Java Foundation class

The java foundation classes enable the original AWT by adding a set of GUI class libraries. JFC provide us with additional visual component classes and a unique way of designing the screen.

Swing
Swing is a set of classes under the JFC that provide lightweight visual components and enable creation of an attractive GUI. Swing not only contains replacement components for AWT visual components but also complex components like trees and tables that do not have AWT equivalents. Swing components have a pluggable look and feel so that with a single set of components we can achieve the look and feel of any OS platform.
 In Swing, the main window, also called a top-level container, is the root of a hierarchy, which contains all of the Swing components that appear inside the window. All Swing applications have at least one top-level container.
Every top-level container has an intermediate container called content pane. This content pane contains all of the visible components in the GUI window. The content pane is the base pane upon which all other component or container objects are placed. One exception to this rule is, if there is a menu bar in the top-level container. Tis menu bar will have a special place, in the top -level container, which is outside the content pane.

All Swing components names start with J .For instance, the Swing button class is named JButton ,whereas the AWT button class is named Button. The Swing components are in the javax.swing package.

Top level containers in Swing are-
> Frames
> Dialogs
> Applets

JFrame
The JFrame is a top-level container or window, which provides a place for placing other Swing components.
A JFrame components is used to create windows in a swing program.

```
import java.awt.*;
import javax.swing.*;

public class Jfa extends JFrame
{
        public Jfa(String title)
        {
                super(title);
        }
        public static void main (String args[])
        {
                Jfa j=new Jfa("Using Swing");
                j.setVisible(true);
                j.setSize(200,200);
        }
}
```

JLabel ---

```java
import java.awt.*;
import javax.swing.*;

public class Jlab extends JApplet
{
        public void init()
        {
                getContentPane().setLayout(new FlowLayout());
                ImageIcon ic=new ImageIcon("a.gif");
                JLabel l1=new JLabel(ic);
                getContentPane().add(l1);
        }
}
```

JtextField

```java
import java.awt.*;
import javax.swing.*;

public class Jtext extends JFrame
{
        public Jtext()
        {
                Container con=getContentPane();
                con.setLayout(new FlowLayout());
                JLabel l1=new JLabel("Enter ypur name ");
                JTextField t1=new JTextField(20);
                con.add(l1);
                con.add(t1);
                setVisible(true);
                setSize(200,200);

        }
        public static void main(String args[])
        {
                Jtext j=new Jtext();
        }
}
```