SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Coimbatore - 641035.

Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A++" Grade

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Department of Computer Applications

Course Code : 23CAT606

Course Name: Java Programming

Unit II : Package

Topic 7 : Applet

Introduction

1. Applet is a special type of program that is embedded in the webpage to generate the dynamic content.
2. It runs inside the browser and works at client side.
3. How to run an Applet?
    1. By html file.
    2. By appletViewer tool (for testing purpose).

Types of Java Programmes

- Standalone
- Web based

1. Run on single machine
2. Complier javac
3. Interpreter java

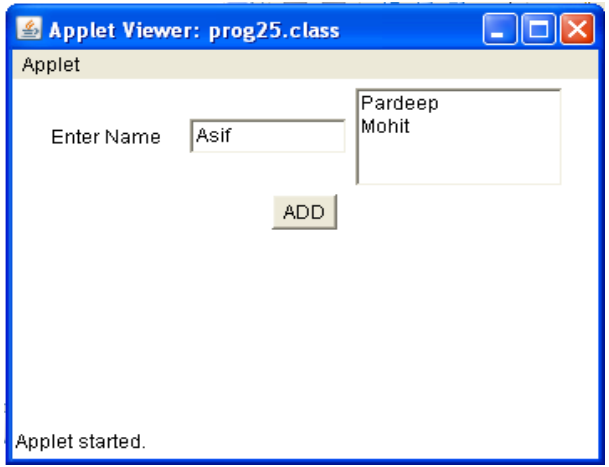
commandline.java - Notepad

```
import java.util.*;

public class commandline
{
    public static void main(String[] args)
    {
        int a,b,s;
        String m,n;
        m=args[1];
        n=args[2];
       Integer x=Integer.parseInt(m);
       Integer y=Integer.parseInt(n);
       a=x.intValue();
       b=y.intValue();
        s=a+b;
        System.out.println("the sum is "+s);
    }

}
```

Standalone

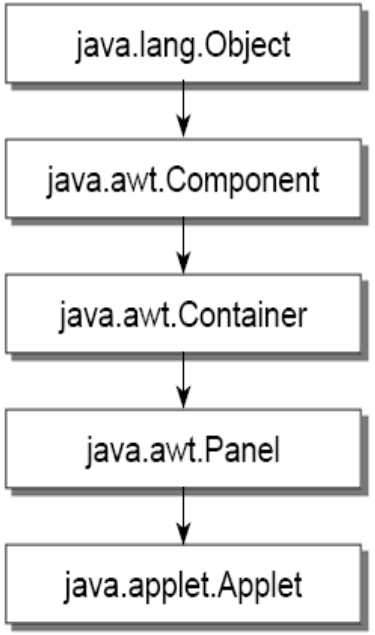


Web based

1. Complier javac
2. Interpreter appletviewer or web browser
3. Subclass
4. Import java.awt

APPLET CLASS

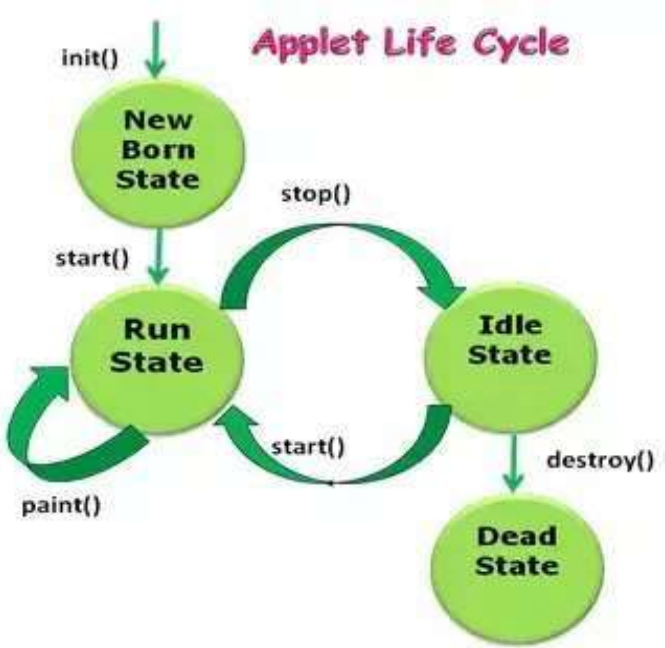
- **java.applet.Applet** is the super class of the all the applets.
- Applet class has a predefined hierarchy



Applet Life cycle

An applet may move from one state to another depending upon the form of methods

- a set of default behaviours inherited in from 'Applet' class.
- These states are
  1. Applet is initialized.
  2. Applet is started.
  3. Applet is painted.
  4. Applet is stopped.
  5. Applet is destroyed.



Lifecycle methods for Applet

java.applet.Applet class

public void init()
public void start()
public void stop()
public void destroy()

java.awt.Component class

public void paint(Graphics g)

Applet Example- by html

```
FirstApplet.java  import java.applet.*;
import java.awt.*;
public class FirstApplet extends Applet
        {
            public void paint(Graphics g)
                {
                    g.drawString("Welcome in Applets",10,50);
                    }
                    }
```

myapplet.html

```
<html>
    <body>
    <applet code="FirstApplet.class" width="300" height="300">
    </applet>
</body>
</html>
```

Applet Example- by appletviewer

```
FirstApplet.java  import
java.applet.*; import
java.awt.*;
public class FirstApplet extends Applet
        {
            public void paint(Graphics g)
                    {
                            g.drawString("Welcome in Applets",10,50);
                    }
        }
```


```
c:\>javac FirstApplet.java
c:\>appletviewer FirstApplet.java
```

Life cycle of Applet

1. init(): Creates the objects, sets up initial values, load images font and colors,

   called only once during the lifetime of on Applet

2. start(): If Applet is stopped or goes to idle state, start() method be called in order to force

   the applet again to run.

3. paint(): Called each time to draw and redraw the output of an applet

4. stop(): Idle state, once it is stopped from running

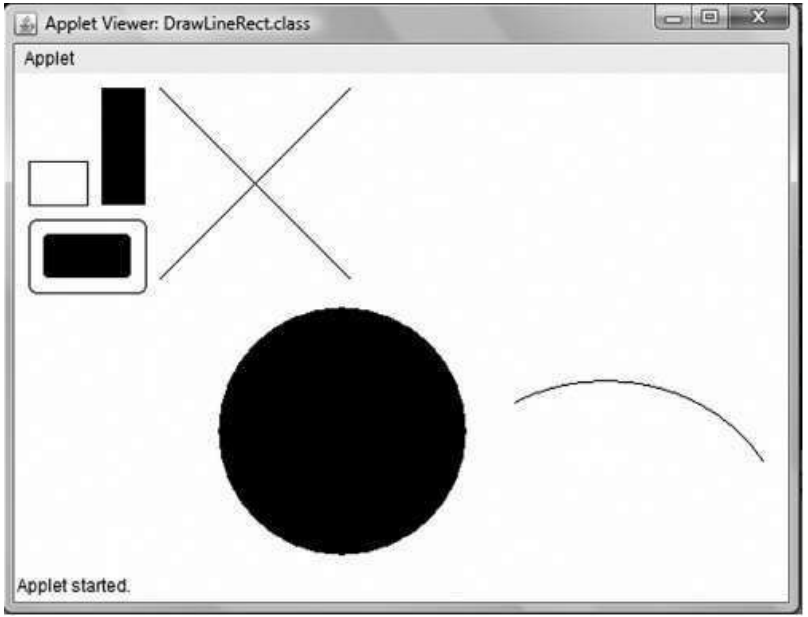
5. destory(): Goes to dead state, results in complete removal of applet from the memory

Common Methods

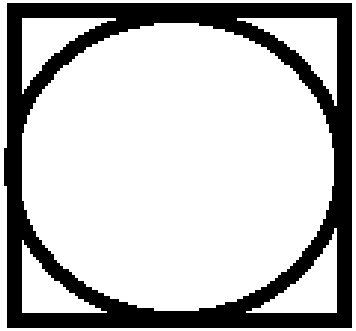
1. Public void drawString(String str, int x, int y)
2. public void drawRect(int x, int y, int width, int height)
3. Public void fillRect(int x, int y, int width, int height)
4. Public void drawOval(int x, int y, int width, int height)
5. public void fillOval(int x, int y, int width, int height)
6. Public void drawLine(int x1, int y1, int x2, int y2)
7. Public boolean drawImage(Image img, int x, int y, ImageObserver observer)
8. Public void drawArc(int x, int y, int width, int height, int startAngle, int arcAngle)
9. Public void fillArc(int x, int y, int width, int height, int startAngle, int arcAngle)
10. Public void setColor(Color c)
11. Public void setFont(Font font)

Graphics class

```
import java.awt.* ;
import java.applet.* ;
public class DrawLineRect extends Applet {
public void paint(Graphics g){
g.drawRect(10,60,40,30);
g.fillRect(60,10,30,80);
g.fillOval(140,160,170,170);
g.drawRoundRect(10,100,80,50,10,10);
g.fillRoundRect(20,110,60,30,5,5);
g.drawArc(280,210,250,220,30,90);
g.drawLine(100,10,230,140);
g.drawLine(100,140,230,10);
}}
```



Now your turn..!!!



- How to programme this…..????

Reference

1. Herbert Schildt “ The Complete Reference Java 2, 8th edition , Tata McGraw Hill, 2011
2. Ralph Bravaco, Shai Simonson, “Java Programming: From the Ground up Tata McGraw Hill, 2012
3. https://www.javatpoint.com

Summary