SAVITRIBAI PHULE PUNE UNIVERSITY

T.E. (Department of ENTC)

(Elective – II)

ADV. JAVA PROGRAMMING

COMPLETE NOTES

FOR INSEM EXAMINATION

DESIGNED BY

GRAD HUB TEAM

Unit-I
Applet

Important point :

Applet Basics, Applet architecture, HTML APPLET tag, Passing parameter to Appletget, DocumentBase() and getCodeBase() , Japplet: Icons and Labels Text Fields Buttons, Combo Boxes , Checkboxes, Tabbed Panes, Scroll Panes, Trees: Tables.

Important question :

- What is applets and limitations of AWT. Differentiate Applets and Application
- Explain the life cycle of applets with suitable diagram
- Explain all attributes available in <applet> tag.
- Explain <PARAM> tag of applet with suitable example.
- Explain the various controls in applet with suitable example : (buttons, text field, combo boxes, checkboxes. Etc)
- Explain With example : getdocumentbase() and getcodebase()

Unit 2

Unit-2
Event Handling using AWT/Swing components

GRADHUB

Important point :

Events, Event sources, Event classes, Event Listeners, Delegation event model, handling mouse and keyboard events, Adapter classes, inner classes. The AWT class hierarchy, user interface components, layout manager.

Important question :

- What is event classes. Enlist its types, explain any two event classes.
- What is event handling? Explain delegation event model.
- Explain the mechanism of mouse event handling with example.
- Explain mechanism of keyboard event handling with suitable example.
- What are adapter classes? List advantages using of adapter classes.
- What is inner class and explain its types with syntax
- Explain AWT class hierarchy.
- Explain following components in AWT. (MenuBar, Text components, Lists, Dialogs, Label, buttons, canvas, scroll bar, checkbox, choices, list panels.)
- Write the short notes on – graphics programming
- Define layout manager and explain its types.

Applets Basics :

Important question :

What is applets and limitations of AWT. Differentiate Applets and Application

Definition :

- Applet are small programs made in Java that can be sent over the internet and shown on web browsers.
- They can do various things like math, graphics, sound, and animation.

when applets are used:

- Dynamic Web Content: Applets are used for showing changing things on web pages, like moving graphics or real-time updates.
- Special Effects: They're used to add cool effects like sound, animations, or interactive visuals to websites.
- Accessible Applications: Applets are used to make applications that can be used online without needing to download anything extra. By embedded application into web pages.

Limitations of AWT (Abstract Window Toolkit):

AWT was an older system used for making graphical user interfaces in Java. However, it had some limitations:

- Platform Dependency: AWT's appearance and functionality relied on the operating system, so it looked different on various computers.

- Limited Components: It had a small set of built-in components, restricting design creativity.

- Lesser Controls: AWT had fewer control features and couldn't handle complex graphics or multimedia well.:

Difference between applets and application :

Applets : are small programs that work inside web browsers to do specific things online.

Applications: are programs that can do many different things on your computer or phone, not just in a web browser.

Aspect	Applets	Applications
Where they run	Inside web browsers	Installed on computers or devices
Main Method	Doesn't have a main method	Have a main method to start execution
Running Status	Runs only when embedded in a webpage	Can run independently anytime
Access to Resources	Restricted access to system resources	Full access to system resources
Deployment	Transferred over the internet	Installed or downloaded
Use Case	For interactive web content	Perform various tasks on devices

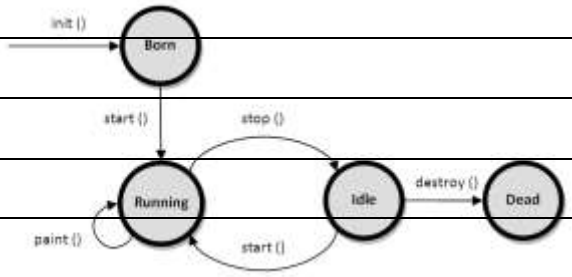
Applet Life cycle (architecture):

Important question :

Explain the life cycle of applets with suitable diagram

The following State which are typically used in applet for initialization and termination purpose :

Born state, Running state, Display state, Idle state, Dead state as shown in the below figure,



1. Born State: This is where the applet gets ready to start. The method used here is 'init()'. It sets up initial values and prepares the applet for running.

2. Running State: Once initialized, the applet enters the running state. Here, the 'start()' method gets triggered. This is where the applet begins executing and performing its tasks.

3. Display State : applet enters in the display state when it wants to display some output. This may happen when applet enters in the running state, the paint() method is for displaying or drawing the contents on the screen.

4. Idle State: The applet might move into an idle state if it's not actively being used. This happens with the 'stop()' method, pausing the applet's actions temporarily.

5. Dead or Destroyed State: When the applet is done or needs to be removed from memory, the 'destroy()' method is called. This is the termination phase where resources are released, and the applet is removed from the system.