Multiple Choice Questions and Answers

Unit-III

1. What is the purpose of a nested try statement?

   a) To catch exceptions thrown by other catch blocks

   b) To handle exceptions in a hierarchical manner

   c) To improve code readability

   d) To create custom exceptions

   Answer: b)

2. Which of the following is a built-in exception in Java?

   a) CustomException

   b) IOException

   c) ApplicationException

   d) UserException

   Answer: b)

3. Can you override a method that throws an exception with a method that doesn't?

   a) Yes

   b) No

   c) Only if the exception is caught in the method

   d) Depends on the method visibility

   Answer: a)

4. What is a custom exception?

   a) An exception that arises due to user input errors

   b) An exception defined by the programmer

   c) An exception that occurs in the custom code

d) An exception that cannot be caught

Answer: b)

5. Can a finally block be skipped?

   a) Yes, if an exception occurs

   b) No, it always executes

   c) Only if the catch block is skipped

   d) Only in multithreading scenarios

   Answer: b)

6. What is a stack trace and how is it useful?

   a) It is a list of stack elements

   b) It helps to trace the execution of the program

   c) It is used to trace the network packets

   d) It is used to trace the database transactions

   Answer: b)

7. What is the difference between 'wait()' and 'sleep()' in Java?

   a) 'wait()' is used for inter-thread communication, 'sleep()' is used to pause the current thread

   b) 'wait()' is used to pause the current thread, 'sleep()' is used for inter-thread communication

   c) 'wait()' and 'sleep()' are synonymous and can be used interchangeably

   d) There is no difference between 'wait()' and 'sleep()'

   Answer: a)

8. What is a daemon thread?

   a) A thread that runs in the background

   b) A thread that executes only once

c) A thread that is paused

d) A thread that runs with the highest priority

Answer: a)

9. What is thread starvation?

a) A situation where a thread is paused indefinitely

b) A situation where a thread is terminated abruptly

c) A situation where a thread is stuck waiting for a resource

d) A situation where a thread consumes excessive memory

Answer: c)

10. What is the purpose of the volatile keyword in Java?

a) It is used to declare variables that cannot be modified

b) It is used to declare variables that are not visible to other threads

c) It is used to prevent thread interference

d) It is used to indicate that a variable's value will be modified by different threads

Answer: d)

11. Which statement about thread-based multitasking is true?

a) Threads share the same address space

b) Threads have separate address spaces

c) Threads are heavier than processes

d) Threads are slower than processes

Answer: a)

12. What's the purpose of the 'throws' clause in Java?

a) Specify exceptions a method may throw

b) Catch exceptions in a method

c) Define a custom exception

d) Specify thread priority

Answer: a)

13. When does the 'finally' block execute in exception handling?

a) Before the 'try' block

b) After the 'try' block, regardless of exceptions

c) Only if an exception is caught

d) Only if no 'catch' block exists

Answer: b)

14. How to achieve inter-thread communication in Java?

a) Using the 'stop' method

b) Using the 'sleep' method

c) Using the 'wait' and 'notify' methods

d) Using the 'yield' method

Answer: c)

15. What's the difference between checked and unchecked exceptions?

a) Checked at compile time, unchecked at runtime

b) Checked at runtime, unchecked at compile time

c) No difference

d) Checked for threads, unchecked for processes

Answer: a)

16. What happens when a method is declared as synchronized in Java?

a) Cannot be overridden

b) Accessible by multiple threads simultaneously

c) Accessible by only one thread at a time

d) Must throw an exception

Answer: c)

17. What's the purpose of the 'yield' method?

a) Pause current thread, allow others to execute

b) Terminate the current thread

c) Change current thread priority

d) Inter-thread communication

Answer: a)

18. How can a deadlock occur in multithreading?

a) Two threads access the same resource simultaneously

b) Thread termination

c) Indefinite thread pause

d) Excessive memory consumption

Answer: a)

19. What's the purpose of the 'interrupt' method?

a) Terminate the thread

b) Pause the thread

c) Check if interrupted

d) Interrupt a blocking thread

Answer: d)

20. Can a catch block handle multiple exceptions?

a) Yes, with a single catch block

b) No, each exception needs its own catch block

c) Yes, with nested catch blocks

d) No, Java doesn't support multiple exceptions

Answer: c)

21. What does the 'join' method do in Java threading?

a) It suspends the current thread

b) It waits for the specified thread to terminate

c) It sets the priority of the current thread

d) It resumes the execution of the specified thread

Answer: b)

22. In Java, what is the purpose of the 'notify' method in multithreading?

a) It pauses the current thread

b) It wakes up a single thread that is waiting on the object's monitor

c) It wakes up all the threads that are waiting on the object's monitor

d) It terminates the current thread

Answer: b)

23. What is the difference between 'start' and 'run' methods in Java threads?

a) There is no 'run' method in Java threads

b) 'start' creates a new thread, 'run' defines the job the thread should execute

c) 'start' is used for inter-thread communication, 'run' is used for synchronization

d) 'start' and 'run' are synonymous and can be used interchangeably

Answer: b)

24. When is the 'run' method invoked in Java threads?

a) Automatically when a thread is created

b) When the 'start' method is called

c) When the thread's priority changes

d) Only if the 'wait' method is called

Answer: b)

25. What is the purpose of the 'yield' method in the Java thread model?

a) It makes the thread sleep for a specified time

b) It gives a hint to the scheduler that the current thread is willing to yield its current use of a processor

c) It sets the priority of the current thread

d) It terminates the current thread

Answer: b)

Unit-IV

26. What is the purpose of the Collection interface in Java?

a) To represent a group of individual objects

b) To create a resizable array

c) To store key-value pairs

d) To represent a collection of unique elements

Answer: a)

27. Which of the following is not a Collection class in Java?

a) ArrayList

b) String

c) Linked List

d) Hash Set

Answer: b)

28. What is the primary difference between ArrayList and LinkedList in Java?

    a) ArrayList is synchronized, while LinkedList is not

    b) ArrayList uses a resizable array, while LinkedList uses a doubly linked list

    c) ArrayList allows duplicate elements, while LinkedList does not

    d) ArrayList is a legacy class, while LinkedList is not

    Answer: b)

29. What is the main purpose of the HashSet class in Java?

    a) To store elements in the form of key-value pairs

    b) To store elements in a sorted order

    c) To store unique elements

    d) To store elements in a resizable array

    Answer: c)

30. Which interface in Java provides a way to access elements in a collection via an iterator?

    a) Accessible

    b) Navigable

    c) Iterable

    d) Iterator

    Answer: d)

31. In Java, which class provides a way to store elements in a queue based on their natural ordering or according to a specified comparator?

    a) TreeSet

    b) PriorityQueue

    c) ArrayDeque

    d) TreeMap

Answer: b)

32. In Java, what is the purpose of the Collections class?

    a) It provides algorithms for operations on collections

    b) It provides a way to represent a group of individual objects

    c) It provides access to system properties and environment variables

    d) It provides methods to work with dates and times

    Answer: a)

33. Which class in Java provides a way to tokenize a string into individual tokens?

    a) StringTokenizer

    b) StringParser

    c) Tokenizer

    d) StringToken

    Answer: a)

34. What is the purpose of the BitSet class in Java?

    a) It provides a way to store a group of individual objects

    b) It provides a resizable array

    c) It provides a way to manage sets of bits

    d) It provides a way to format text

    Answer: c)

35. Which class in Java provides a way to generate a stream of pseudorandom numbers?

    a) Math

    b) Random

    c) SecureRandom

    d) NumberGenerator

Answer: b)

36. Which collection class in Java is best suited for implementing the Stack data structure?
    a) ArrayList
    b) Vector
    c) LinkedList
    d) HashSet

    Answer: b) Vector

37. What is the primary difference between a TreeMap and a HashMap in Java?
    a) TreeMap maintains the natural order of elements, while HashMap does not
    b) TreeMap allows duplicate keys, while HashMap does not
    c) TreeMap is synchronized, while HashMap is not
    d) TreeMap provides constant-time performance for the basic operations, while HashMap does not

    Answer: a)

38. In Java, which interface provides a way to define a comparison method for objects?
    a) Sortable
    b) Comparator
    c) Comparable
    d) Orderable

    Answer: b)

39. Which utility class in Java provides methods for sorting and searching arrays?
    a) Arrays
    b) Sorter
    c) SearchUtil

d) ArrayUtils

Answer: a)

40. What is the purpose of the Calendar class in Java?

a) It provides methods for parsing and formatting strings

b) It provides a way to tokenize a string into individual tokens

c) It provides methods for manipulating dates and times

d) It provides a way to generate random numbers

Answer: c)

41. In Java, which legacy class provides a way to store key-value pairs?

a) PropMap

b) AssocArray

c) Properties

d) KeyValueMap

Answer: c) Properties

42. Which class in Java provides a way to read formatted input from a stream?

a) StringReader

b) BufferedInputStream

c) Scanner

d) InputStreamReader

Answer: c)

43. What is the primary use of the Vector class in Java?

a) It provides a way to tokenize a string into individual tokens

b) It provides a resizable array

c) It provides a way to store key-value pairs

d) It provides a synchronized way to store elements

Answer: d)

44. Which class in Java provides methods for formatting and parsing date and time?

a) SimpleDateFormat

b) DateParser

c) TimeFormatter

d) DateTimeUtil

Answer: a)

45. In Java, which class provides a way to represent a set of bits?

a) BitSet

b) BitArray

c) BitSequence

d) BitStream

Answer: a)

46. What is the use of the StringTokenizer class in Java?

a) Formatting input/output for streams

b) Parsing primitive types and strings from various input sources

c) Managing a set of bits or flags

d) Tokenizing strings into a set of tokens based on a delimiter

Answer: d)

47. Explain the BitSet class in Java.

a) BitSet is used to store date and time information

b) BitSet is a resizable array implementation of the List interface

c) BitSet represents a collection of bits that can be set or cleared individually

d) BitSet is a synchronized collection that stores elements based on their natural ordering

Answer: c)

48. What is the purpose of the Date class in Java?

a) To manage a set of bits or flags

b) To provide date and time manipulation functionalities

c) To store key-value pairs in a hash table

d) To format input/output for streams

Answer: b)

49. How is Calendar different from Date in Java?

a) Calendar provides static methods for manipulating dates, while Date does not

b) Calendar is an abstract class, while Date is a concrete class

c) Calendar allows for date arithmetic and formatting, while Date does not

d) Calendar is immutable, while Date is mutable

Answer: c)

50. What is the Random class used for in Java?

a) To manage a set of bits or flags

b) To provide date and time manipulation functionalities

c) To generate pseudo-random numbers

d) To format input/output for streams

Answer: c)

51. What is the purpose of the 'Iterator' interface in the Java Collections Framework?

a) To store elements in a collection

b) To provide a specific order for accessing elements

c) To modify elements in a collection

d) To iterate through elements in a collection one by one

Answer: d)

52. What is the key difference between the 'HashMap' and 'TreeMap' implementations of the 'Map' interface?

a) HashMap allows null keys, while TreeMap does not

b) HashMap provides faster access time, while TreeMap maintains sorted order

c) HashMap can store only primitive data types, while TreeMap can store objects

d) TreeMap is thread-safe, while HashMap is not

Answer: b)

53. What is the primary benefit of using the 'Collections.sort' method over sorting an array manually?

a) Collections.sort is thread-safe

b) It allows sorting based on custom comparators

c) It can handle different data types

d) It is more efficient for large datasets

Answer: b)

54. What does the 'Formatter' class offer compared to the standard 'System.out.print' method for formatting output?

a) Formatter supports internationalization features

b) It can write formatted output to different destinations

c) It provides more precise control over formatting options

d) All of the above

Answer: d)

55. Which Collection class in Java is best suited for implementing the Stack data structure?

a) ArrayList

b) Vector

c) LinkedList

d) HashSet

Answer: b)

56. What is the primary difference between a TreeMap and a HashMap in Java?

a) TreeMap maintains the natural order of elements, while HashMap does not

b) TreeMap allows duplicate keys, while HashMap does not

c) TreeMap is synchronized, while HashMap is not

d) TreeMap provides constant-time performance for the basic operations, while HashMap does not

Answer: a)

57. In Java, which interface provides a way to define a comparison method for objects?

a) Sortable

b) Comparator

c) Comparable

d) Orderable

Answer: b)

58. Which utility class in Java provides methods for sorting and searching arrays?

a) Arrays

b) Sorter

c) SearchUtil

d) ArrayUtils

Answer: a)

59. What is the purpose of the Calendar class in Java?

a) It provides methods for parsing and formatting strings

b) It provides a way to tokenize a string into individual tokens

c) It provides methods for manipulating dates and times

d) It provides a way to generate random numbers

Answer: c)

60. In Java, which legacy class provides a way to store key-value pairs?

a) PropMap

b) AssocArray

c) Properties

d) KeyValueMap

Answer: c)

61. Which class in Java provides a way to read formatted input from a stream?

a) StringReader

b) BufferedInputStream

c) Scanner

d) InputStreamReader

62. What is the primary use of the Vector class in Java?

a) It provides a way to tokenize a string into individual tokens

b) It provides a resizable array

c) It provides a way to store key-value pairs

d) It provides a synchronized way to store elements

Answer: d)

63. Which class in Java provides methods for formatting and parsing date and time?

   a) SimpleDateFormat

   b) DateParser

   c) TimeFormatter

   d) DateTimeUtil

   Answer: a)

64. In Java, which class provides a way to represent a set of bits?

   a) BitSet

   b) BitArray

   c) BitSequence

   d) BitStream

   Answer: a)

65. What is the difference between an ArrayList and a LinkedList in Java?

   a) ArrayList is synchronized, while LinkedList is not

   b) ArrayList uses a resizable array, while LinkedList uses a doubly linked list

   c) ArrayList allows duplicate elements, while LinkedList does not

   d) ArrayList is a legacy class, while LinkedList is not

   Answer: b)

66. What advantages does a TreeSet offer over a HashSet in terms of searching elements?

   a) Faster retrieval by element value

   b) Ability to search based on object references

   c) More efficient storage for large datasets

   d) Compatibility with primitive data types

   Answer: a)

67. When iterating through a HashMap using an Iterator, what happens if you modify the map's contents during iteration?

a) Iteration throws a ConcurrentModificationException

b) Iterator automatically updates to reflect changes

c) Only values are affected, keys remain accessible

d) Iteration continues on unmodified elements

Answer: a)

68. What is the primary function of the PriorityQueue class in Java?

a) Maintaining elements in sorted order based on natural ordering

b) Implementing a first-in, first-out (FIFO) queue

c) Providing efficient retrieval of the element with the highest priority

d) Storing unique elements according to a custom comparator

Answer: c)

69. How does the Scanner class handle different delimiters for tokenization?

a) Requires specifying delimiters upfront

b) Automatically adapts based on whitespace characters

c) Allows defining custom delimiters through regex patterns

d) Limited to comma (,) as the only delimiter

Answer: c)

70. What benefit does using ConcurrentHashMap offer compared to standard HashMap in multithreaded environments?

a) Improved performance for read operations

b) Increased thread safety and concurrent access

c) Automatic synchronization for all methods

d) Ability to store non-serializable objects

Answer: b)

71. What is the essential difference between the ArrayList and LinkedList implementations of the List interface?

    a) Random access vs. sequential access capabilities

    b) Flexibility in resizing vs. fixed size limitations

    c) Thread-safety features vs. non-synchronized behavior

    d) Storage efficiency for primitive data types

    Answer: a)

72. What approach does the Collections.binarySearch method use to find an element in a sorted collection?

    a) Linear search through all elements

    b) Hashing based on element value

    c) Iterative comparison and narrowing down search space

    d) Recursive divide-and-conquer strategy

    Answer: c)

73. How can you achieve thread-safe iteration over a HashMap in Java?

    a) Synchronize the entire loop block manually

    b) Use the synchronizedMap wrapper provided by Collections

    c) Iterate using the HashMap's entrySet method

    d) Convert the HashMap to a synchronized ConcurrentHashMap

    Answer: c)

74. What does the Comparator interface require to define a custom sorting order for objects?

    a) Implementation of the compare method with element comparison logic

    b) Definition of a specific data type for sorting

c) Annotation specifying the desired sorting criteria

d) Registration with the Collections class

Answer: a)

75. What advantages does the StringTokenzier class offer compared to splitting strings manually using delimiters?

a) Handling escaped characters within tokens

b) Supporting multiple delimiters in a single operation

c) Customizing tokenization based on regular expressions

d) Maintaining the original order of tokens

Answer: b)

Unit - V

76. What is the primary purpose of the MVC architecture in GUI programming?

a) To enhance security features

b) To organize code into three interconnected components

c) To optimize layout management

d) To provide graphical user interface components

Answer: b)

77. Which layout manager in Swing allows components to be arranged in a grid-like fashion?

a) Flow Layout

b) Border Layout

c) Grid Layout

d) Card Layout

Answer: c)

78. What is the role of an Event Listener in Swing programming?
    a) To create graphical user interface components
    b) To manage layout of Swing components
    c) To handle events generated by Swing components
    d) To enforce security measures

    Answer: c)

79. In Swing, which class is used to display a simple text message or an image?
    a) JTextArea
    b) JLabel
    c) JTextField
    d) JList

    Answer: b)

80. Which layout manager in Swing allows components to be arranged one after another in a single line?
    a) Flow Layout
    b) Grid Layout
    c) Border Layout
    d) Card Layout

    Answer: a)

81. What is the purpose of the Delegation event model in Swing?
    a) To handle mouse and keyboard events
    b) To organize Swing components into a hierarchy
    c) To manage event sources and listeners efficiently
    d) To create graphical user interface components

Answer: c)

82. Which Swing component is used to allow users to choose from a list of options?

    a) JList

    b) JCheckBox

    c) JRadioButton

    d) JComboBox

    Answer: d)

83. How can you handle mouse events in Swing?

    a) By implementing the MouseListener interface

    b) By extending the MouseAdapter class

    c) By using the addMouseListener method

    d) All of the above

    Answer: d)

84. What is the purpose of the CardLayout manager in Swing?

    a) To arrange components in a grid-like fashion

    b) To display only one component at a time, like a stack of cards

    c) To organize components in a flow layout

    d) To align components along the borders of a container

    Answer: b)

85. Which Swing component is used to display a list of items that the user can choose from?

    a) JList

    b) JComboBox

    c) JCheckBox

    d) JRadioButton

Answer: a)

86. In the Swing framework, what is the purpose of an applet?
    a) To handle events generated by Swing components
    b) To organize code into three interconnected components
    c) To create graphical user interface components
    d) To provide a GUI application that runs within a web browser

    Answer: d)

87. How can you pass parameters to a Swing applet?
    a) Using command-line arguments
    b) Through the init() method of the applet
    c) By directly modifying the HTML file
    d) By embedding them in the applet's bytecode

    Answer: c)

88. Which layout manager in Swing provides the most flexible arrangement of components?
    a) GridBagLayout
    b) BorderLayout
    c) FlowLayout
    d) CardLayout

    Answer: a)

89. What is the role of the Adapter class in Swing event handling?
    a) It adapts Swing components to be used in different layouts
    b) It provides a default implementation for event listener interfaces
    c) It manages the layout of Swing components
    d) It creates graphical user interface components

Answer: b)

90. What is the purpose of the JToggleButton in Swing?

a) To display an image

b) To display a list of options

c) To provide a toggleable button

d) To display a text message

Answer: c)

91. How can you handle keyboard events in Swing?

a) By extending the KeyboardAdapter class

b) By implementing the KeyListener interface

c) By using the addKeyListener method

d) All of the above

Answer: d)

92. What is the purpose of the JScrollPane component in Swing?

a) To display scrollable text

b) To provide a tabbed pane interface

c) To display a list of options

d) To scroll other components that don't fit in a container

Answer: d)

93. In Swing, which class represents a popup menu?

a) JPopupMenu

b) JMenuBar

c) JMenu

d) JPopupMenu

Answer: a)

94. How does a JTabbedPane differ from a JTabPanel in Swing?

    a) JTabbedPane is a container for tabs, while JTabPanel represents each individual tab

    b) They are synonymous and represent the same component

    c) JTabbedPane is used for vertical tabs, while JTabPanel is used for horizontal tabs

    d) JTabbedPane is used for layout management, while JTabPanel is used for event handling

    Answer: a)

95. Which Swing component allows users to select multiple options from a list?

    a) JRadioButton

    b) JCheckBox

    c) JToggleButton

    d) JList

    Answer: b)

96. What is the role of Adapter classes in Swing event handling?

    a) They provide additional functionalities to Swing components

    b) They simplify the implementation of event listeners by providing default implementations for all methods

    c) They handle all events generated by Swing components automatically

    d) They enforce security measures in Swing applications

    Answer: b)

97. Which layout manager in Swing allows components to be resized dynamically to fit the available space?

    a) Flow Layout

    b) Grid Layout

c) Border Layout

d) GridBag Layout

Answer: d)

98. How can you handle keyboard events in Swing?

a) By implementing the KeyboardListener interface

b) By extending the KeyboardAdapter class

c) By using the addKeyboardListener method

d) By implementing the KeyListener interface or extending the KeyAdapter class

Answer: d)

99. In Swing programming, what is the purpose of an Applet?

a) To provide a simple text message or an image

b) To handle events generated by Swing components

c) To create graphical user interface components

d) To create dynamic web content that runs within a web browser

Answer: d)

100. What security issues are associated with Swing applets?

a) They have unrestricted access to the client's system resources

b) They are vulnerable to denial-of-service attacks

c) They can execute malicious code on the client's machine

d) They cannot be embedded within web pages

Answer: c)

101. Which Swing component is used to display multiple panels, allowing users to switch between them?

a) JTabbedPane

b) JScrollPane

c) JList

d) JComboBox

Answer: a)

102. How can you pass parameters to a Swing applet?

a) By embedding them directly within the HTML code

b) By using the <applet> tag attributes

c) By using the <param> tag within the <applet> tag

d) By using the init() method of the applet class

Answer: c)

103. What is the primary purpose of the JToggleButton class in Swing?

a) To display a simple text message or an image

b) To create a button that can be toggled between pressed and unpressed states

c) To allow users to choose from a list of options

d) To provide a drop-down list of selectable items

Answer: b)

104. Which layout manager in Swing allows components to be arranged along the edges of a container?

a) Flow Layout

b) Border Layout

c) Grid Layout

d) Card Layout

Answer: b)

105. What is the role of the paintComponent method in Swing?

a) To handle mouse and keyboard events

b) To paint graphical user interface components on the screen

c) To manage layout of Swing components

d) To enforce security measures

Answer: b)

106. What is the primary function of the BorderLayout layout manager in Swing?

a) To arrange components in a single row or column

b) To arrange components in a grid-like fashion

c) To arrange components along the edges of a container

d) To arrange components based on their preferred sizes

Answer: c)

107. How can you create a simple Swing application in Java?

a) By using the AWT library

b) By extending the Applet class

c) By creating a subclass of the JFrame class

d) By implementing the Swing interface

Answer: c)

108. What is the purpose of the MVC architecture in Swing applications?

a) To simplify the implementation of event handling

b) To separate the presentation, business logic, and data layers

c) To provide default implementations for event listeners

d) To enforce security measures in Swing components

Answer: b)

109. Which Swing component is used to display a list of selectable items?

a) JTabbedPane

b) JList

c) JComboBox

d) JScrollPane

Answer: b)

110. How does the GridBagLayout manager differ from other layout managers in Swing?

a) It arranges components in a grid-like fashion

b) It allows components to be resized dynamically

c) It aligns components along the edges of a container

d) It provides precise control over the layout of components

Answer: d)

111. What is the primary advantage of using the CardLayout manager in Swing?

a) It arranges components in a grid-like fashion

b) It allows components to be resized dynamically

c) It provides precise control over the layout of components

d) It allows multiple panels to be displayed within the same container, with only one visible at a time

Answer: d)

112. How does Swing handle event delegation?

a) By directly assigning event listeners to components

b) By delegating event handling to the operating system

c) By using the Delegation event model

d) By implementing the Observer pattern

Answer: c)

113. What is the primary role of the JLabel component in Swing?

a) To provide a container for other components

b) To display images or simple text messages

c) To allow users to input text

d) To display a list of selectable items

Answer: b)

114. Which Swing component is used to allow users to select one or more options from a list?

a) JList

b) JComboBox

c) JCheckBox

d) JRadioButton

Answer: c)

115. What is the primary function of the JScrollPane component in Swing?

a) To provide a container for other components

b) To display a list of selectable items

c) To allow scrolling of components that do not fit within the visible area

d) To display a tabbed pane with multiple panels

Answer: c)

116. How does an Adapter class simplify event handling in Swing?

a) By providing default implementations for event listener methods

b) By delegating event handling to the operating system

c) By encapsulating event sources within the adapter class

d) By providing a graphical user interface for event configuration

Answer: a)

117. What is the primary function of the JTabbedPane component in Swing?

a) To display a list of selectable items

b) To allow users to select one or more options from a list

c) To provide a container for other components with tabs for navigation

d) To arrange components in a grid-like fashion

Answer: c)

118. How does the BorderLayout layout manager in Swing divide the container?

a) Into a single row or column

b) Into five regions: north, south, east, west, and center

c) Into a grid of rows and columns

d) Into a series of cards, with only one visible at a time

Answer: b)

119. What is the main difference between a Swing applet and a Swing application?

a) Applets are embedded in web pages using HTML, while applications are standalone programs

b) Applets are executed by a web browser, while applications are executed by the Java Virtual Machine

c) Applets are created using the AWT library, while applications are created using Swing

d) Applets cannot be resized, while applications can be resized dynamically

Answer: a)

120. Which layout manager in Swing is most suitable for creating forms with labeled fields?

a) FlowLayout

b) BorderLayout

c) GridLayout

d) GridBagLayout

Answer: d)

121. What is the primary role of the CardLayout manager in Swing?

a) To arrange components in a single row or column

b) To divide the container into regions like north, south, east, west, and center

c) To provide a way to switch between multiple panels or "cards"

d) To arrange components in a grid-like fashion

Answer: c)

122. How does an inner class simplify event handling in Java Swing?

a) By providing default implementations for event listener methods

b) By encapsulating event sources within the inner class

c) By providing a graphical user interface for event configuration

d) By allowing access to the enclosing class's instance variables and methods

Answer: d)

123. In Java Swing, what is the primary purpose of the JList component?

a) To display a list of selectable items

b) To allow users to select one or more options from a list

c) To provide a container for other components with tabs for navigation

d) To arrange components in a grid-like fashion

Answer: a)

124. How does a JToggleButton differ from a regular JButton in Swing?

a) JToggleButton supports toggling between two states, while JButton does not

b) JToggleButton is not clickable, while JButton is clickable

c) JToggleButton displays text, while JButton does not

d) JToggleButton does not support icons, while JButton does

Answer: a)

125. What is the primary purpose of using a JScrollPane in a Swing application?

a) To provide scrolling functionality for components that exceed the visible area

b) To display text-based content with line wrapping enabled

c) To allow users to resize the window dynamically

d) To organize components into a tabbed layout

Answer: a)