SNS COLLEGE OF ENGINEERING

Kurumbapalayam(Po), Coimbatore – 641 107
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Department of Information Technology

19CS204 OBJECT ORIENTED PROGRAMMING

I YEAR /II SEMESTER

Topic – Java Applets

Applet

- Applet is a **special type of java program** that is **embedded in the webpage to generate the dynamic content.**
- It runs **inside the browser and works at client side**.
- It works at client side so less response time.
- Secured
- It can be executed by **browsers running under many plateforms, including Linux, Windows, Mac Os etc.**

Applet

- An applet is a **Java class that extends** the **java.applet.Applet class.**
- **A main() method is not invoked on an applet**, and an applet class will not define main().
- Applets are designed to be **embedded within an HTML page.**
- When a user views an HTML page that contains an applet, **the code for the applet is downloaded to the user's machine.**

Applet life Cycle

- Applet is initialized.
- Applet is started.
- Applet is painted.
- Applet is stopped.
- Applet is destroyed

Applet

- init − This method is **intended for whatever initialization is needed for your applet**. It is called after the param tags inside the applet tag have been processed.

- start − **This method is automatically called after the browser calls the init method.** It is also called whenever the user returns to the page containing the applet after having gone off to other pages.

- stop − **This method is automatically called when the user moves off the page on which the applet sits**. It can, therefore, be called repeatedly in the same applet.

- destroy − **This method is only called when the browser shuts down normally**. Because applets are meant to live on an HTML page, you **should not normally leave resources behind after a user leaves the page that contains the applet.**

- paint − Invoked immediately after the start() method, and **also any time the applet needs to repaint itself in the browser.** The **paint() method is actually inherited from the java.awt**.

Applet

```
import java.applet.Applet;
import java.awt.Graphics;
public class First extends Applet{

public void paint(Graphics g){
g.drawString("welcome",150,150);
}

}
```

```
<html>
<body>
<applet code="First.class" width="300"
 height="300">
</applet>
</body>
</html>
```

Swing(GUI)

- Swing in java is **part of Java foundation class** which **is lightweight and platform independent**.

- It is used for **creating window based applications**. It includes components **like button, scroll bar, text field etc**. Putting together all these components makes a **graphical user interface**.

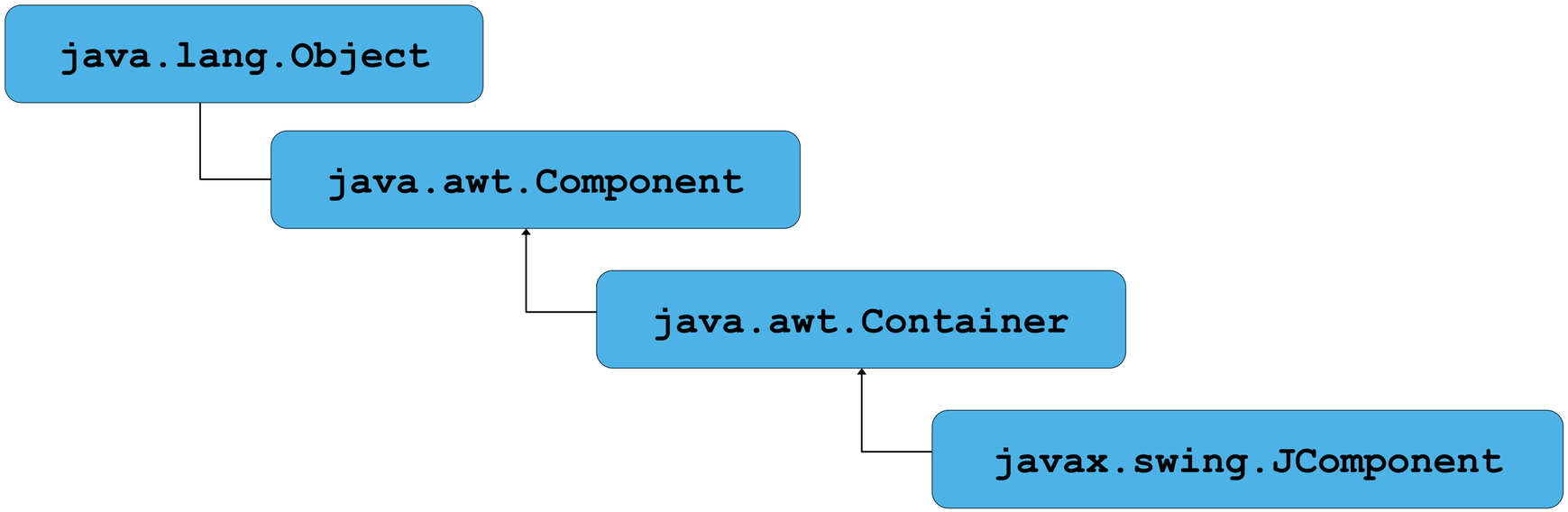
- Defined in **package javax.swing**

- Original GUI components from AWT in **java.awt**
- **Heavyweight components -** rely on local platform's windowing system for look and feel

- **Swing components are lightweight**
- Not weighed down by GUI capabilities of platform
- More portable than heavyweight components

- Swing components allow programmer to specify look and feel
- Can change depending on platform
- Can be same across all platforms

Swing

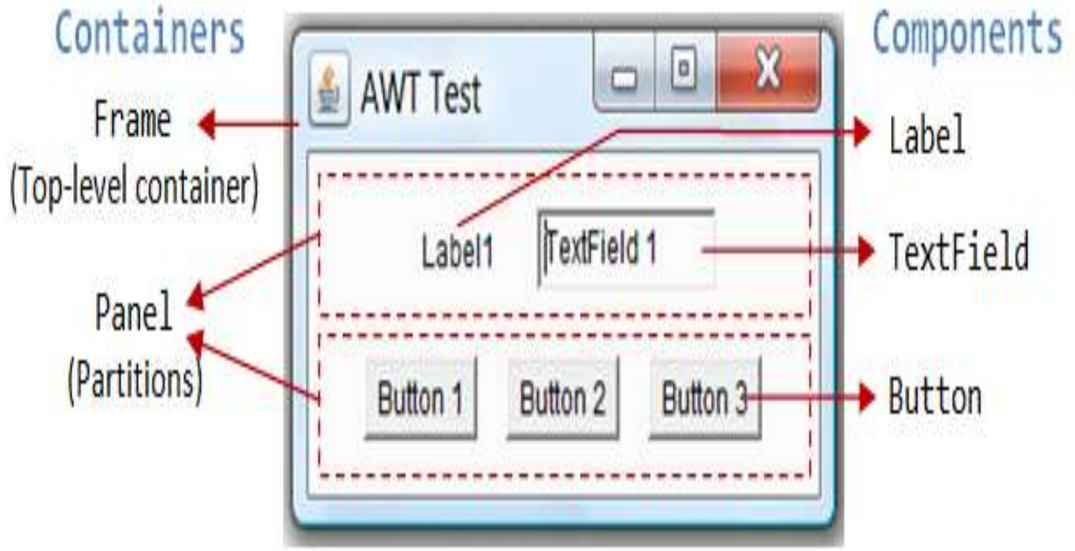

java.lang.Object
java.awt.Component
java.awt.Container
javax.swing.JComponent

Swing

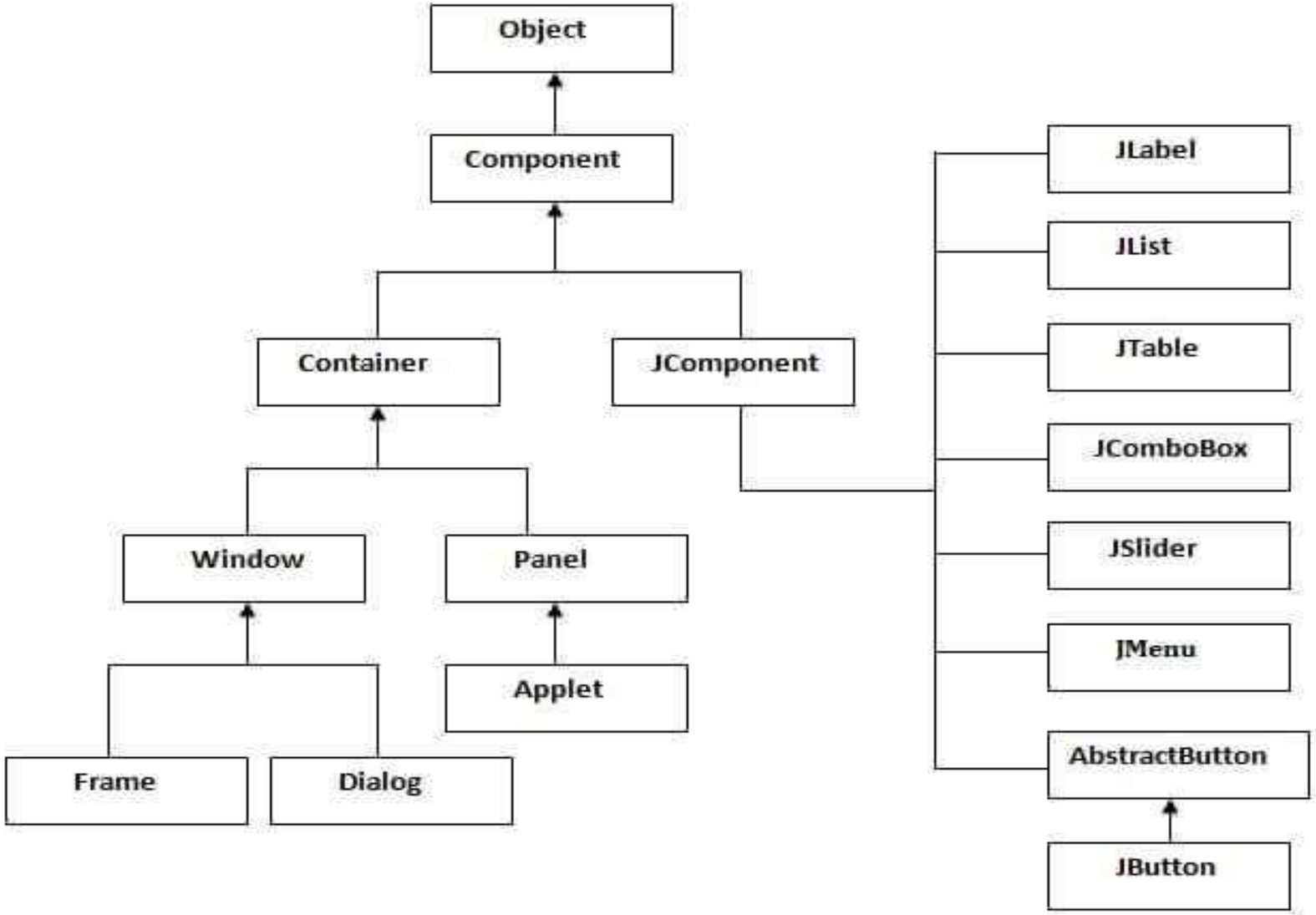
•**Component** defines methods used in its subclasses
(for example, **paint** and **repaint**)

• **Container** - collection of related components
• When using **JFrame**, add components to content pane (a **Container**)

• **JComponent** - superclass to most Swing components



Swing


Object
Component
Container
JComponent
Window
Panel
Applet
Frame
Dialog
JLabel
JList
JTable
JComboBox
JSlider
JMenu
AbstractButton
JButton

Jbutton Class

```
import javax.swing.*;
public class Simple {
JFrame f;
Simple(){
f=new JFrame();//creating instance of JFrame

JButton b=new JButton("click");//creating instance of JButton
b.setBounds(130,100,100, 40);

f.add(b);//adding button in JFrame

f.setSize(400,500);//400 width and 500 height
f.setLayout(null);//using no layout managers
f.setVisible(true);//making the frame visible
}
public static void main(String[] args) {
new Simple();
}
```

Swing

JTextField Class

It inherits the JTextComponent class and it is used to allow editing of single line text.

Example

```
import javax.swing.*;
public class Text{
public static void main(String args[]) {
JFrame a = new JFrame(”Textfield");
JTextField b = new JTextField(”Example for text field");
b.setBounds(50,100,200,30);
a.add(b);
a.setSize(300,300);
a.setLayout(null);
a.setVisible(true);
}
}
```

THANK YOU