

Course Name: A Level (2nd Sem)
Topic: AWT(Abstract window Toolkit)

Subject: JAVA
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AWT:

AWT (Abstract Window Toolkit) is a concept designed for building simple GUIs in Java applications. Desktop applications are built using AWT

Java AWT components are platform-dependent i.e. AWT components look different on different operating systems. AWT is heavyweight i.e. its components use the resources of OS.

AWT Packages:

AWT consists of 12 packages of 370 classes.

2 packages - **java.awt** and **java.awt.event** - are commonly used.

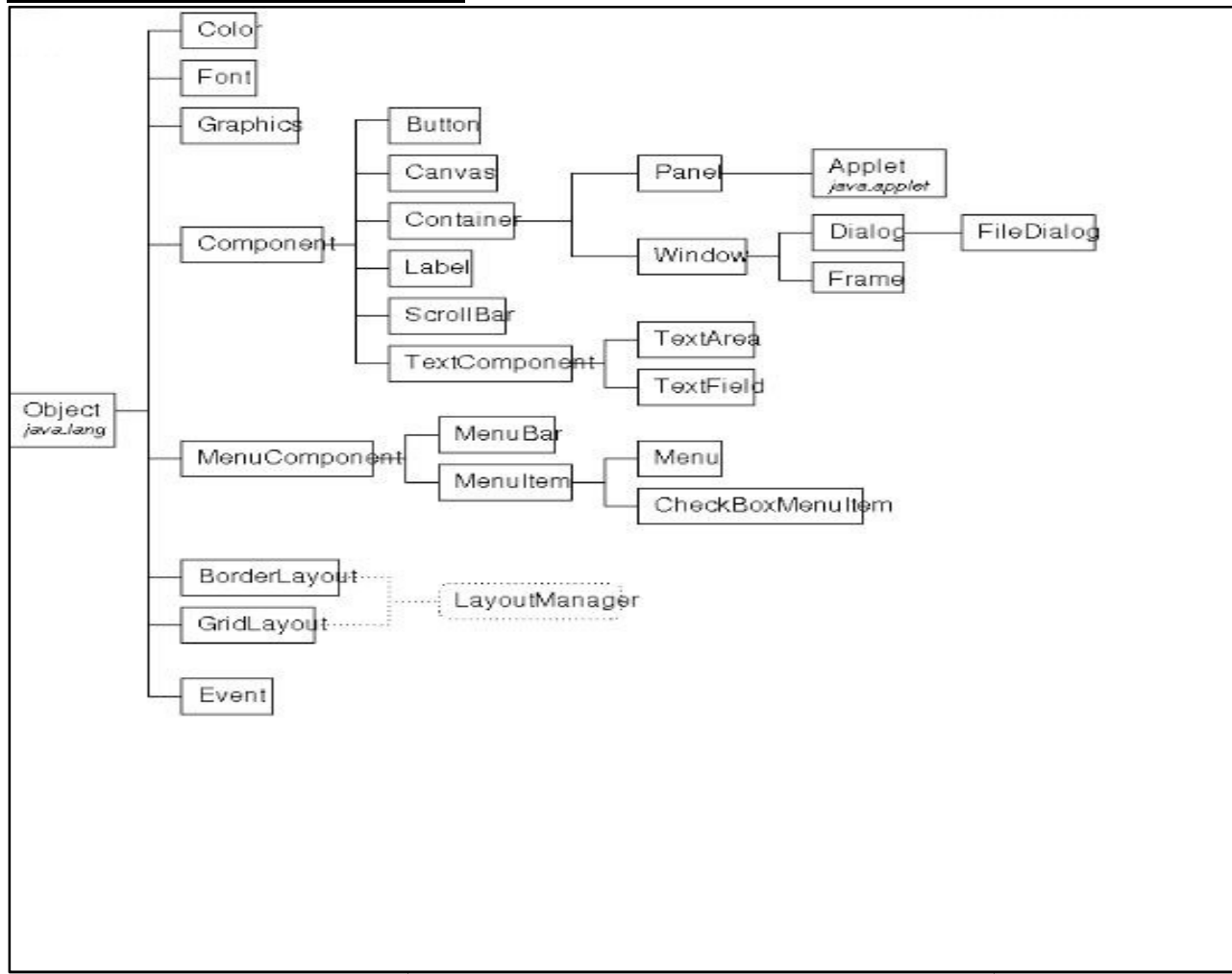
1)The java.awt package contains the core AWT graphics classes:

- a)GUI Component classes, such as Button, TextField, and Label
- b)GUI Container classes, such as Frame and Panel
- c)Layout managers, such as FlowLayout, BorderLayout and GridLayout
- d)Custom graphics classes, such as Graphics, Color and Font.

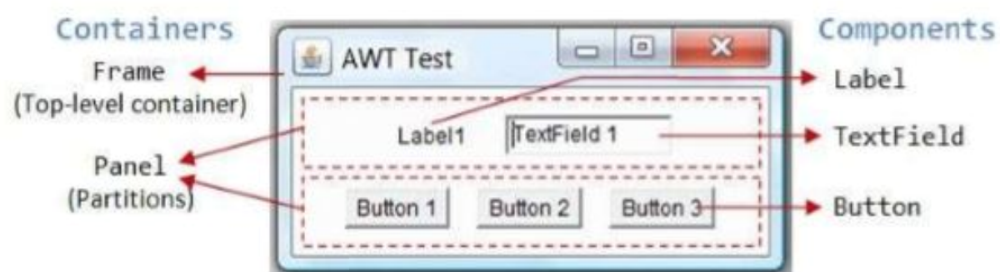
2)The java.awt.event package supports event handling:

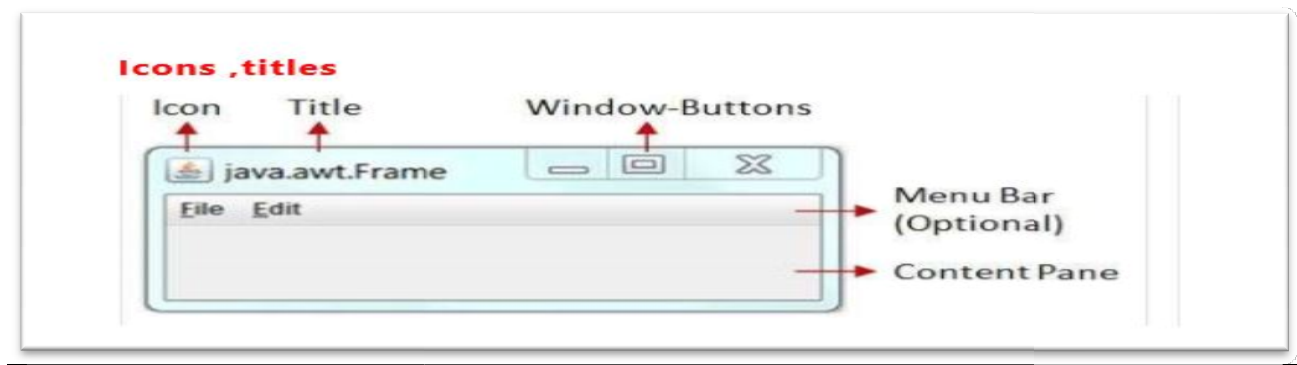
- a)Event classes, such as ActionEvent, MouseEvent, KeyEvent and WindowEvent
- b)Event Listener Interfaces, such as ActionListener, MouseListener, KeyListener and WindowListener,
- c)Event Listener Adapter classes, such as MouseAdapter, KeyAdapter, and WindowAdapter

AWT HIERARACHY:



Containers and Components





BASIC TERMS:

Container:

The Container is a component in AWT that can contain other components like buttons, text fields, labels etc. The classes that extend Container class are known as container such as Frame, Dialog and Panel.

Window:

The window is the container that has no borders and menu bars. You must use frame, dialog or another window for creating a window.

Component class and its sub classes:

Component class is an immediate sub class of the Object. The other immediate sub classes include Label, Button, Checkbox, Choice, List, Canvas, Scrollbar and Text Component.

Window class:

A window in AWT is a container represents a top-level window that doesn't have a title bar (so it doesn't have close, minimize, maximize buttons), menu bar. This sits on the desktop directly and has a Border Layout by default.

Frame class:

It is a sub class of Window class which has a title bar, menu bar, borders and is resizable with border layout by default. This is what we will use in our programs to create windows.

Panel class:

It is a sub class of the Container class. It is a border less window that doesn't contain any title bar or menu bar and generally added to another container like the Frame. The main purpose of a panel is to group components. It comes with a default Flow Layout.