Introduction

History

❖ Java original components set was AWT (Abstract
   Windowing Toolkit). AWT was dependent on the underlying
   platform and it was a relatively poor solution.
   If a feature wasn't available on one of the underlying platforms it wasn't available
   on any of the others.

❖ As a result of AWT drawbacks, JFC (Java Foundation
   Classes) was introduced.

History

❖ Swing is a GUI components set 100% Java implemented and part of the JFC.

Swing Demo

AWT Demo

The Swing Components

❖ The Swing components set support all of the capabilities the AWT components set has and offers a lot more.

❖ Though the Swing classes replace the AWT classes there are many AWT concepts that still apply for the Swing classes:

Layout Managers

Events Handling

Graphics Drawing

The Swing Components

❖ Many of the Swing classes have names that start with 'J'
while AWT classes don't. In many cases, an existing AWT
class has turned into a Swing class by adding the 'J' letter:

Button => JButton

TextField => JTextField

List => JList

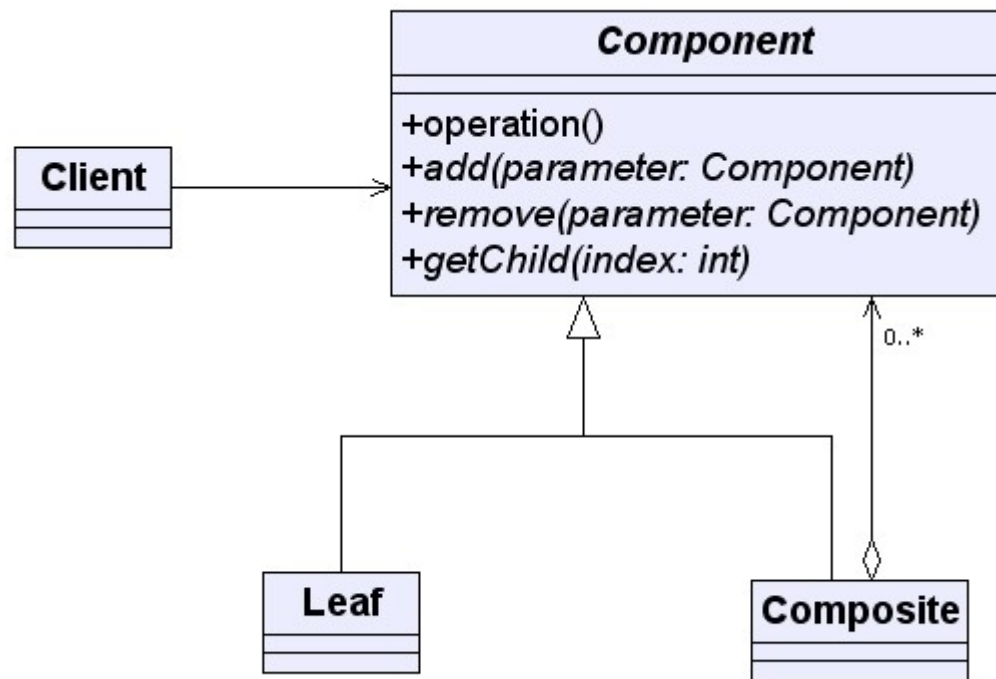Frame => JFrame

Window => JWindow

,,,

The Swing Components

❖ Whereas the AWT components rely on the user's operating system GUI implementation, the Swing components are 100% controlled from within the Java program.

❖ In addition to being a replacement for the basic AWT components, the Swing components set includes many more GUI components.
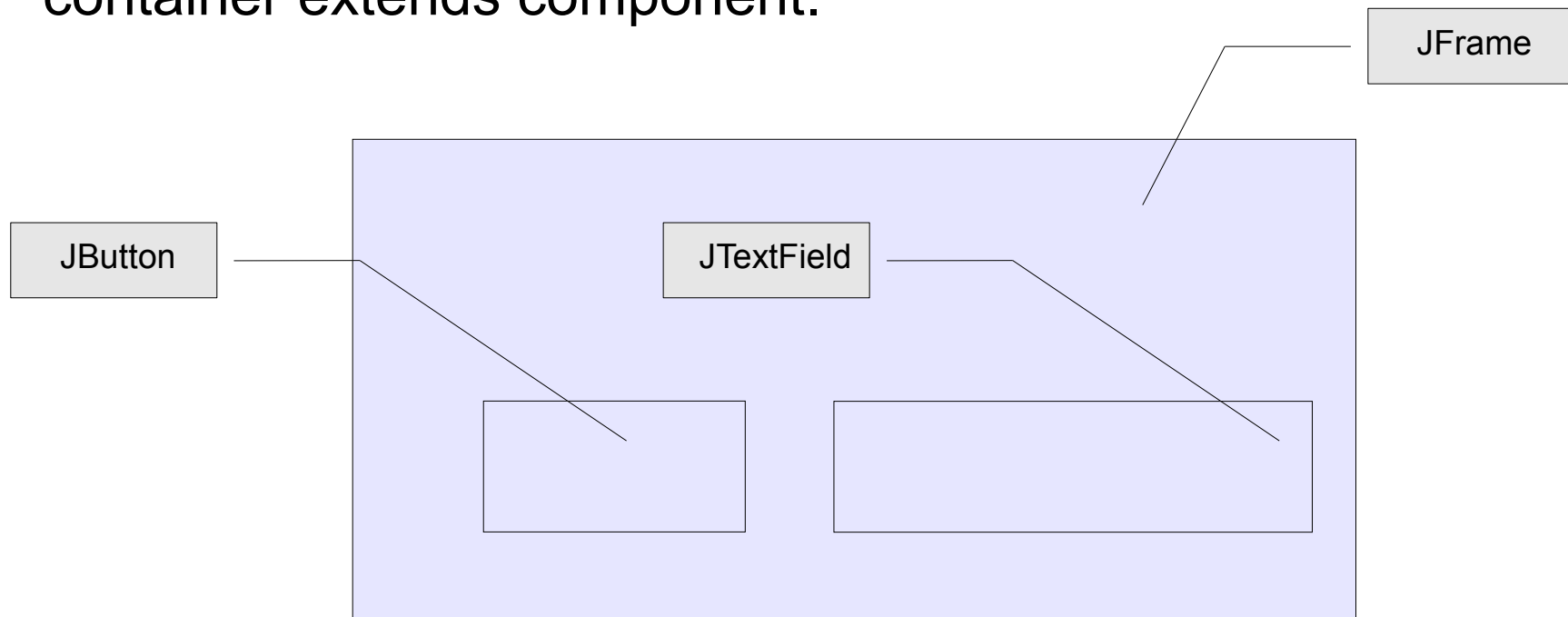
The Composite Design Pattern

❖ The GUI structure, both when using AWT and when using

Swing, is based on the Composite design pattern.

The Composite Design Pattern

❖ The Swing/AWT components (Component) are placed above Swing/AWT containers (Composite). The Swing/AWT container extends component.

JFrame

JButton

JTextField

SwingSet Demo

❖ The Java SDK installation includes many code samples.
   Both the source code and the class files.

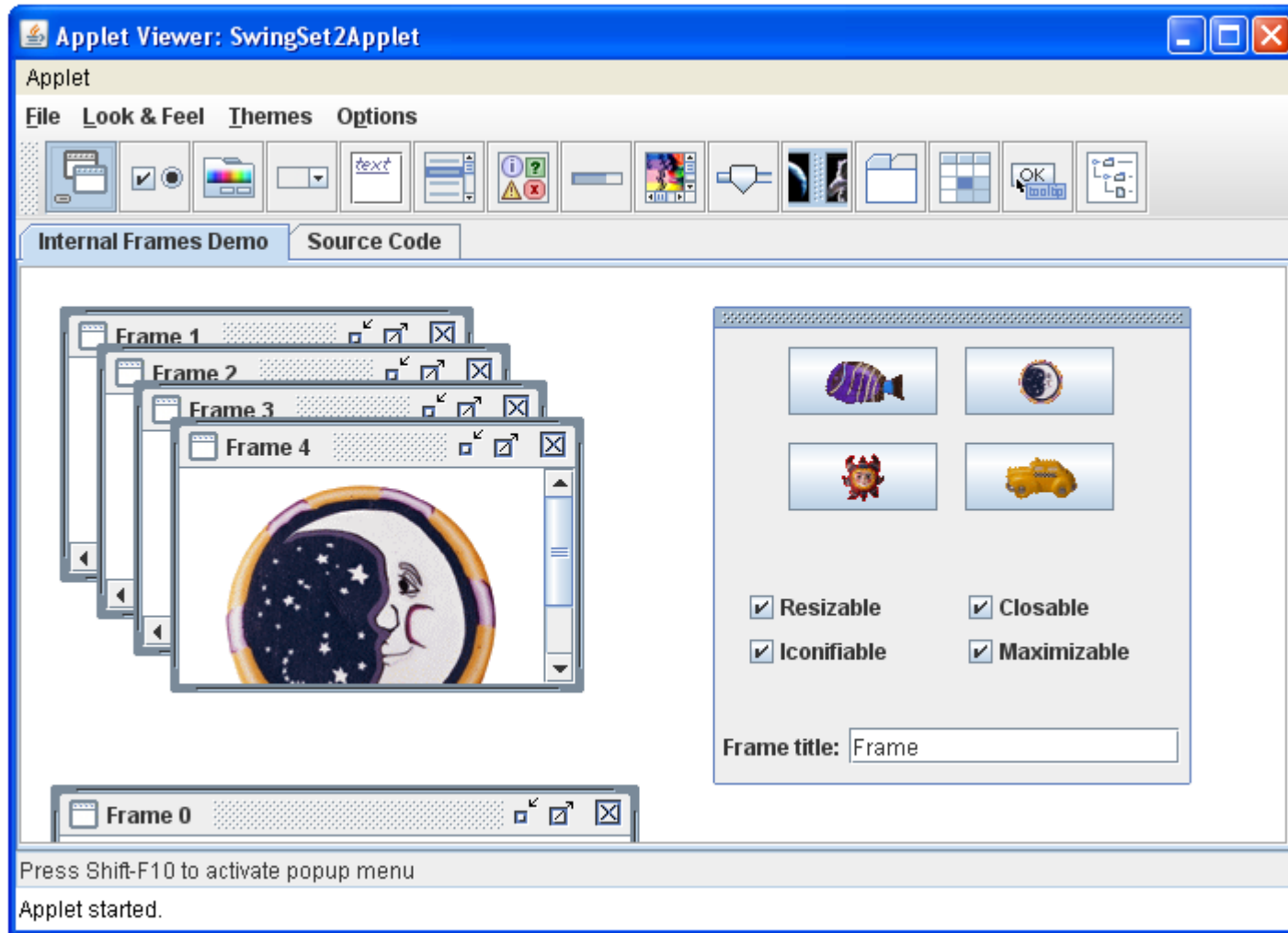❖ One of these samples is a demo for Swing capabilities. Its
   name is SwingSet2.

❖ You can find this code sample at:
   ```
   C:\Program Files\Java\jdk1.6.0_04\demo\jfc\SwingSet2>
   ```

❖ In order to run it you should type:
   ```
   appletviewer SwingSet2.html
   ```

SwingSet Demo

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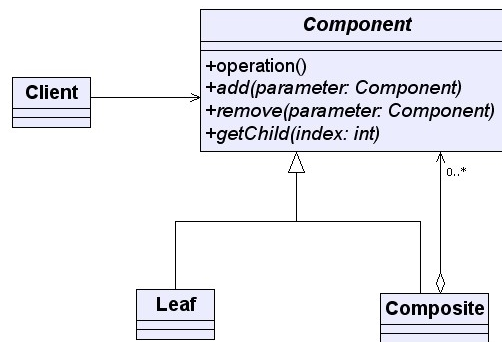
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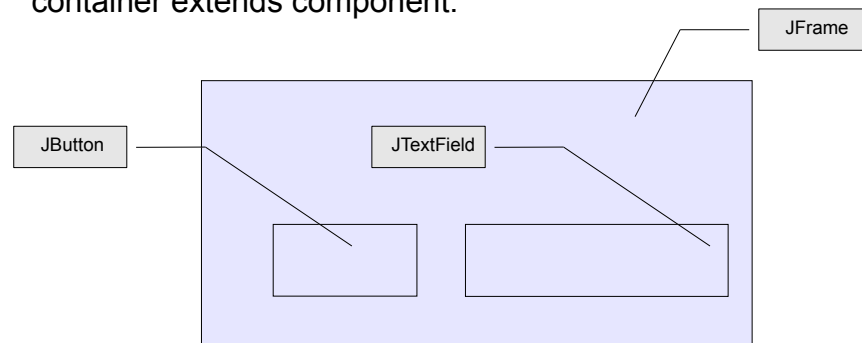
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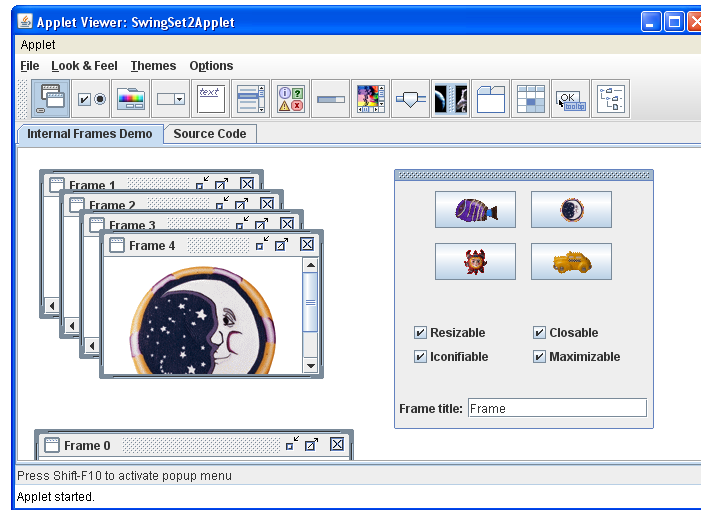
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SwingSet Demo