A Simple Applet

WelcomeApplet.html

WelcomeApplet.java

Running Applet

Applet

Applet

Remote host
• Web page (.html)
• Program (.class)

Local host
• Browser with Java Plug-in

import java.awt.Graphics;
import javax.swing.JApplet;

public class WelcomeApplet extends JApplet {
    public void paint( Graphics g ) {
        super.paint(g);
        g.drawString( "Welcome to Applet Programming!", 25, 25 );
        g.drawOval( 100, 100, 100, 100 );
    }
} // end of class WelcomeApplet

WelcomeApplet.html

<html>
<head>
<title>WelcomeApplet</title>
</head>
<body>
<applet code="WelcomeApplet.class" width=300 height=300>
</applet>
</body>
</html>

Browser
• URL of the web page
• Open File – WebPageName.html

Appletviewer
• appletviewer WebPageName.html
Applet as a Top-level Container

- Hold other components
  - getContentPane()
    - setLayout(LayoutManager)
  - add( Component)
  - setJMenuBar( JMenuBar)
- Handling various events

JEdit Revisited

- JEdit, the Applet version

Applet-specific Issues

- How do we start an applet, or when is an applet object created?
- What happens if we leaves a web page?
- What happens if we reload a web page?
- How do we end an applet?
  - System.exit() does not work, for good reasons

Life Cycle of an Applet ... Sort Of

<table>
<thead>
<tr>
<th>Browser</th>
<th>Applet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loads the web page with the applet for the first time</td>
<td>Applet object created</td>
</tr>
<tr>
<td>Leaves the web page, or minimizes the web page</td>
<td>Applet initializes itself</td>
</tr>
<tr>
<td>Returns to the web page, or maximizes the web page</td>
<td>Applet starts running</td>
</tr>
<tr>
<td>Reloads the web page</td>
<td>Applet stops running</td>
</tr>
<tr>
<td>Browser is closed</td>
<td>Applet stops running</td>
</tr>
<tr>
<td>Applet object created</td>
<td>Applet object is destroyed</td>
</tr>
<tr>
<td>Applet initializes itself</td>
<td>An new applet object is created, then it initializes and starts</td>
</tr>
</tbody>
</table>

The Milestone Methods

- Milestone methods
  - public void init()
  - public void start()
  - public void stop()
  - public void destroy()
- init() vs. constructor

Other Applet Methods

- showStatus( String )
  - AppletLife.java
- getWidth(), getHeight()
- String getParameter( String name )
Limitations of Applets

- Security restrictions
  - Cannot read/write files
  - Can only make network connections with the remote host where the applet is downloaded
- Limited support for graphics design
- Different browsers have different Java plug-ins