

### Introduction to Java Applet:

An applet is a java program that runs in a web browser. An applet is a container class like a frame. An applet is a java class that extends the java.applet.Applet class. Applets are designed to be embedded within the HTML page. There is no main method.

### Creation process of an applet

1. Create a class by inheriting java applet. Applet class.
2. Override the life cycle method of applet such as init (), start (), stop (), destroy () and provide a presentation with business logic into these methods.
3. Create an HTML file, which must contain the <Applet> tag to load the applet into the web browser.
4. Compile the file and load the HTML file into the browser.
5. Using the applet viewer tool available in JDK can test an applet corresponding HTML file.

### Example:

```
AppletBasic.java  
import java.applet.Applet;  
import java.awt.Graphics;  
  
public class AppletBasic extends Applet {  
  
    public void paint(Graphics g) {  
        g.drawString("Nawaraj", 100, 50);  
    }  
}
```

### appletPage.html

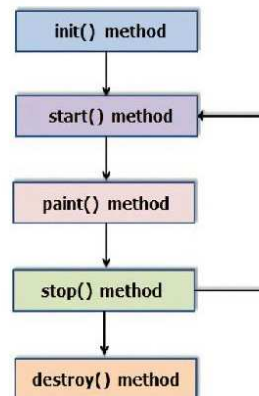
```
<html>  
<title> Applet Progras Running</title>  
<body>  
<applet code="AppletBasic" width="400" height="400">  
</applet>  
</body>  
</html>
```

1. step: compile java code.
2. appletviewer appletPage.html

### Lifecycle of Java Applet:

It is of five types

1. Init()
2. Start()
3. Paint()
4. Stop()
5. Destroy()



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**Init():**- This is a method that initializes the applet with the required components inside it. This method executes only once of the life cycle of an applet.

**Start():**- This method is responsible for activating the applet. This method executes when the applet will be restored or visible in the web browser. This method executes more than once in the life cycle of an applet.

**Paint():**- This method can be used to draw different components or graphical shapes into the applet. This method can be executed repeatedly during the applet execution.

**Stop():**- When an applet will be minimized or made invisible by using the back or forward button of the web browser then the applet will be deactivated by calling this method.

**Destroy():**- When the browser containing the applet will be closed then this method will be called. This method executes only once in the life cycle of an applet.

#### **Example of Lifecycle of Java Applet:**

```
LifecycleofJavaApplet.java
import java.applet.*;
import java.awt.*;
public class LifecycleofJavaApplet extends Applet {
    public void init()
    {
        setBackground(Color.yellow);
        setFont(new Font("", Font.BOLD, 30));
        Label lab1 = new Label("life cycle Applet");
        add(lab1);
        System.out.println("Init called");
    }
    public void start() {
        System.out.println("start called");
    }
    public void paint(Graphics g) {
        System.out.println("paint called");
    }
    public void stop() {
        System.out.println("stop called");
    }
    public void destroy() {
        System.out.println("destroy called");
    }
}

LifecycleofApplet.html
<html>
<title> Applet Progras Running</title>
<body>
<applet code="LifecycleofJavaApplet" width="400" height="400">
</applet>
</body>
</html>
```

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**Difference between applet and application:**

<b>Applet</b>		<b>Application</b>	
1	Smaller in size compared to applications.	1	Larger in size due to their standalone nature.
2	The Java applet initializes through the init(). It does not require the usage of any main() method.	2	The execution of the Java application begins with the main() method. The usage of the main() is a prerequisite here.
3	Applet is portable and can be executed by any java supported browser.	3	Need JDK, JRE, JVM installed on client machine.
4	Applets are created by extending the java.applet.Applet	4	Applications are created by writing public static void main(String[] args) method.