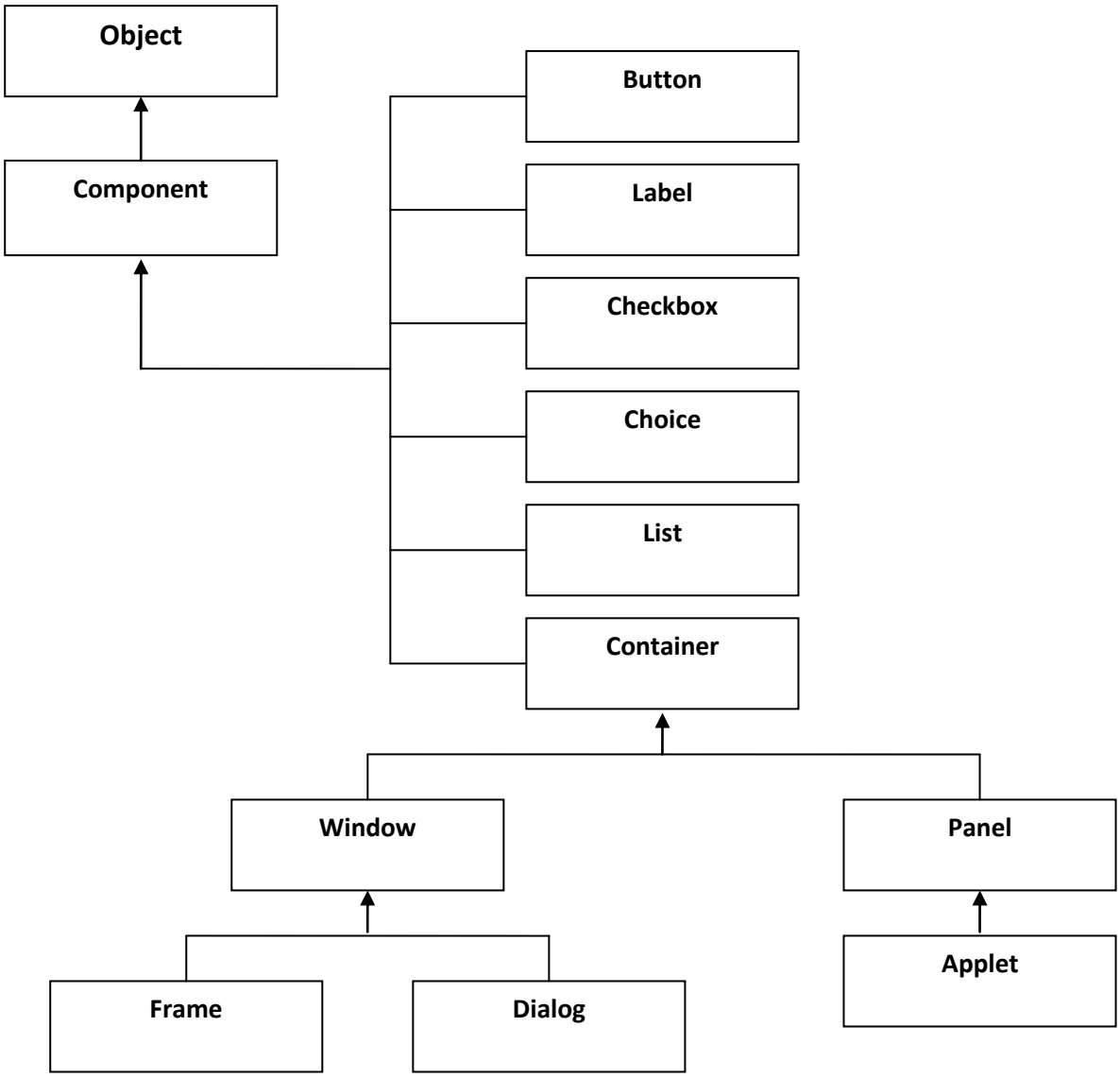
Introduction

- AWT stands for ***A***bstract ***W***indow ***T***oolkit.
- *It is used to develop GUI or window-based applications.*
- Java AWT components are platform-dependent.
- Java AWT is heavyweight.
- The java.awt package provides classes for AWT API such as:
    - Text Field
    - Label
    - Text Area
    - Radio Button
    - Checkbox
    - Choice

AWT Hierarchy



Basic Terminologies

- **Component**
  - Component is an object having a graphical representation.
  - It can be displayed on the screen.
  - It can interact with the user.
  - For examples:
    - Buttons
    - Checkboxes
    - List
    - Scrollbars
- **Container**
  - Container object is a component that can contain other components like buttons, text fields, labels etc.
  - Components added to a container are tracked in a list.
  - The order of the list will define the components 'front-to-back' stacking order within the container.
  - If no index is specified while adding, it will be added to the end of the list.
  - The class that extends Container class are known as container such as Frame, Panel.
- **Panel**
  - Panel provides space in which an application can attach any other components, including other panels.
  - The Panel is the container that doesn't contain title bar and menu bars.
  - It can have other components like button, text field etc.
- **Window**
  - Window is a rectangular area which is displayed on the screen.
  - In different window we can execute different program and display different data.
  - Window is the container that has no borders and menu bars.
  - We must use frame, dialog or another window for creating a window.
- **Frame**
  - Frame encapsulates *window*.
  - The size of the frame includes any area designated for the border.
  - It and has a title bar, menu bar, borders, and resizing corners.

Creating Frame

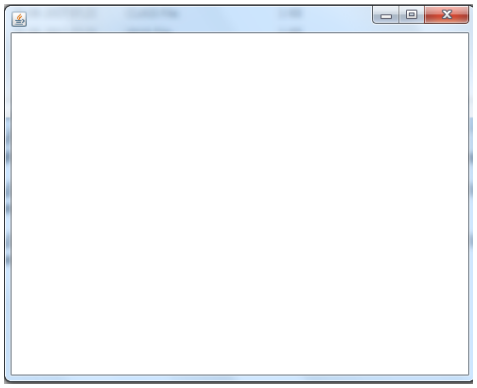
- There are two ways to create frame in AWT:
  - Inheritance
    - By extending Frame class ()
  - Association
    - By creating the object of Frame class ()

a. By extending Frame class()

Example: one.java

```
import java.awt.*;
class one extends Frame
{
	one()
	{
		setSize(500,400);
		setVisible(true);
	}
	public static void main(String args[])
	{
		new one();
	}
}
```

Output:

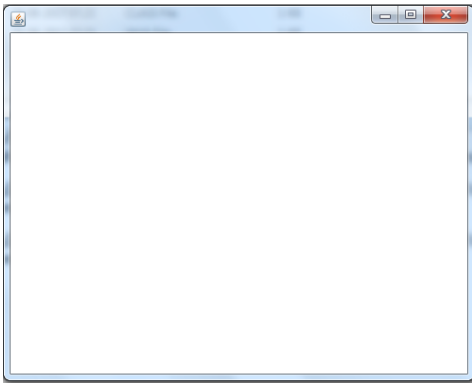


b. By creating the object of Frame class()

Example: two.java

```
import java.awt.*;
class two
{
	two()
	{
		Frame f=new Frame();
		f.setSize(500,400);
		f.setVisible(true);
	}
	public static void main(String args[])
	{
		new two();
	}
}
```

Output:



Questions asked in semester paper

Question-Write short notes on:

a. AJAX
b. EJB Architecture
c. AWT

[2016-2017]

Question-What do you mean by AWT? Explain the working of AWT.

[2015-2016]

Question-Abstract Window Toolkit (AWT) defines windows according to class hierarchy that adds functionality and specificity at each level. Give description of class hierarchy for Panel and Frame. Give Brief introduction to Component, Container, Panel, Window, Frame, and canvas classes.
Write a simple applet to draw a cone

[2005-2006]

Question-What do you mean by AWT? Explain the working of AWT.

[2002-2003]