

ObjectOrientedProgrammingThroughJava(25IT303)

Worksheet

UNIT-5: APPLETs, AWT AND SWINGS

A. MultipleChoice Questions

1. WhichsuperclassdoallAppletclassesdirectlyorindirectlyextend?

- A) java.awt.Frame
- B) java.applet.Applet
- C) javax.swing.JFrame
- D) java.awt.Component

Answer:B

2. WhichmethodiscalledfirstwhenanAppletbeginsexecution?

- A) start()
- B) paint()
- C) init()
- D) main()

Answer:C

3. WhatmechanismdoesJavausetoprosesseventsgeneratedbyGUIelements?

- A) ModelAndViewController
- B) EventDelegationModel
- C) Observer-ListModel
- D) ThreadPoolModel

Answer:B

4. Which package contains classes for AWT event handling in Java?

- A) java.awt.graphics
- B) java.awt.event
- C) javax.swing.event
- D) java.util.event

Answer: B

5. Which layout manager arranges components in five distinct regions: North, South, East, West, and Center?

- A) FlowLayout
- B) GridLayout
- C) BorderLayout
- D) CardLayout

Answer: C

6. Which layout manager places components in a left-to-right, top-to-bottom flow by default?

- A) BorderLayout
- B) FlowLayout
- C) GridLayout
- D) GridBagLayout

Answer: B

7. What type of components are lightweight and written entirely in Java?

- A) AWT Components
- B) C++ Native Controls
- C) Swing Components
- D) Operating System Native Controls

Answer: C

8. Which class serves as the top-level container window with a title bar and border in Swing?

- A) JPanel

B) JComponent

C) JFrame

D) JDialog

Answer:C

9. Adapter classes in event handling provide empty default implementations for which of the following?

A) Event sources

B) Event listener interfaces

C) Event classes

D) Swing components

Answer:B

10. Which Swing component is specifically designed to display hierarchical tree structures?

A) JTable

B) JList

C) JTree

D) JTabbedPane

Answer:C

11. Which Swing component displays data in a two-dimensional grid of rows and columns?

A) JTree

B) JTable

C) JScrollPane

D) JPanel

Answer:B

12. Which Swing component provides a scrollable view of another component?

A) JTabbedPane

B) JScrollPane

C) JDialog

D) JComponent

Answer:B

13. What is the default layout manager for a standard JPanel?

A) BorderLayout

B) GridLayout

C) FlowLayout

D) CardLayout

Answer:C

14. Which AWT component is used to select a single item from a drop-down list of choices?

A) List

B) Choice

C) Button

D) Checkbox

Answer:B

15. What are listener interfaces with only one abstract method called, often implemented using an anonymous inner class?

A) Functional Interfaces

B) Adapter Classes

C) Event Sources

D) Containers

Answer:A

B. Fill in the Blanks with Answers

1. Applets execute within a web browser or using the appletviewer tool.
2. The four core lifecycle methods of an Applet are init(), start(), stop(), and destroy().
3. Event handling in Java is built on the Delegation Event Model.
4. An object that generates an event is called an event source.
5. An object that receives and handles notifications about an event is called an event listener.
6. AWT stands for Abstract Window Toolkit.

7. AWT components are called **heavyweight** because they rely on native operating system peers.
8. Swing components are called **lightweight** because they are written completely in Java.
9. The **GridLayout** manager lays out components in a grid of equal-sized cells arranged in rows and columns.
10. The **CardLayout** manager treats each component as a card, showing only one card at a time.
11. Event listener interfaces are imported from the **java.awt.event** package.
12. **Adapter** classes simplify event handling by providing default empty implementations of listener interfaces.
13. The **JTabbedPane** component allows users to switch between a group of components by clicking on a tab.
14. A popup window used to display messages or take simple input in Swing applications is a **JDialog** box.
15. In Swing, most basic GUI elements derive from the abstract **JComponent** superclass.