

Chapter 16 JavaFX UI Controls and Multimedia

Section 16.2 Labeled and Label

16.1 To create a label with the specified text, use _____.

- ☐ A. `new Labelled();`
- ☐ B. `new Label();`
- ☐ C. `new Labelled(text);`
- ☒ D. `new Label(text);`

Your answer is correct



16.2 To set a red color for the text in the label `lbl`, use _____.

- ☐ A. `lbl.setFill(Color.red);`
- ☐ B. `lbl.setTextFill(Color.red);`
- ☐ C. `lbl.setFill(Color.RED);`
- ☒ D. `lbl.setTextFill(Color.RED);`

Your answer is correct



16.3 _____ are properties in `Labelled`.

- ☒ A. `alignment`
- ☒ B. `contentDisplay`
- ☒ C. `graphic`
- ☒ D. `text`
- ☒ E. `underline`

Your answer is correct



16.4 To set the node to the right of the text in a label `lbl`, use _____.

- ☐ A. `lbl.setContentDisplay(ContentDisplay.TOP);`
- ☐ B. `lbl.setContentDisplay(ContentDisplay.BOTTOM);`
- ☐ C. `lbl.setContentDisplay(ContentDisplay.LEFT);`
- ☒ D. `lbl.setContentDisplay(ContentDisplay.RIGHT);`

Your answer is correct



Section 16.3 Button

16.5 _____ is a superclass for Button.

- ☐ A. Label
- ☒ B. Labelled
- ☒ C. ButtonBase
- ☐ D. Control
- ☐ E. Node

Your answer BC is incorrect
The correct answer is BCDE



16.6 _____ is a superclass for Label.

- ☐ A. Scene
- ☒ B. Labelled
- ☐ C. ButtonBase
- ☐ D. Control
- ☐ E. Node

Your answer B is incorrect
The correct answer is BDE



16.7 The setOnAction method is defined in _____.

- ☐ A. Label
- ☐ B. Labelled
- ☐ C. Node
- ☒ D. ButtonBase
- ☐ E. Button

Your answer is correct



16.8 Analyze the following code:

```
import javafx.application.Application;
import javafx.scene.Scene;
```

```

import javafx.scene.control.Button;
import javafx.scene.image.Image;
import javafx.scene.image.ImageView;
import javafx.scene.layout.HBox;
import javafx.stage.Stage;

public class Test extends Application {
    @Override // Override the start method in the Application class
    public void start(Stage primaryStage) {
        HBox pane = new HBox(5);
        Image usIcon
= new Image("http://www.cs.armstrong.edu/liang/image/usIcon.gif");
        Button bt1 = new Button("Button1", new ImageView(usIcon));
        Button bt2 = new Button("Button2", new ImageView(usIcon));
        pane.getChildren().addAll(bt1, bt2);

        Scene scene = new Scene(pane, 200, 250);
        primaryStage.setTitle("Test"); // Set the stage title
        primaryStage.setScene(scene); // Place the scene in the stage
        primaryStage.show(); // Display the stage
    }

    /**
     * The main method is only needed for the IDE with limited JavaFX
     * support. Not needed for running from the command line.
     */
    public static void main(String[] args) {
        launch(args);
    }
}

```

- ☒ A. Two buttons displayed with the same icon.
- ☐ B. Only bt2 displays the icon and bt1 does not display the icon.
- ☐ C. Only bt1 displays the icon and bt2 does not display the icon.
- ☐ D. Two buttons displayed with different icons.

Your answer is correct 

[Click here to show an explanation](#)

16.9 Analyze the following code:

```

import javafx.application.Application;
import javafx.scene.Scene;
import javafx.scene.control.Button;
import javafx.scene.layout.StackPane;
import javafx.stage.Stage;

public class Test extends Application {
    @Override // Override the start method in the Application class
    public void start(Stage primaryStage) {
        StackPane pane = new StackPane();
        Button bt1 = new Button("Java");
        Button bt2 = new Button("Java");
    }
}

```

```

    Button bt3 = new Button("Java");
    Button bt4 = new Button("Java");
    pane.getChildren().addAll(bt1, bt2, bt3, bt4);

    Scene scene = new Scene(pane, 200, 250);
    primaryStage.setTitle("Test"); // Set the stage title
    primaryStage.setScene(scene); // Place the scene in the stage
    primaryStage.show(); // Display the stage
}

/**
 * The main method is only needed for the IDE with limited JavaFX
 * support. Not needed for running from the command line.
 */
public static void main(String[] args) {
    launch(args);
}
}

```

- ☒ A. One button is displayed with the text "Java".
- ☐ B. Two buttons are displayed with the same text "Java".
- ☐ C. Three buttons are displayed with the same text "Java".
- ☐ D. Four buttons are displayed with the same text "Java".



Your answer is correct
[Click here to show an explanation](#)

16.10 Analyze the following code:

```

import javafx.application.Application;
import javafx.scene.Scene;
import javafx.scene.control.Button;
import javafx.scene.layout.Pane;
import javafx.scene.layout.FlowPane;
import javafx.stage.Stage;

public class Test extends Application {
    @Override // Override the start method in the Application class
    public void start(Stage primaryStage) {
        Pane pane = new FlowPane();
        Button bt1 = new Button("Java");
        Button bt2 = new Button("Java");
        Button bt3 = new Button("Java");
        Button bt4 = new Button("Java");
        pane.getChildren().addAll(bt1, bt2, bt3, bt4);

        Scene scene = new Scene(pane, 200, 250);
        primaryStage.setTitle("Test"); // Set the stage title
        primaryStage.setScene(scene); // Place the scene in the stage
        primaryStage.show(); // Display the stage
    }

    /**

```

```

    * The main method is only needed for the IDE with limited JavaFX
    * support. Not needed for running from the command line.
    */
    public static void main(String[] args) {
        launch(args);
    }
}

```

- ☐ A. One button is displayed with the text "Java".
- ☐ B. Two buttons are displayed with the same text "Java".
- ☐ C. Three buttons are displayed with the same text "Java".
- ☒ D. Four buttons are displayed with the same text "Java".

Your answer is correct



Section 16.4 CheckBox

16.11 _____ checks whether the CheckBox chk is selected.

- ☐ A. chk.getSelected()
- ☒ B. chk.selected()
- ☐ C. chk.isSelected().
- ☐ D. chk.select()

Your answer B is incorrect
The correct answer is C



16.12 Which of the following statements are true?

- ☒ A. CheckBox inherits from ButtonBase.
- ☐ B. CheckBox inherits from Button.
- ☐ C. CheckBox inherits from Labelled.
- ☐ D. CheckBox inherits from Control.
- ☐ E. CheckBox inherits from Node.

Your answer A is incorrect
The correct answer is ACDE




Section 16.5 RadioButton

16.13 Which of the following statements are true?


- ☒ A. RadioButton inherits from ButtonBase.

- ☐ B. RadioButton inherits from Button.
- ☐ C. RadioButton inherits from Labelled.
- ☐ D. RadioButton inherits from Control.
- ☐ E. RadioButton inherits from Node.

Your answer A is incorrect 
The correct answer is ACDE

16.14 _____ checks whether the RadioButton rb is selected.

- ☐ A. rb.getSelected()
- ☒ B. rb.selected()
- ☐ C. rb.isSelected().
- ☐ D. rb.select()

Your answer B is incorrect 
[Click here to show the correct answer](#)

16.15 Analyze the following code:

```
import javafx.application.Application;
import javafx.scene.Scene;
import javafx.scene.control.RadioButton;
import javafx.scene.control.ToggleGroup;
import javafx.scene.layout.FlowPane;
import javafx.scene.layout.Pane;
import javafx.stage.Stage;

public class Test extends Application {
    @Override // Override the start method in the Application class
    public void start(Stage primaryStage) {
        Pane pane = new FlowPane();

        ToggleGroup group = new ToggleGroup();
        RadioButton rb1 = new RadioButton("Java");
        RadioButton rb2 = new RadioButton("C++");
        pane.getChildren().addAll(rb1, rb2);

        Scene scene = new Scene(pane, 200, 250);
        primaryStage.setTitle("Test"); // Set the stage title
        primaryStage.setScene(scene); // Place the scene in the stage
        primaryStage.show(); // Display the stage
    }


    /**
     * The main method is only needed for the IDE with limited JavaFX
     * support. Not needed for running from the command line.
     */
}
```

```

    */
    public static void main(String[] args) {
        launch(args);
    }
}

```


- ☐ A. The program displays two radio buttons. The two radio buttons are grouped.
- ☐ B. The program displays one radio button with text Java.
- ☒ C. The program displays two radio buttons. The two radio buttons are not grouped.
- ☐ D. The program displays one radio button with text C++.

Your answer is correct 
[Click here to show an explanation](#)

Section 16.6 TextField

16.16 Which of the following statements are true?

- ☒ A. TextField inherits from TextInputControl.
- ☐ B. TextField inherits from ButtonBase.
- ☐ C. TextField inherits from Labelled.
- ☐ D. TextField inherits from Control.
- ☐ E. TextField inherits from Node.

Your answer A is incorrect 
 The correct answer is ADE

16.17 The properties _____ can be used in a TextField.

- ☐ A. text
- ☐ B. editable
- ☒ C. alignment
- ☒ D. prefColumnCount
- ☒ E. onAction

Your answer CDE is incorrect 
 The correct answer is ABCDE

16.18 Which of the following statements are true?

- ☒ A. You can specify a horizontal text alignment in a text field.

- ☒ B. You can specify the number of columns in a text field.
- ☐ C. You can disable editing on a text field.
- ☒ D. You can create a text field with a specified text.

Your answer ABD is incorrect
The correct answer is ABCD

16.19 The method _____ gets the contents of the text field tf.

- ☒ A. tf.getText(s)
- ☐ B. tf.getText()
- ☐ C. tf.getString()
- ☐ D. tf.findString()

Your answer A is incorrect
The correct answer is B

16.20 Which of the following statements are true?

- ☐ A. PasswordField inherits from TextInputControl.
- ☒ B. PasswordField inherits from TextField.
- ☐ C. PasswordField inherits from Labelled.
- ☐ D. PasswordField inherits from Control.
- ☐ E. PasswordField inherits from Node.

Your answer B is incorrect
The correct answer is ABDE


16.22 Which of the following statements are true?

- ☐ A. You can specify a horizontal text alignment in a text area.
- ☐ B. You can specify the number of columns in a text area.
- ☐ C. You can disable editing on a text area.
- ☒ D. You can create a text field with a specified text area.
- ☒ E. You can specify the number of rows in a text area.

Your answer DE is incorrect
The correct answer is BCDE


16.23 To wrap a line in a text area ta, invoke _____.

- ☐ A. ta.setLineWrap(false)
- ☐ B. ta.setLineWrap(true)
- ☐ C. ta.WrapLine()
- ☒ D. ta.wrapText()
- ☐ E. ta.setWrapText(true)

Your answer D is incorrect 
The correct answer is E


16.24 To wrap a line in a text area jta on words, invoke _____.

- ☐ A. jta.setWrapStyleWord(false)
- ☒ B. jta.setWrapStyleWord(true)
- ☐ C. jta.wrapStyleWord()
- ☐ D. jta.wrapWord()

Your answer is correct 

16.25 Which of the following statements are true?

- ☒ A. TextArea inherits from TextInputControl.
- ☐ B. TextArea inherits from TextField.
- ☐ C. TextArea inherits from Labelled.
- ☐ D. TextArea inherits from Control.
- ☐ E. TextArea inherits from Node.

Your answer A is incorrect 
The correct answer is ADE

Section 16.8 ComboBox

16.26 How many items can be added into a ComboBox object?

- ☐ A. 0
- ☐ B. 1
- ☐ C. 2

- ☒ D. Unlimited

Your answer is correct



16.27 How many items can be selected from a ComboBox at a time?

- ☐ A. 0
☒ B. 1
☐ C. 2
☐ D. Unlimited

Your answer is correct



16.28 _____ returns the selected item on a ComboBox cbo.

- ☒ A. `cbo.getSelectedIndex()`
☐ B. `cbo.getSelectedItem()`
☐ C. `cbo.getSelectedIndices()`
☐ D. `cbo.getSelectedItems()`
☐ E. `cbo.getValue()`

Your answer A is incorrect
The correct answer is E



16.29 The method _____ adds an item s into a ComboBox cbo.

- ☐ A. `cbo.add(s)`
☐ B. `cbo.addChoice(s)`
☐ C. `cbo.addItem(s)`
☐ D. `cbo.addObject(s)`
☒ E. `cbo.getItems().add(s)`

Your answer is correct



16.30 Which of the following statements are true?

- ☒ A. ComboBox inherits from ComboBoxBase.
☐ B. ComboBox inherits from ButtonBase.
☐ C. ComboBox inherits from Labelled.

- ☐ D. ComboBox inherits from Control.
- ☐ E. ComboBox inherits from Node.

Your answer A is incorrect
The correct answer is ADE



16.31 You can use the _____ properties in a ComboBox.

- ☒ A. value
- ☒ B. editable
- ☒ C. onAction
- ☐ D. items
- ☐ E. visibleRowCount

Your answer ABC is incorrect
[Click here to show the correct answer](#)



Section 16.9 Lists

16.32 _____ are properties for a ListView.

- ☒ A. items
- ☒ B. orientation
- ☒ C. selectionModel
- ☐ D. visibleRowCount
- ☐ E. onAction

Your answer is correct



16.33 Which of the following statements are true?

- ☒ A. ListView inherits from ComboBoxBase.
- ☐ B. ListView inherits from ButtonBase.
- ☐ C. ListView inherits from Labelled.
- ☐ D. ListView inherits from Control.
- ☐ E. ListView inherits from Node.

Your answer A is incorrect
The correct answer is DE



16.34 The statement for registering a listener for processing list view item change is _____.

- ☐ A. `lv.getItems().addListener(e -> {processStatements});`
- ☐ B. `lv.addListener(e -> {processStatements});`
- ☒ C. `lv.getSelectionModel().selectedItemProperty().addListener(e -> {processStatements});`
- ☐ D. `lv.getSelectionModel().addListener(e -> {processStatements});`

Your answer is correct



Section 16.10 ScrollBar

16.35 _____ are properties of ScrollBar.

- ☒ A. value
- ☒ B. min
- ☒ C. max
- ☒ D. orientation
- ☒ E. visibleAmount

Your answer is correct



16.36 The statement for registering a listener for processing scroll bar value change is _____.

- ☐ A. `sb.addListener(e -> {processStatements});`
- ☐ B. `sb.getValue().addListener(e -> {processStatements});`
- ☒ C. `sb.valueProperty().addListener(e -> {processStatements});`
- ☐ D. `sb.getItems().addListener(e -> {processStatements});`

Your answer is correct




Section 16.11 Slider

16.37 _____ are properties of Slider.


- ☒ A. value
- ☒ B. min
- ☒ C. max
- ☒ D. orientation

- ☐ E. visibleAmount

Your answer ABCD is incorrect 
The correct answer is ABCDE

16.38 The statement for registering a listener for processing slider change is _____.


- ☐ A. `sl.addListener(e -> {processStatements});`
☐ B. `sl.getValue().addListener(e -> {processStatements});`
☒ C. `sl.valueProperty().addListener(e -> {processStatements});`
☐ D. `sl.getItems().addListener(e -> {processStatements});`

Your answer is correct 

Section 16.13 Video and Audio


16.39 Which of the following statements are true?

- ☐ A. A Media can be shared by multiple MediaPlayer.
☐ B. A MediaPlayer can be shared by multiple MediaView.
☒ C. A MediaView can be placed into multiple Pane.
☐ D. A Media can be downloaded from a URL.

Your answer C is incorrect 
The correct answer is ABD

16.40 You can use the methods _____ to control a MediaPlayer.

- ☐ A. `start()`.
☐ B. `stop()`.
☒ C. `pause()`.
☒ D. `play()`.

Your answer is correct 

16.41 You can use the properties _____ to control a MediaPlayer.

- ☒ A. `autoPlay`
☒ B. `currentCount`
☒ C. `cycleCount`



D. mute



E. volume

Your answer is correct



16.42 You can use the properties _____ in a MediaView.



A. x



B. y



C. mediaPlayer



D. fitWidth



E. fitHeight

Your answer is correct

