



SNS COLLEGE OF ENGINEERING



Kurumbapalayam(Po), Coimbatore - 641 107

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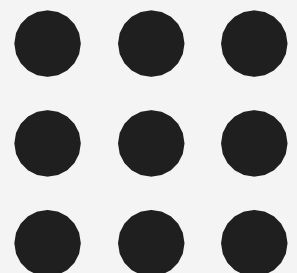
Approved by AICTE, Recognized by UGC & Affiliated to Anna University, Chennai

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 platforms, including Linux, Windows, Mac Os etc.



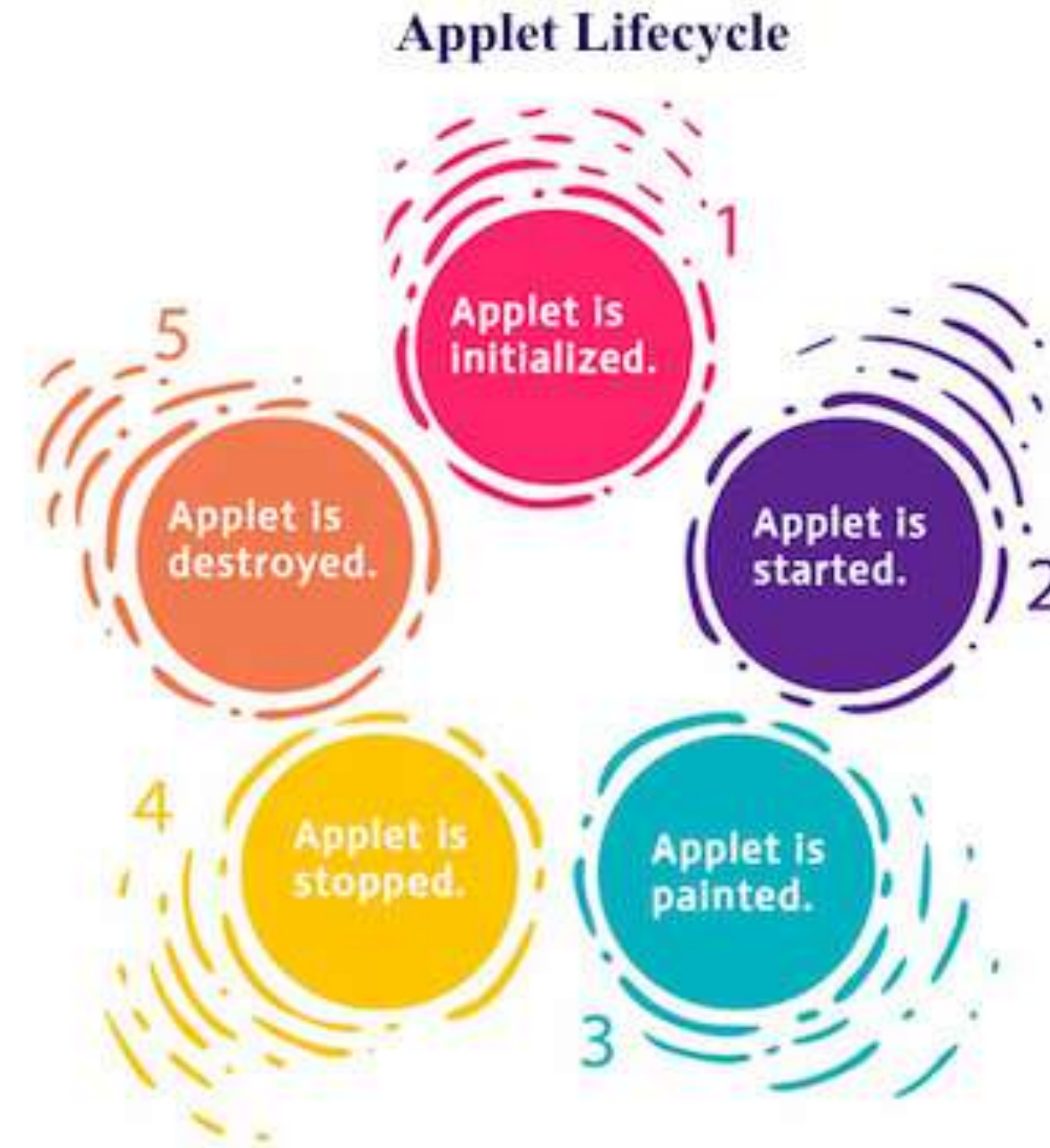
Applet



- 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

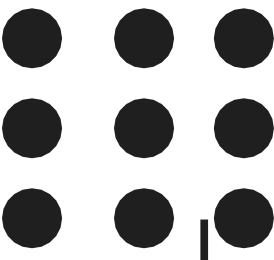
- Applet is initialized.
- Applet is started.
- Applet is painted.
- Applet is stopped.
- Applet is destroyed





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>
```



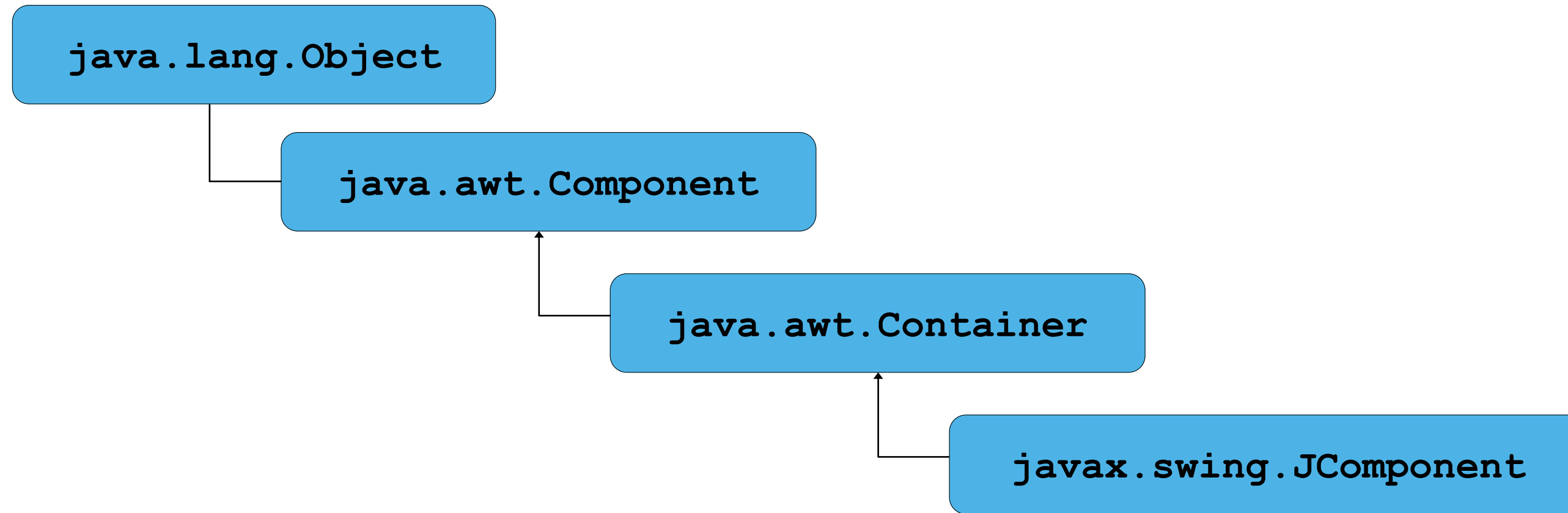
Swing



- 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

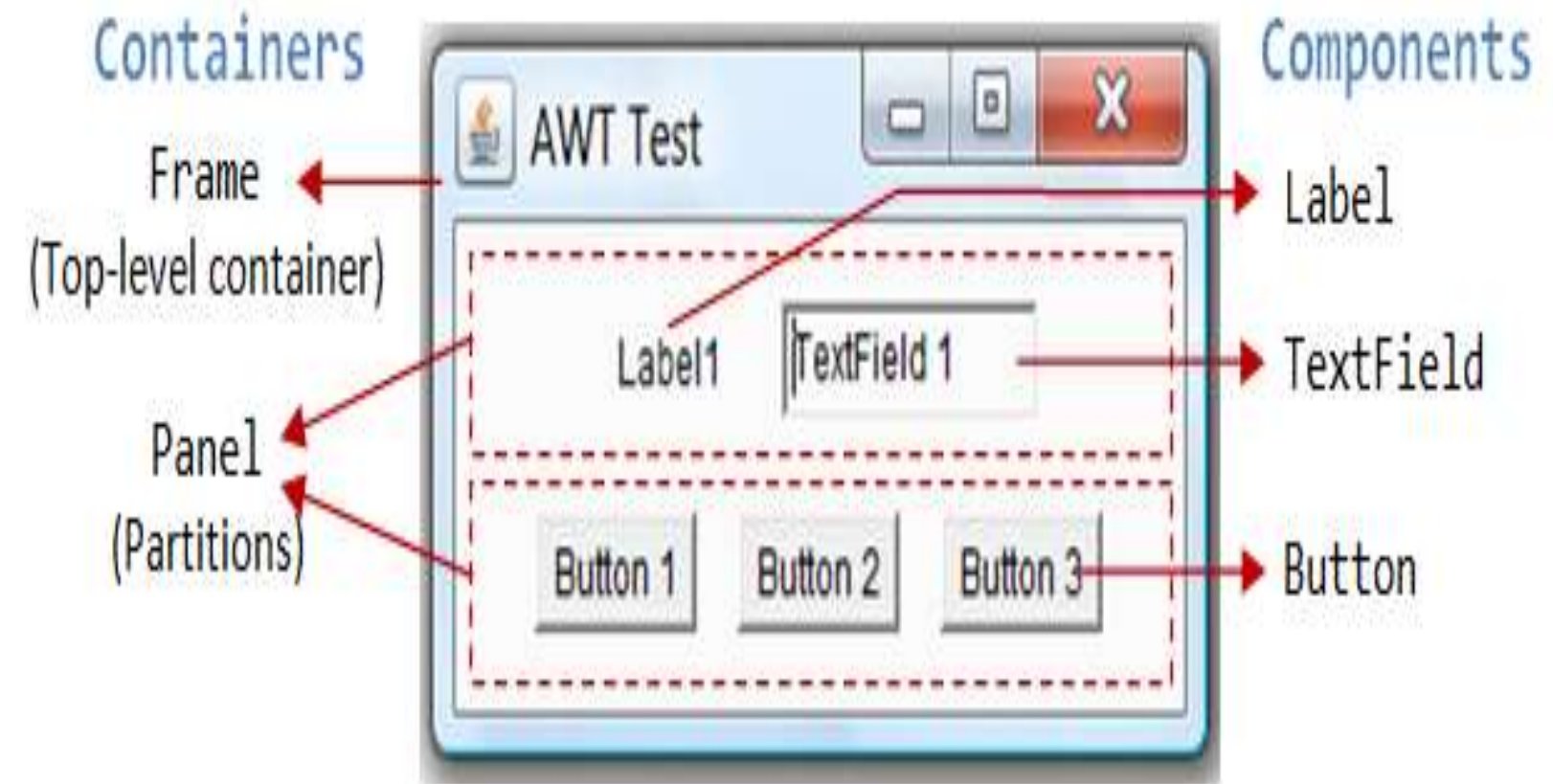


Swing

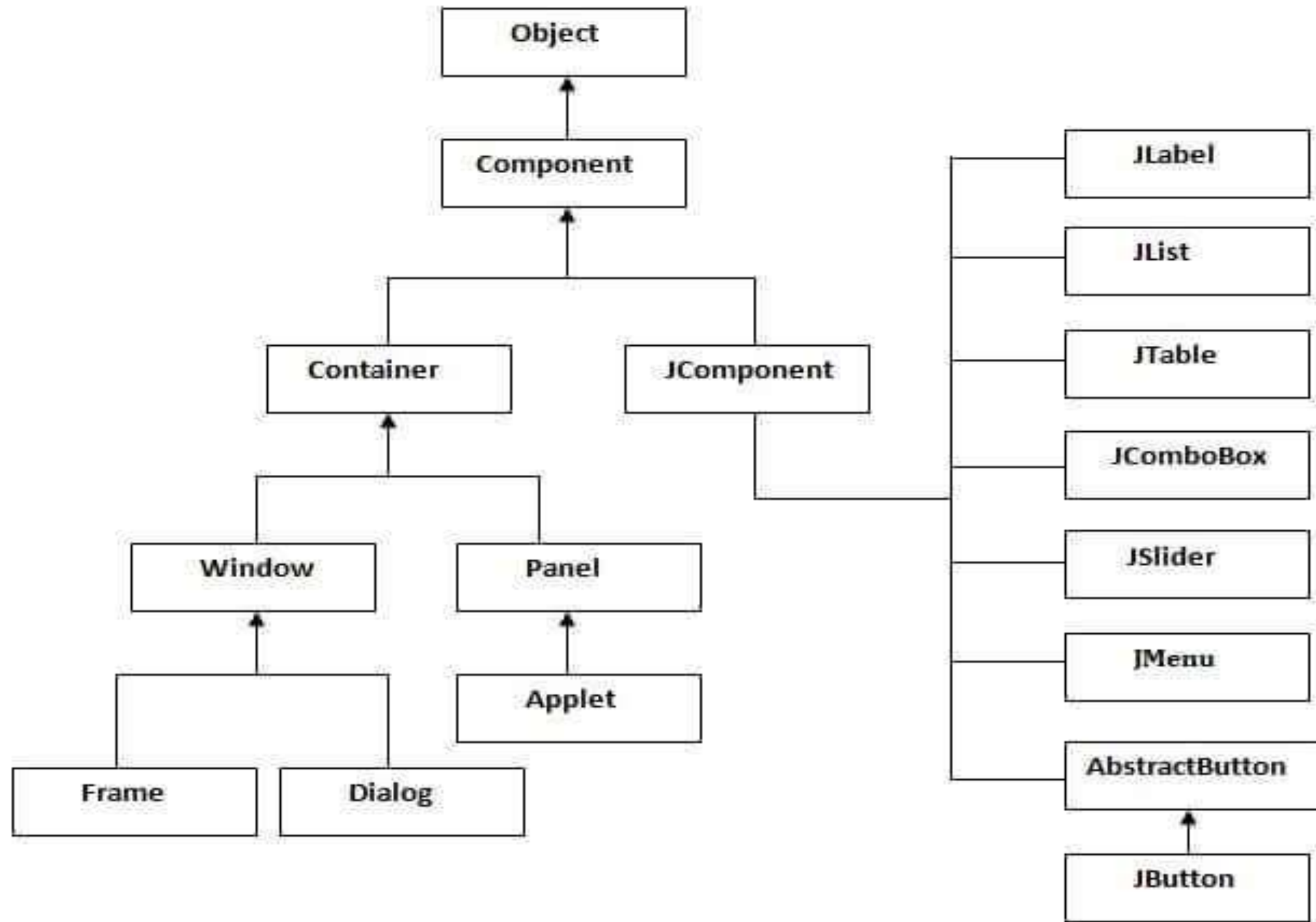


Swing

- **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





Swing



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