

# Java GUI Programming

## AWT/SWING - GUI

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AWT, SWING AND OBJECTDRAW PACKAGES

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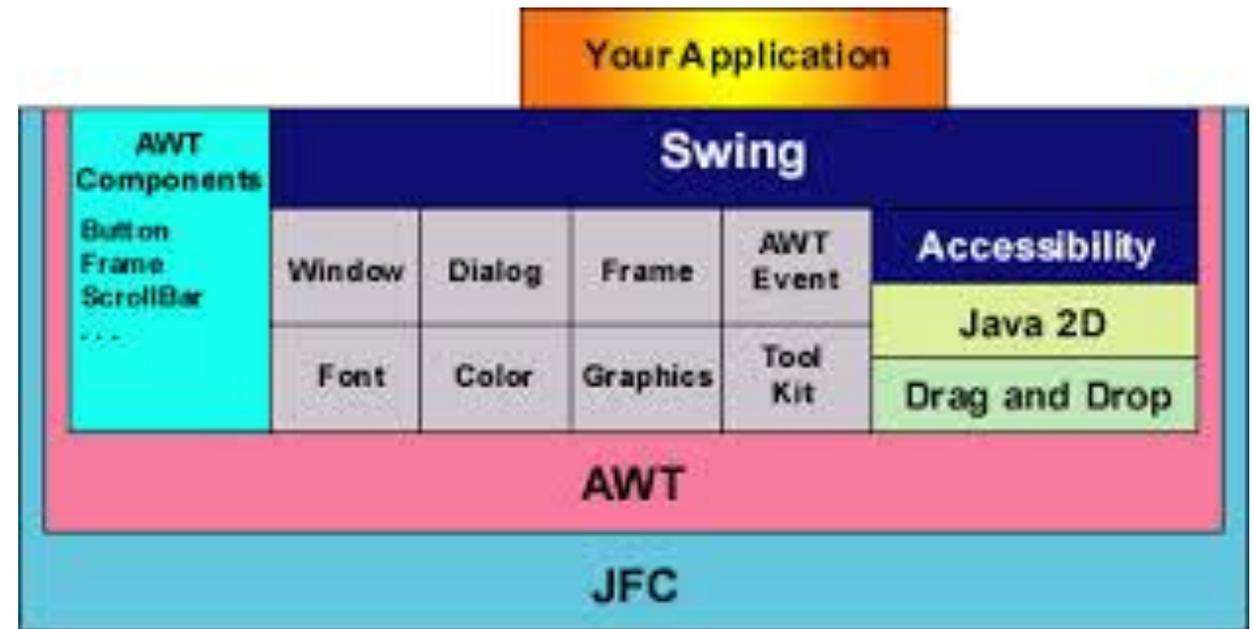
IEEE SENIOR MEMBER



# Graphics User Interface for Java

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

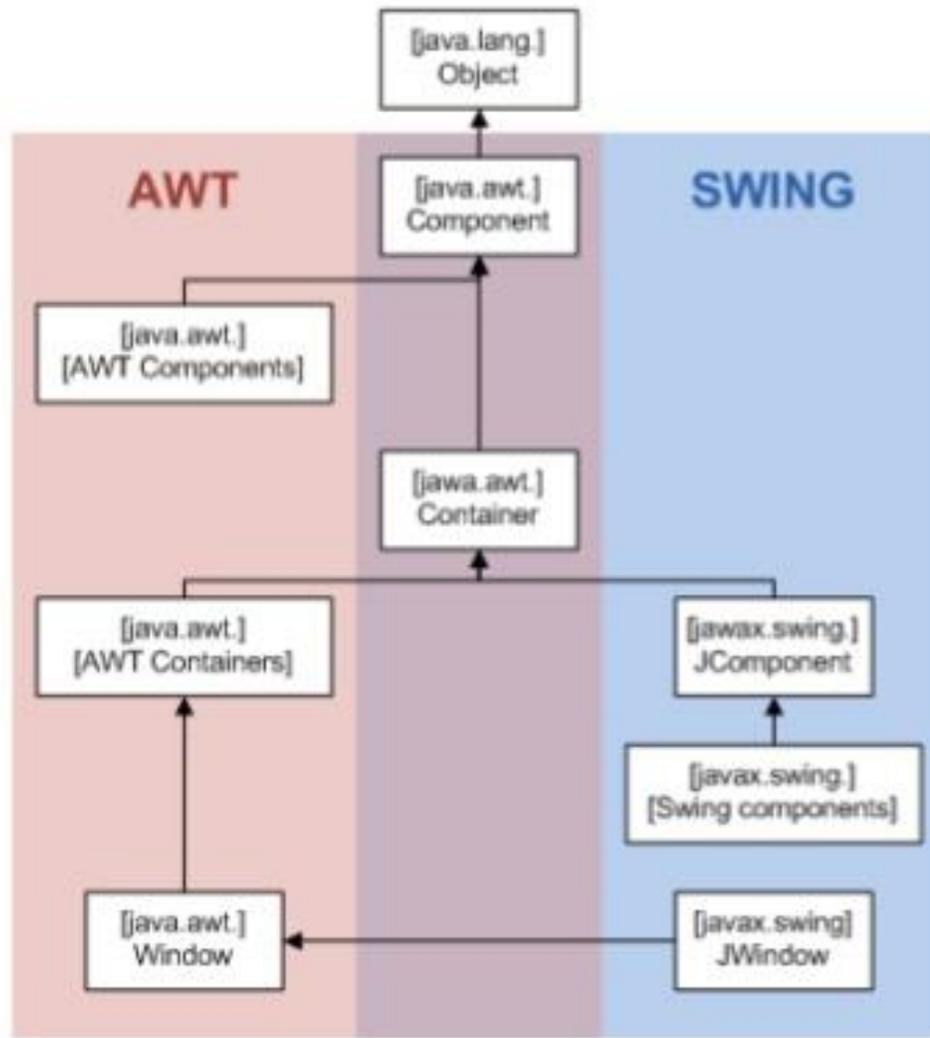
## JFC (Java Foundation Classes)



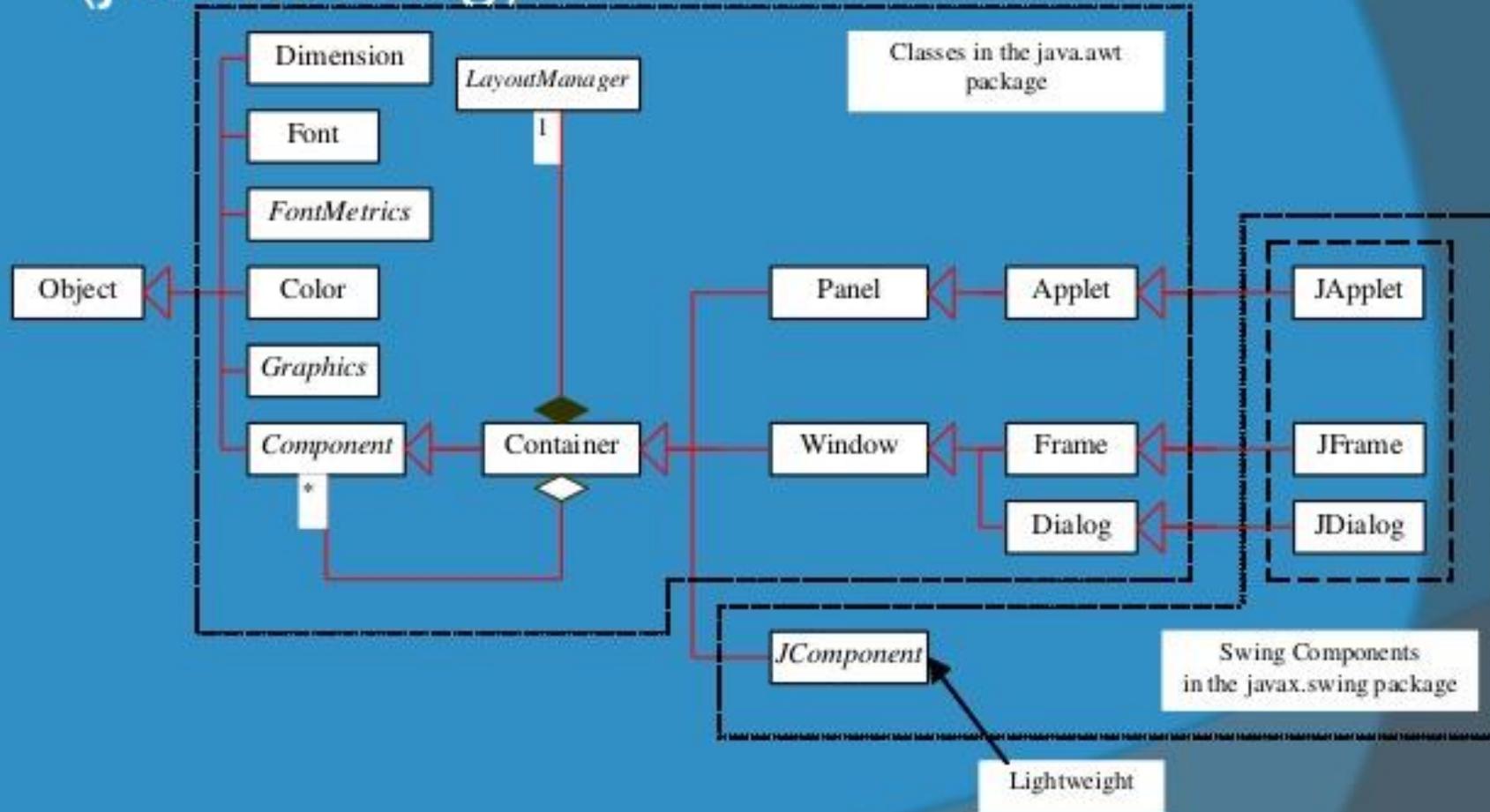
# AWT AND SWING CLASS HIERARCHY



**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 3<sup>rd</sup> party version of **AWT**. **Javafx** is a replacement for all.

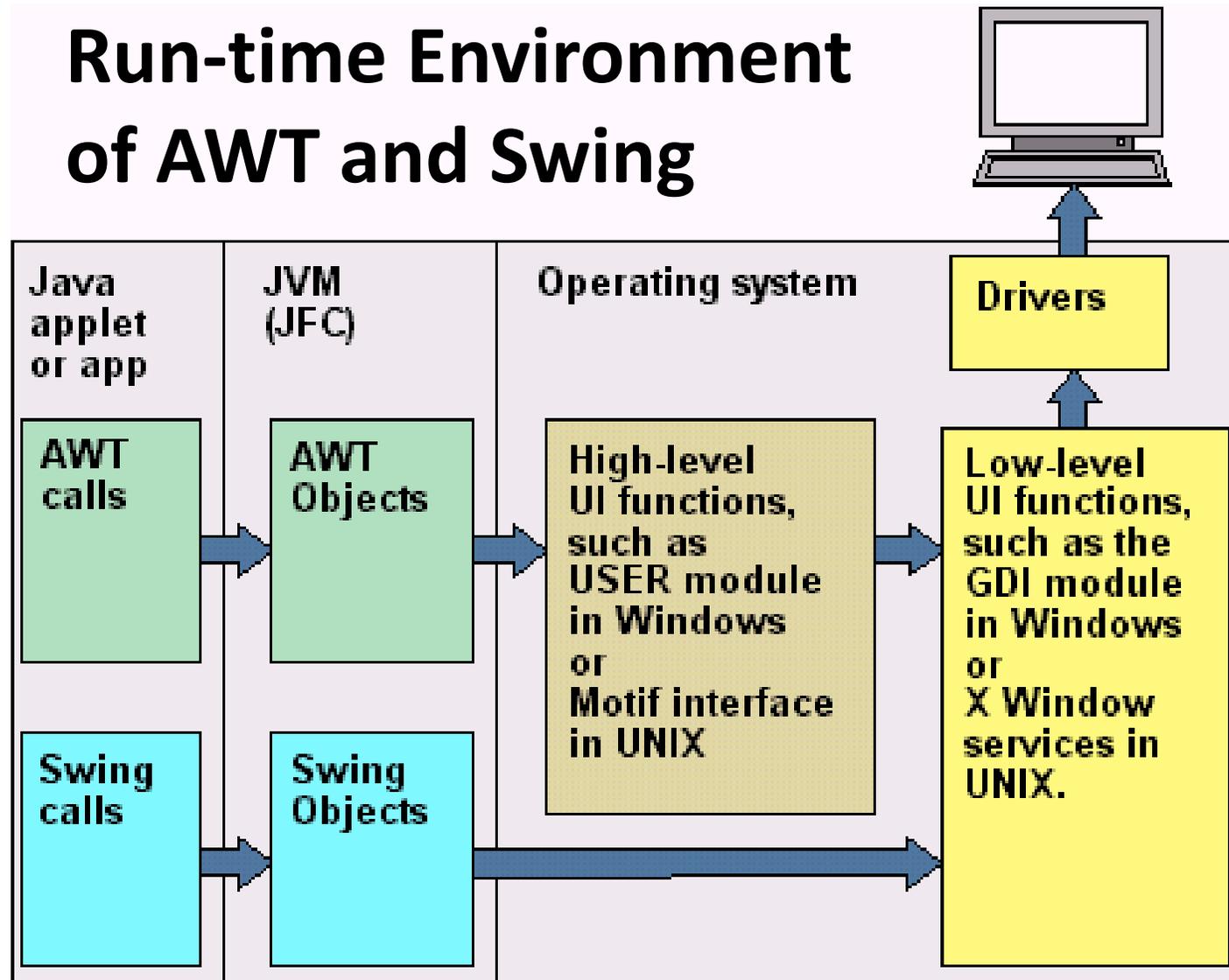


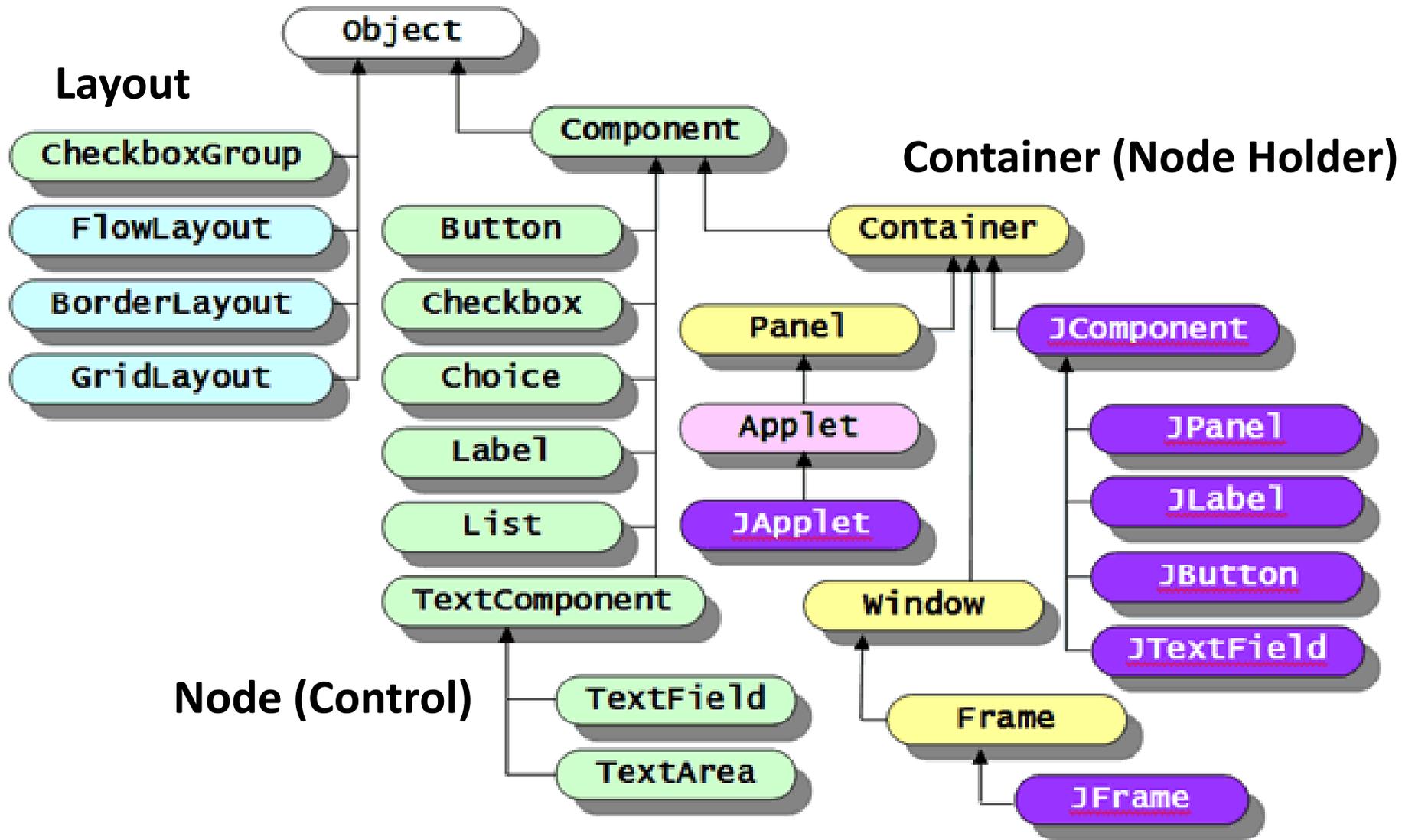
# Swing Class Hierarchy (javax.swing)





# Run-time Environment of AWT and Swing







# objectdraw package (3<sup>rd</sup> Party Library)

Package Built upon Swing and AWT

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



## Installation of **objecdrow.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)

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Go BlueJ!