

## Homework

The following homework is designed to cover the course objectives for this unit.

### Project 2

Your second project for this course is due at the beginning of Unit 8. Your instructor will provide you with a complete description of the projects for this course. Please refer to that handout for complete details.

### Assignment 7.1:

Research the ITT Tech Virtual Library to find answers for the following:

- While a frame or dialog is running and visible, what method—other than a Java method—can be used to print its component hierarchy to the standard output stream?
- What are some of the subclasses of the component class?
- How does the CheckboxMenuItem class relate to MenuItem?
- What are the primary differences between Java applets and ActiveX controls?
- Suppose you write several listeners and add them all to the same component. Is it true that all the listeners will get notified of an event in the order they were added?

Cite your sources using Chicago Manual of Style format. Submit your report to your instructor at the beginning of Unit 8.

### Assignment 7.2:

Answer the following questions and submit them to your instructor at the beginning of Unit 8. **Note:** Some questions may go across multiple pages; be sure to read the entire question and all answer options.

1. Which of the following statements are true? (Hint: There are multiple answers.)
  - a. JToolBar has an add method that enables you to add an instance of ActionListener to the menu.
  - b. JMenu has an add method that enables you to add an instance of ActionListener to the menu.
  - c. JMenu has an add method that enables you to add an instance of Action to the menu.
  - d. Action is a subinterface of ActionListener.
2. A JCheckBoxMenuItem is a subclass of \_\_\_\_\_.  
(Hint: There are multiple answers.)
  - a. JComponent
  - b. AbstractButton

- c. JMenu
  - d. JMenuItem
3. JToolBar uses \_\_\_\_\_.
- a. GridLayout
  - b. BorderLayout
  - c. SpringLayout
  - d. BoxLayout
  - e. FlowLayout
4. \_\_\_\_\_ allows you to create custom buttons.
- a. An option dialog
  - b. An input dialog
  - c. A message dialog
  - d. A confirmation dialog
5. The method \_\_\_\_\_ places a menu item mi into a menu mu.
- a. mu.addMenuItem(mi)
  - b. mu.addItem(mi)
  - c. mu.add(mi)
  - d. None of the above.
6. Which of the following statements are true? (Hint: There are multiple answers.)
- a. JToolBar has an add method that enables you to add an instance of ActionListener to the menu.
  - b. JButton has an add method that enables you to add an instance of Action to the menu.
  - c. JButton has a constructor new JButton(Action) that enables you to add an instance of Action to the menu.
  - d. JToolBar has an add method that enables you to add an instance of Action to the menu.
  - e. JButton has an add method that enables you to add an instance of ActionListener to the menu.
7. A JMenu is a subclass of \_\_\_\_\_. (Hint: There are multiple answers.)
- a. JMenuItem
  - b. JButton
  - c. AbstractButton
  - d. JComponent

8. You can set a mnemonic property on a \_\_\_\_\_.  
(Hint: There are multiple answers.)
- a. JRadioButtonMenuItem
  - b. JCheckBoxMenuItem
  - c. JMenuItem
  - d. JMenu
9. You can set an ImageIcon property on a \_\_\_\_\_.  
(Hint: There are multiple answers.)
- a. JMenu
  - b. JMenuItem
  - c. JCheckBoxMenuItem
  - d. JRadioButtonMenuItem
10. A JMenuItem is a subclass of \_\_\_\_\_. (Hint: There are multiple answers.)
- a. JComponent
  - b. AbstractButton
  - c. JMenu
  - d. JButton
11. A JRadioButtonMenuItem is a subclass of \_\_\_\_\_.  
(Hint: There are multiple answers.)
- a. AbstractButton
  - b. JComponent
  - c. JMenuItem
  - d. JMenu
12. \_\_\_\_\_ is used to receive input from the user.
- a. An option dialog
  - b. A confirmation dialog
  - c. A message dialog
  - d. An input dialog
13. \_\_\_\_\_ is the action that causes a popup menu to be displayed.
- a. Popup action
  - b. Popup event
  - c. Popup reaction
  - d. Popup trigger

14. The method \_\_\_\_\_ places a menu bar mb into the frame f.
- a. f.setJMenuBar(mb)
  - b. f.add(mb)
  - c. f.setJMenu(mb)
  - d. f.addBar(mb)
15. How do you display a JPopupMenu?
- a. Invoke the show() from a JPopupMenu.
  - b. Invoke the show(Component, x, y) from a JPopupMenu.
  - c. Add the JPopupMenu to a container.
  - d. Invoke the setVisible(true) from a JPopupMenu.
16. The method \_\_\_\_\_ places a menu mu into a menu bar mb.
- a. mb.add(mu)
  - b. mb.addItem(mu)
  - c. mb.addMenuItem(mu)
  - d. None of the above
17. \_\_\_\_\_ displays a message that alerts the user and waits for the user to click the OK button to close the dialog.
- a. An option dialog
  - b. An input dialog
  - c. A confirmation dialog
  - d. A message dialog
18. The method \_\_\_\_\_ separates menu items in a menu mu.
- a. mu.add('-')
  - b. mu.addSeparator()
  - c. Either a or b
  - d. None of the above
19. Which of the following statements are true? (Hint: There are multiple answers.)
- a. You can add a JRadioButtonMenuItem to a JPopupMenu.
  - b. You can add a JMenu to a JPopupMenu.
  - c. You can add a JMenuItem to a JPopupMenu.
  - d. You can add a JCheckBoxMenuItem to a JPopupMenu.
  - e. You can add a JPopupMenu to a JMenu.

20. Which of the following statements are correct?

(Hint: There are multiple answers.)

- a. You can add any GUI component to a JToolBar.
- b. You can set orientation of a JToolBar.
- c. A JToolBar may be floatable.
- d. A JToolBar is a GUI component, so it can be added to a container.