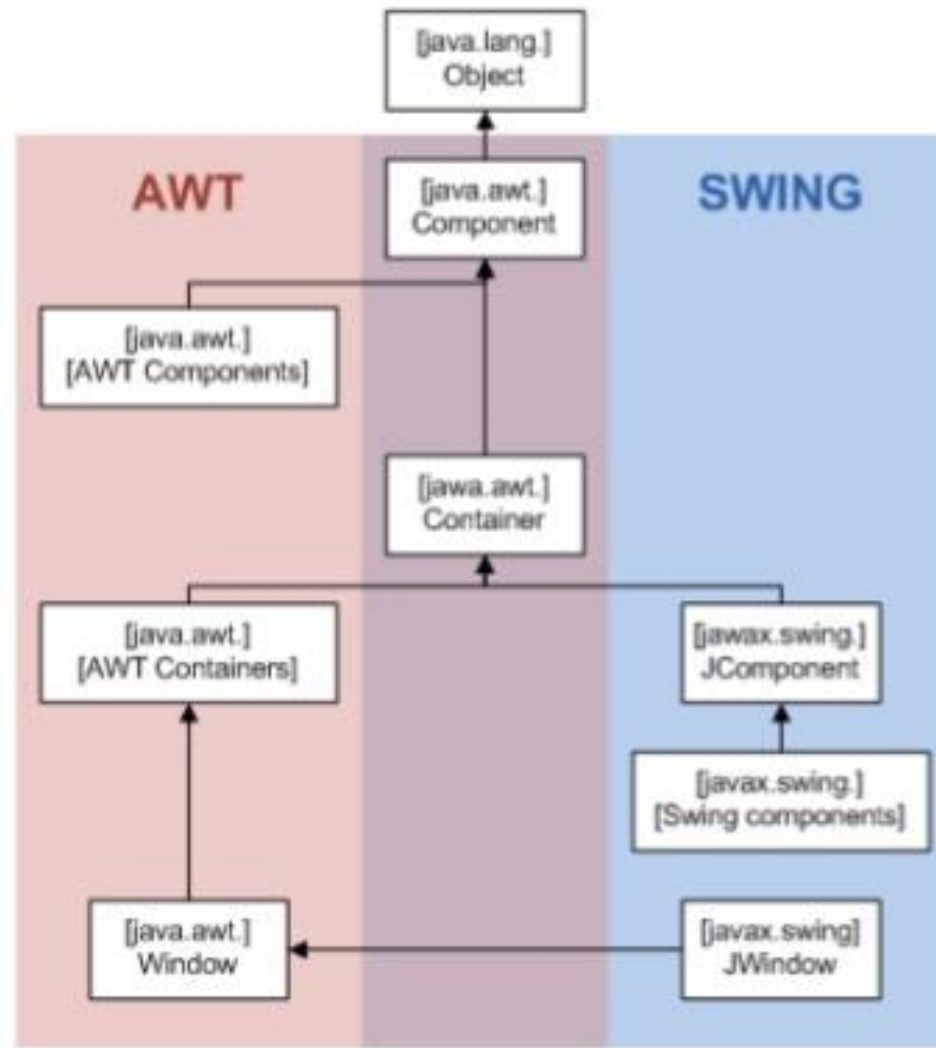
- Abstract Window Toolkit (**AWT**): Oracle
- Standard Window Toolkit (**SWT**): IBM
- **Swing**: Oracle
- **Javafx**: Oracle (**New**)
- **objectdraw** package

JFC (Java Foundation Classes)

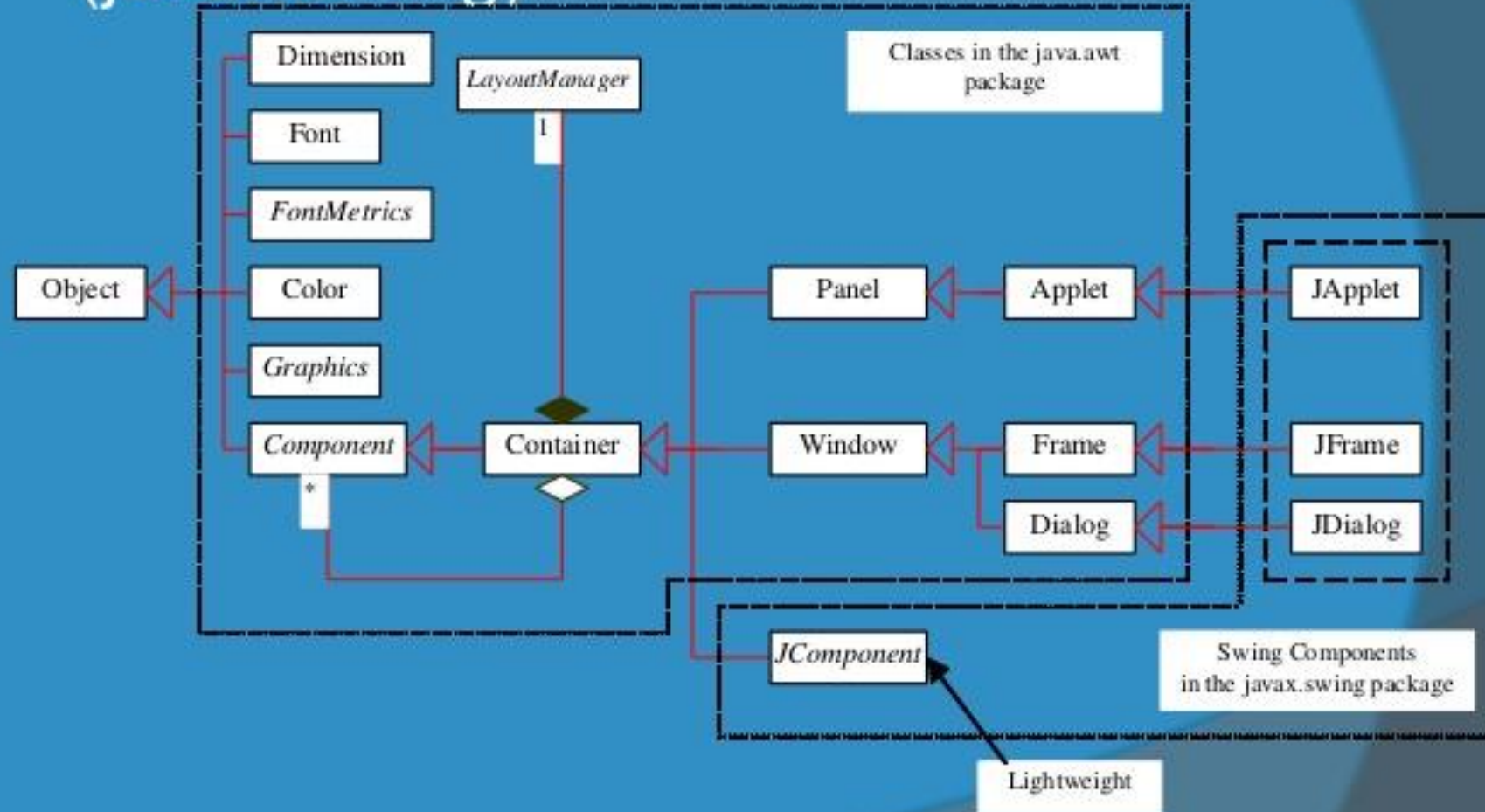


AWT AND SWING CLASS HIERARCHY

Swing has **J** for all its containers. Swing is a light-weight enhanced version of **AWT** Containers. **Swing/SWT/AWT** are in one integrated environment. **SWT** is a 3rd party version of **AWT**. **Javafx** is a replacement for all.

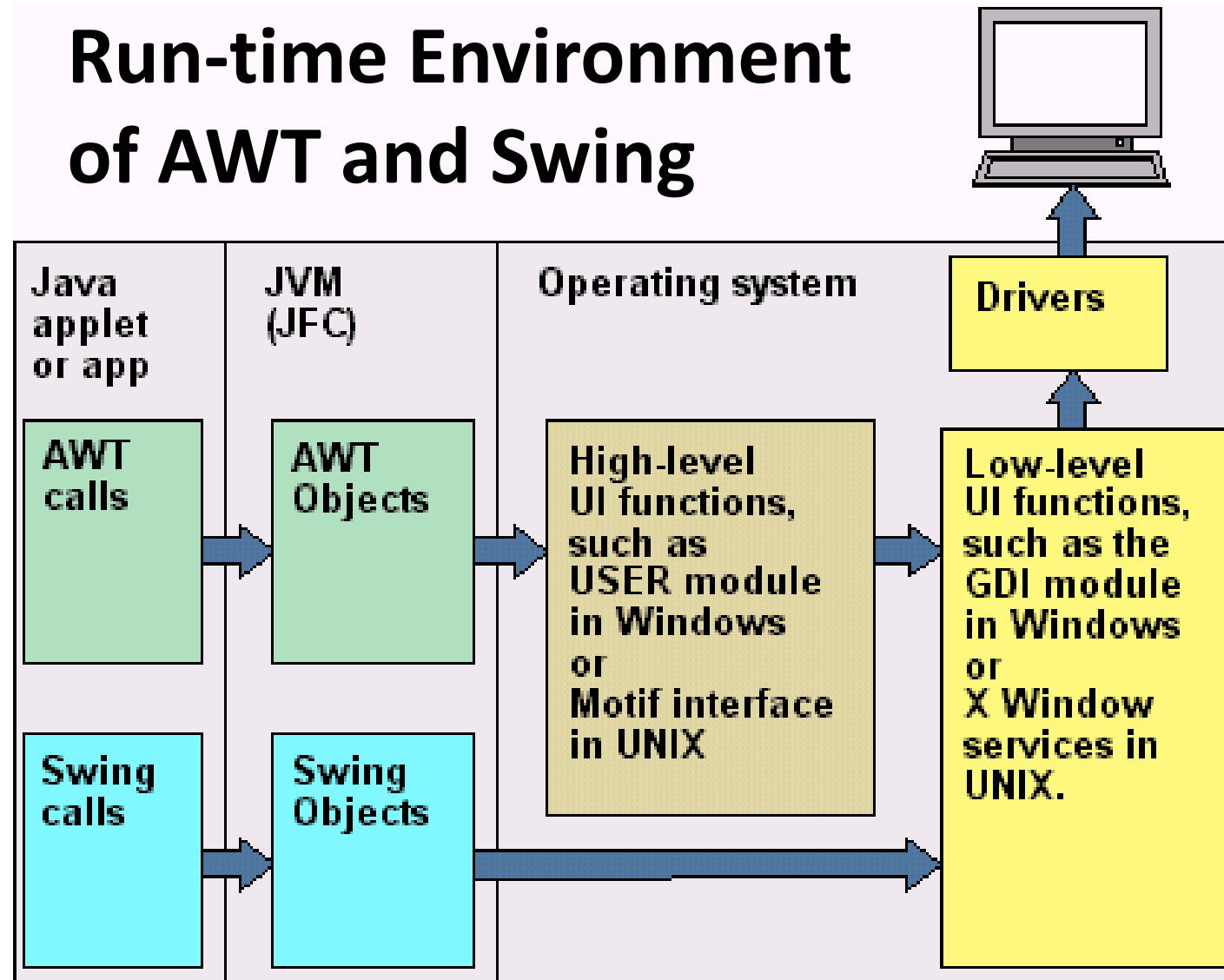


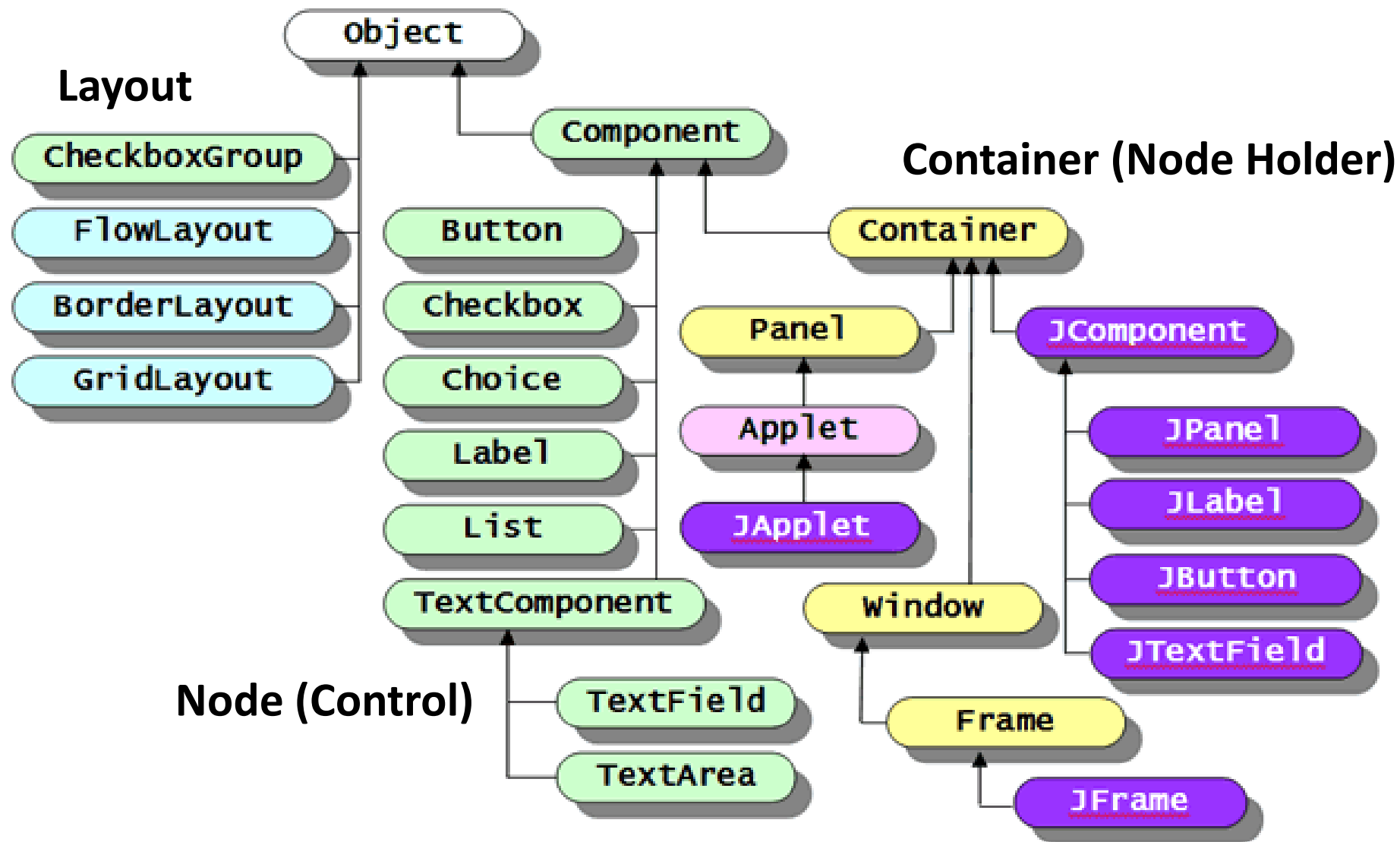
Swing Class Hierarchy (javax.swing)





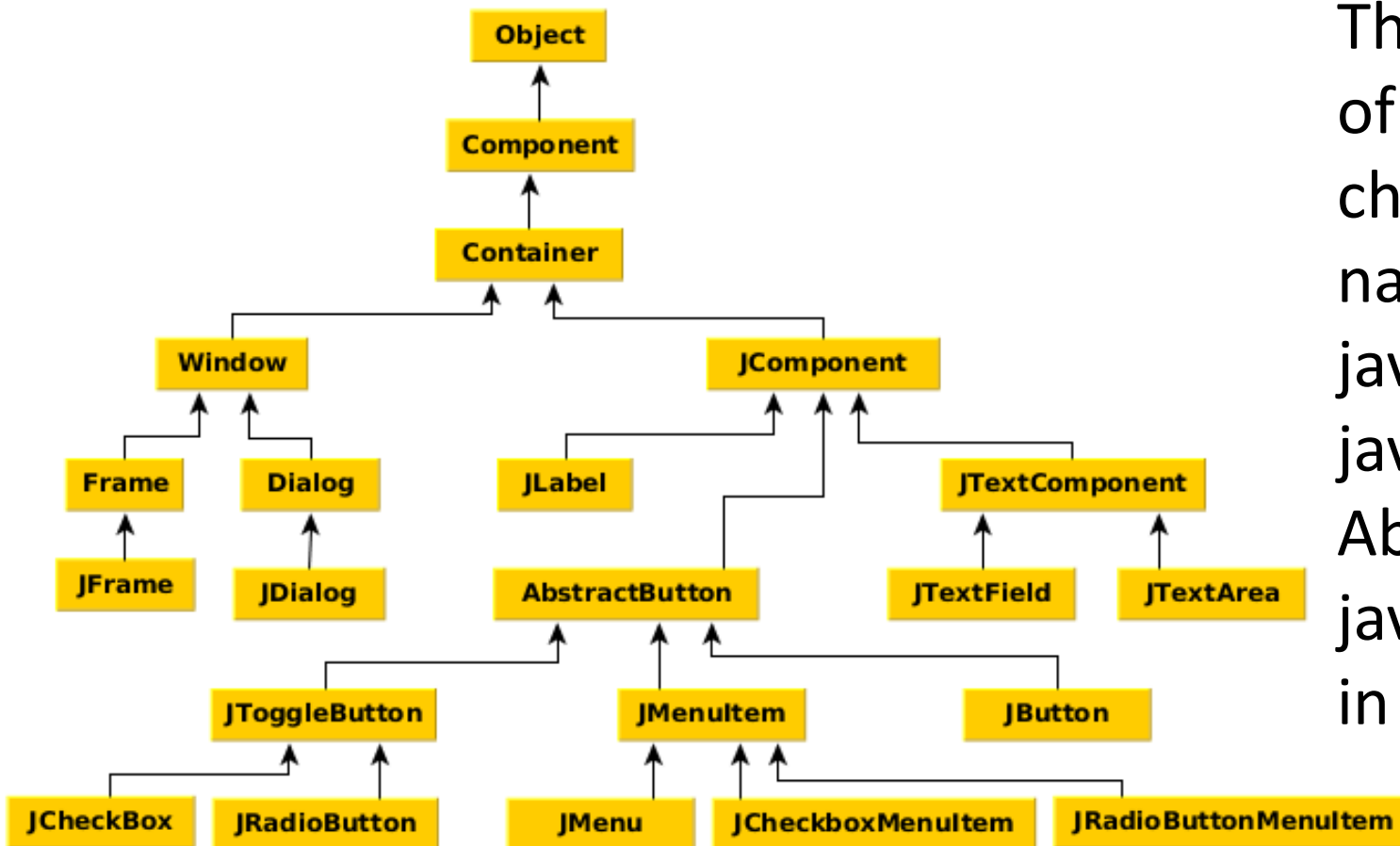
Run-time Environment of AWT and Swing







Swing Container (Node holders) with J



The package paths in this portion of the GUI hierarchy are easy to characterize: any class whose name begins with "J" is in the javax.swing package, except for javax.swing.text.JTextComponent. AbstractButton is also in javax.swing. Otherwise the class is in the java.awt package.

objectdraw package (3rd Party Library)

Package Built upon Swing and AWT

(<http://eventfuljava.cs.williams.edu/library.html>)



Installation of **objectdraw.jar**

Install the "Objectdraw Invoker" BlueJ extension.

Go BlueJ!

JTF (ACM Extension of objectdraw)

Textbook: (College Level Class)

<http://eventfuljava.cs.williams.edu/index.html>

Sample Program and Lecture:

<http://eventfuljava.cs.williams.edu/sampleProgs.html>

All Classes

- [AWTController](#)
- [AWTDrawingCanvas](#)
- [AWTFrameCanvas](#)
- [AWTFrameController](#)
- [AWTFrameWindowController](#)
- [AWTSizeablePanel](#)
- [AWTWindowController](#)
- [ActiveObject](#)
- [AngLine](#)
- [Controller](#)
- [ControllerFrame](#)
- [Drawable1DInterface](#)
- [Drawable2DInterface](#)
- [DrawableInterface](#)
- [DrawableIterator](#)
- [DrawingCanvas](#)
- [FilledArc](#)
- [FilledOval](#)
- [FilledRect](#)
- [FilledRoundedRect](#)
- [FrameCanvas](#)
- [FrameController](#)
- [FrameWindowController](#)
- [FramedArc](#)
- [FramedOval](#)
- [FramedRect](#)
- [FramedRoundedRect](#)
- [JDrawingCanvas](#)
- [Line](#)
- [Location](#)
- [RandomDoubleGenerator](#)
- [RandomIntGenerator](#)
- [Resizable2DInterface](#)
- [SizeablePanel](#)
- [Text](#)
- [VisibleImage](#)
- [WindowController](#)

Try Draw2DGrid.java (Applet)



Go BlueJ!