

Chapter 2

Welcome App

2.1 Introduction

1. A _____ app is an app that can run on iPhones, iPod touches and iPads.
- a. multi-purpose
 - b. global
 - c. unrestricted
 - d. universal

Ans: d. universal

2. You can _____ your apps so that they can display strings in different spoken languages based on the user's device settings.
- a. limit
 - b. restrict
 - c. confine
 - d. localize

Ans: d. localize

2.2 Technologies Overview

2.2.2 Labels and Image Views

1. Which of the following statements is *false*?
- a. Text can be displayed in a **Label** (an object of class `UILabel` from the Cocoa Touch's UIKit framework) and a picture can be displayed in an **Image View** (an object of class `UIImageView`).
 - b. Using Cocoa Touch, you can (without programming) drag and drop a **Label** and an **Image View** onto the UI.
 - c. iOS's auto layout capabilities can maintain various relationships among GUI elements when the user rotates the device.
 - d. You can edit UI component attributes (e.g., the **Text** attribute of a **Label** and the **Image** attribute of an **Image View**) to customize them for your apps.

Ans: b. Using Cocoa Touch, you can (without programming) drag and drop a Label and an Image View onto the UI. [Actually, using *Interface Builder*, you can (without programming) drag and drop a Label and an Image View onto the UI.]

2.2.3 Asset Catalogs and Image Sets

2. Which of the following statements is *false*?

- a. When your app is installed on a device, its icon and name appear with all other installed apps in the iOS home screen.
- b. You specify the icon for your app as part of the app's settings-.
- c. iOS supports asset catalogs, which manage image resources that require different resolutions for different devices-. An asset catalog contains image sets from which iOS automatically chooses the appropriate image based only on the device running the app.
- d. Your app's icon will appear in different sizes and resolutions based on the device and context in which it's displayed.

Ans: c. iOS supports asset catalogs, which manage image resources that require different resolutions for different devices-. An asset catalog contains image sets from which iOS automatically chooses the appropriate image based only on the device running the app. Actually, an asset catalog contains image sets from which iOS automatically chooses the appropriate image based on the device running the app and the context in which the icon is used—such as in the iOS Settings app, in Spotlight search or as the app's icon on the home screen.

2.3 Creating a Universal App Project with Xcode

2.3.2 Projects and App Templates

1. Which of the following statements is *false*?

- a. A project is a group of related files, such as the Swift code files and any media files (e.g., images, video, audio) that compose an app.
- b. Select **File > New > Project...** to create a new project.
- c. Selecting **File > New > Project...** displays a sheet containing the design patterns that you can use as your new project's foundation. Design patterns save you time by providing preconfigured starting points for commonly used app designs.
- d. A sheet is a type of dialog that slides down from the top of a window.

Ans: c. Selecting File > New > Project... displays a sheet containing the design patterns that you can use as your new project's foundation. Design patterns save you time by providing preconfigured starting points for commonly used app designs. [Actually, this sheet contains *templates*, not design patterns.]

2.4 Xcode Workspace Window

1. A new project's window is known as a _____ window, which is divided into four main areas below the toolbar: the **Navigator** area, **Editor** area, **Utilities** area and the **Debug** area.

- a. workplace
- b. workbench
- c. workspace
- d. workdesk

Ans: c. workspace

2.4.5 Xcode Toolbar

2. Clicking the Xcode 6 toolbar's **Run** button builds then runs the project on the currently selected simulator or device as specified in the **Scheme** selector. Clicking and holding on this button displays **Run**, **Test**, **Profile** and **Analyze** options. The **Test** option allows you to run unit tests on your app. The **Profile** option collects information about your running code to help you locate performance issues, memory leaks and more. The **Analyze** option checks your source code for _____.

- a. syntax errors
- b. current programming idiom
- c. compilation errors
- d. potential logic errors

Ans: d. potential logic errors

2.5 Storyboarding the Welcome App's UI

2.5.2 Providing an App Icon

1. The _____ manages image resources that require different sizes and resolutions for different devices and contexts.

- a. asset catalog
- b. image catalog
- c. device manager
- d. context manager

Ans: asset catalog

2.5.4 Overview of the Storyboard and the Xcode Utilities Area

2. Which of the following statements about size classes and auto layout tools is *false*?

- a. Size classes help you design scenes for different screen sizes and orientations.
- b. By default, the scene is configured for **Any** width and **Any** height, meaning that the scene is designed for any iOS device and any device orientation.

- c. The **Any/Any** scene is 256-by-256 pixels.
- d. The auto layout tools enable you to specify how UI components adjust their sizes and positions based on a device's size and orientation.

Ans: c. The Any/Any scene is 256-by-256 pixels. Actually, The Any/Any scene is 600-by-600 pixels.

2.5.8 Using Auto Layout to Support Different Screen Sizes and Orientations

3. You use _____ constraints to specify how UI components are positioned relative to other components and how components should resize and reposition based on the device and device orientation.
- a. relative layout
 - b. auto layout
 - c. position layout
 - d. device-based layout

Ans: b. auto layout

2.6 Running the Welcome App

No questions

2.7 Making Your App Accessible

1. Which of the following statements is *false*?
- a. For people with visual and physical disabilities, iOS's VoiceOver can speak the screen text (such as the text on a **Label** or **Button**) or text that you provide to help the user understand the purpose of a UI component.
 - b. When VoiceOver is enabled and the user touches an accessible UI component, VoiceOver speaks the accessibility text associated with the component.
 - c. All UIKit framework components support accessibility and many have it enabled by default. For example, when the user touches a **Label**, VoiceOver speaks the **Label**'s text.
 - d. VoiceOver is supported in the iOS simulator.

Ans: d. VoiceOver is supported in the iOS simulator. Actually, VoiceOver is *not* currently supported in the iOS simulator, so you must run this app on a device to hear VoiceOver speak the text. However, in the simulator you can use the Accessibility Inspector to view the text that VoiceOver will speak.

2.8 Internationalizing Your App

1. Using _____ layout to design your UI is a key part of internationalization—when used correctly, it enables iOS to present your UI in a manner appropriate for each locale. For example, a UI arranged left-to-right for some languages (e.g., English, French, Spanish, etc.) would typically be arranged right-to-left for others (e.g., Arabic, Hebrew, etc.).

- a. adjusting
- b. customizing
- c. regulating
- d. auto

Ans: auto

2.8.1 Locking Your UI During Translation

2. If you're still developing your app and want to have your string resources translated in parallel, you can _____ your UI components for an entire storyboard or individually so they cannot be modified accidentally.

- a. load
- b. lock
- c. parallelize
- d. freeze

Ans: b. lock

Chapter 2

Introduction to Swift Programming

1.1 Introduction

No questions

1.2 A First Swift Program: Printing a Line of Text

1. Any _____ scoped statements in `main.swift`—that is, statements that are not written inside function, method or type definitions—serve as the app’s entry point.

- a. locally
- b. outer
- c. generically
- d. globally

Ans: globally

2. String literals cannot span multiple lines of code, but you may concatenate multiple Strings into a longer String by using the _____ operator.

- a. @
- b. -
- c. ^
- d. +

Ans: d. +

3. As you type code in the source-code editor, Xcode displays context-sensitive, _____ suggestions that help you write code quickly and correctly.

- a. code-anticipation
- b. code-fill
- c. code-fulfillment
- d. code-completion

Ans: code-completion

4. Where the standard output appears depends on the type of program and where you execute it. Which of the following statements is *false*?

- a. If you execute a `println` in a playground, the result displays in playground's **Console** window.
- b. If you execute any app from an Xcode project, the output appears in the **Debug** area at the bottom of the Xcode window.
- c. If the statement is part of a **Command Line Tool** application, when you execute the application in a **Terminal** window, the output appears in that window.
- d. If you execute an iOS app on a device, the result is sent to a log file that you can view in Xcode's **Devices** window.

Ans: a. If you execute a `println` in a playground, the result displays in playground's Console window. Actually, if you execute a `println` in a playground, the result displays in playground's Assistant-Editor window.

1.3 Modifying Your First Program

1. How many lines of readable text does the following statement print?

```
println("welcome\nto\nSwift\nProgramming!")
```

- a. 1
- b. 2
- c. 3
- d. 4

Ans: d. 4

2. The backslash (\) is a(n) _____ character, which has special meaning in a String literal—\n, for example, represents the line-feed special character.

- a. outbreak
- b. escape
- c. release
- d. break

Ans: b. escape

1.4 Composing Larger strings with string Interpolation

1. Swift uses type _____ to determine a constant's or variable's type from its initializer value.

- a. interpolation
- b. conjecture
- c. inference
- d. interpretation

Ans: c. inference

2. Constants and variables of the type _____ are limited to the range $-32,768$ to $32,767$.

- a. `Int8`
- b. `Int16`
- c. `Int32`
- d. `Int64`

Ans: `Int16`

3. Constants and variables of the type _____ are limited to the range 0 to $4,294,967,295$.

- a. `UInt8`
- b. `UIntnt16`
- c. `UIntnt32`
- d. `UIntnt64`

Ans: c. `UInt32`

1.5 Another Application: Adding Integers

1. Which of the following statements is *false*?

- a. Whole-number values are treated as type `Int`.
- b. Use constants rather than variables when you know a value will not change after it's initialized.
- c. Compilers can perform optimizations on variables that cannot be performed on constants.
- d. Constants also eliminate accidental modifications of data that should remain constant.

Ans: c. Compilers can perform optimizations on variables that cannot be performed on constants. [Actually, compilers can perform optimizations on *constants* that cannot be performed on *variables*.]

2. An expression is any portion of a statement that has a(n) _____ associated with it.

- a. name
- b. constant
- c. variable
- d. value

Ans: d. value

1.6 Arithmetic

1. Among the arithmetic operators, the asterisk (*) indicates multiplication, and the percent sign (%) is the _____ operator.

- a. division
- b. integer division
- c. remainder

d. interpolation

Ans: c. remainder

2. Integer division yields an integer quotient. For example, the expression $7 / 4$ evaluates to 1, and the expression $17 / 5$ evaluates to 3. Any fractional part in integer division is simply _____—no *rounding* occurs.

a. rounded

b. averaged

c. truncated

d. interpolated

Ans: c. truncated

3. $9 \% 4$ yields _____.

a. 1

b. 2

c. 39

d. 5

Ans: a. 1

2.6.2 Operator Precedence

4. When we say that operators are applied from left to right, we're referring to their _____.

a. associativity

b. commutativity

c. idempotence

d. transitivity

Ans: a. associativity

1.7 Decision Making:

The `if` Conditional Statement and the Comparative Operators

1. (True/False) An empty control-statement body is represented as _____ in Swift.

a. blank space

b. ;

c. {}

d. ()

Ans: c. {}