# Test Bank for Starting out with Visual C# 4th Gaddis

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**Starting Out with Visual C#, 4th Edition**
**Chapter 2: Introduction to Visual C#**

**Multiple Choice**

1. Which one of the following Button control names is not a legal C# identifier?
   a. `_calculateTotalButton`
   b. `printSalesReportButton`
   c. `clear_customer_names_button`
   d. `1stPlayerStartButton`

   ANS: D

2. Which one of the following Button control names is a legal C# identifier?
   a. `_DisplayOption5Button`
   b. `Exit!Button`
   c. `*Clear*Button*`
   d. `delete Record Button`

   ANS: A

3. The _____ naming convention gets its name because the uppercase characters that appear in a name are sometimes reminiscent of a camel's humps.
   a. camelCase
   b. Pascal
   c. Hungarian notation
   d. CaMeL style

   ANS: A

4. When learning computer programming, it is traditional to start by learning to write a _____ program.
   a. *Simple*
   b. *Hello World*
   c. *Pseudocode*
   d. *K&R Style*

   ANS: B

5. The PictureBox control's _____ property determines whether the image stored in the control will cause the control to be shrunk or expanded.
   a. DisplayMode
   b. Visible
   c. SizeMode
   d. Render

   ANS: C

6. Programmers commonly use _____ in their code to create a sense of visual organization.

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a. different font colors
b. documentation comments
c. blank lines and indentation
d. bold images, such as photos

ANS: C

7. To close an application's form in code, you use the statement _____.
   a. `me.Quit();`
   b. `this.Close();`
   c. `form.Exit();`
   d. `app.Stop();`

   ANS: B

8. When you enter a statement into the code editor, Visual Studio analyzes it, and if a syntax error is found, it is _____.
   a. automatically corrected
   b. underlined with a jagged line
   c. crossed out
   d. highlighted

   ANS: B

9. The _____ shows a description of the error, the name of the source code file containing the error, the error's line number and column number, and the name of the project.
   a. *Debug* dialog box
   b. *Crash* pop up
   c. *Error List* window
   d. *Just In Time* debugger

   ANS: C

10. The _____ file contains an application's start-up code, which executes when the application runs.
    a. Main.cs
    b. Code.cs
    c. Program.cs
    d. Source.cs

    ANS: C

11. The file named _____ contains code associated with a form named Form1.
    a. Form1.cs
    b. MainForm.cs
    c. Control.cs
    d. Window.cs

    ANS: A

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12. A _____ is a declared block in a program between braces {…} that holds classes.
    a. method
    b. program
    c. namespace
    d. list

    ANS: C

13. A(n) _____ is a logical container in a program that holds methods (as well as other program elements).
    a. event
    b. namespace
    c. queue
    d. class

    ANS: D

14. A(n) _____ is a sequence of one or more programming statements (code) that performs some operation.
    a. algorithm
    b. method
    c. class
    d. namespace

    ANS: B

15. The _____ directives appearing at the top of a C# source code file indicate which namespaces the program will use. Usually, these namespaces belong to the .NET Framework.
    a. `include`
    b. `namespace`
    c. `public`
    d. `using`

    ANS: D

16. Code containers, such as namespaces, classes, and methods, use _____ to enclose code.
    a. braces (`{}`)
    b. asterisks (`**`)
    c. parentheses (`()`)
    d. brackets (`[]`)

    ANS: A

17. An easy way to switch between the *Designer* and the code editor is to click the _____ for the desired window. This only works if both the code file and designer file have already been opened.
    a. icon

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b. tab
c. button
d. bounding box

ANS: B

18. A(n) _____ is a method that executes when a specific event (such as clicking the mouse) takes place while an application is running.
    a. action sequencer
    b. feature coordinator
    c. event handler
    d. incident manager

    ANS: C

19. A(n) _____ event occurs on a control when the user clicks the mouse on a control while the program is running.
    a. Action
    b. Click
    c. Live
    d. Mouse

    ANS: B

20. A _____ is a small pop-up window, also known as a *dialog box,* that displays a message.
    a. standard window
    b. pop up
    c. banner
    d. message box

    ANS: D

21. If you want your code to execute a method, write a statement known as a(n) _____.
    a. event handler
    b. executor statement
    c. initialization routine
    d. method call

    ANS: D

22. Which one of the following statements correctly display the text "*Hello*" in a message box?
    a. `Messagebox("Hello")`
    b. `MessageBox.Show("Hello");`
    c. `msgbox(Hello);`
    d. `msgbox.show(Hello)`

    ANS: B

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23. When a(n) _____ appears around an object in the Visual Studio *Designer*, it indicates that the object is selected and is ready for editing.
    a. sizing handle
    b. editing icon
    c. bounding box
    d. frame

    ANS: C

24. _____ allow you to resize a selected object in the Visual Studio *Designer* by clicking and dragging the mouse when the mouse cursor becomes a two-headed arrow.
    a. Bounding boxes
    b. Sizing handles
    c. ToolTips
    d. Properties

    ANS: B

25. When you select an object in the Visual Studio *Designer*, the object's size, color, text, and other characteristics are displayed in the _____ window.
    a. *Designer*
    b. *Editing*
    c. *Object*
    d. *Properties*

    ANS: D

26. The _____ property of a form determines the text that is displayed in a form's title bar.
    a. Title
    b. Caption
    c. Name
    d. Text

    ANS: D

27. The _____ property can be used to change a form's width and height, measured in pixels.
    a. Area
    b. Resolution
    c. Size
    d. Rectangle

    ANS: C

28. When selected in the Properties window toolbar, the _____ button causes the items in the *Properties* window to be displayed in alphabetical order.
    a. Arrange
    b. Ascending

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c. Descending
d. Alphabetical

ANS: D

29. Selecting the _____ button in the *Properties* window causes the items in the window to be displayed in logical groups.
    a. Grouped
    b. Categorized
    c. Ordered
    d. Type

    ANS: B

30. The Visual Studio _____ window shows a scrollable list of controls that you can add to a form.
    a. *Collection*
    b. *Bank*
    c. *Toolbox*
    d. *Shelf*

    ANS: C

31. In the design window, you can click and drag a control to a new location when the mouse cursor is positioned inside the control and the mouse cursor becomes a _____.
    a. two-headed arrow
    b. four-headed arrow
    c. hand icon
    d. scissor icon

    ANS: B

32. To delete a control, you can select it on a form and then press the _____ key on the keyboard.
    a. Delete
    b. Z
    c. Tab
    d. X

    ANS: A

33. A Button control has a _____ property that holds a string to be displayed on the face of the button.
    a. Text
    b. Name
    c. Description
    d. Face

    ANS: A

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34. A control's _____ property identifies the control in the application's code and in the Visual Studio environment.
    a. Text
    b. Source
    c. Tag
    d. Name

    ANS: D

35. Control names are also known as _____, the same term used for variables in programs.
    a. tags
    b. identifiers
    c. values
    d. labels

    ANS: B

36. To run an application in Visual Studio, press the _____ button on the keyboard or click the *Start Debugging* button on the toolbar.
    a. Enter
    b. F5
    c. Tab
    d. Shift

    ANS: B

37. A file that contains program code is called a _____.
    a. source code file
    b. program file
    c. C# file
    d. cs file

    ANS: A

38. In programming we use the term _____ to mean a sequence of characters that could be enclosed in quotation marks "…".
    a. statement
    b. thread
    c. word
    d. string

    ANS: D

39. In C# code, _____ are required to indicate the beginning and the end of a string.
    a. single quotation marks, such as (')
    b. double quotation marks, such as (")
    c. parentheses
    d. semicolons

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ANS: B

40. Just as a period marks the end of a sentence, a _____ marks the end of a programming statement in C#.
    a. space
    b. underscore
    c. semicolon
    d. period

    ANS: C

41. When a piece of data such as 23 or “Hello” is written into a program’s code, it is called a _____.
    a. constant
    b. sentinel
    c. value
    d. literal

    ANS: D

42. When a string is written into a program’s code, it is called a(n) _____.
    a. string literal
    b. typed string
    c. encoded string
    d. string constant

    ANS: A

43. When you have a project open in Visual Studio, the time during which you build the GUI and write the application’s code is referred to as _____.
    a. prototyping
    b. design time
    c. visual planning
    d. application progression

    ANS: B

44. The time during which an application is executing is referred to as _____.
    a. up time
    b. execution
    c. run time
    d. instancing

    ANS: C

45. When you want to display text on a form but not allow the user to change the text, you use a _____.
    a. String control
    b. Label control

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c. Text control
d. Font control

ANS: B

46. The Label control can be found in the _____ group of the *Toolbox*.
    a. *Common Controls*
    b. *Containers*
    c. *Data*
    d. *Components*

    ANS: A

47. The _____ property allows you to set the font, font style, and size of a control's text.
    a. Appearance
    b. Text
    c. Font
    d. Graphics

    ANS: C

48. The _____ can be accessed from the *Properties* window by clicking the ellipses (…) appearing next to the Font property's value.
    a. *Text* designer
    b. *Font* dialog box
    c. *Text* editor
    d. *Font* selector

    ANS: B

49. Each Label control has a _____ property that allows you to display a rectangle around the control's text.
    a. Border
    b. FrameStyle
    c. Frame
    d. BorderStyle

    ANS: D

50. Which one of the following is not a valid setting for a Label control's BorderStyle property?
    a. FixedSingle
    b. None
    c. Fixed3D
    d. FixedDouble

    ANS: D

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51. Label controls have a(n) _____ property that affects the way they can be resized.
    a. Resize
    b. AutoSize
    c. SizeMode
    d. Redraw

    ANS: B

52. A _____ property can be set to one of two possible values: *True* or *False*.
    a. Boolean
    b. Binary
    c. Singular
    d. Toggle

    ANS: A

53. A Label control's _____ property can be used to change the alignment of text within the Label.
    a. TextPosition
    b. DisplayFont
    c. TextAlign
    d. HorizontalAlign

    ANS: C

54. In code, you use a(n) _____ to store a value in a control's property.
    a. string literal
    b. assignment statement
    c. dialog box
    d. constant

    ANS: B

55. In C#, the equal sign (=) is known as the _____.
    a. equality operator
    b. parity operator
    c. assignment operator
    d. transfer operator

    ANS: C

56. The standard notation for referring to a control's property in code is:
    a. `ControlName.PropertyName`
    b. `ControlName->PropertyName`
    c. `ControlName::PropertyName`
    d. `ControlName<PropertyName/>`

    ANS: A

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57. Which of the following statements would display the number 25 in a Label control named `ouputLabel`?
    a. `outputLabel.Text = 25;`
    b. `outputLabel.Text = "25";`
    c. `outputLabel(25);`
    d. `outputLabel = "25";`

    ANS: B

58. Which of the following statements would clear the text displayed in a Label control named `cityLabel`?
    a. `cityLabel.Text = "empty";`
    b. `cityLabel.Text = "none";`
    c. `cityLabel.Text = "clear";`
    d. `cityLabel.Text = "";`

    ANS: D

59. _____ is a feature of Visual Studio that provides automatic code completion as you write programming statements.
    a. IntelliSense
    b. AutoComplete
    c. Snippet
    d. CodeHelper

    ANS: A

60. You can use a(n) _____ control to display a graphic image on a form.
    a. Image
    b. Graphics
    c. Texture2D
    d. PictureBox

    ANS: D

61. Once you have created a PictureBox control, you use its _____ property to specify the image it will display.
    a. Picture
    b. Image
    c. Source
    d. Display

    ANS: B

62. _____ is the default value of the PictureBox control's SizeMode property.
    a. AutoSize
    b. Normal
    c. Zoom
    d. StretchImage

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ANS: B

63. _____ is a term that refers to an image's width to height ratio.
    a. Area
    b. Bounding box
    c. Aspect ratio
    d. UV map

    ANS: C

64. When a PictureBox control's SizeMode property is set to _____, the image is uniformly resized to fit the PictureBox without losing its original aspect ratio.
    a. Normal
    b. Zoom
    c. CenterImage
    d. StretchImage

    ANS: B

65. Most controls have a(n) _____ property that determines whether the control can be seen by the user at run time.
    a. Enabled
    b. Invisible
    c. Show
    d. Visible

    ANS: D

66. Assuming an application has a PictureBox control named `profilePictureBox`, which one of the following assignment statements will hide the PictureBox from the user at run time?
    a. `profilePictureBox.Visible = False;`
    b. `profilePictureBox.Visible = false;`
    c. `profilePictureBox.Invisible = True;`
    d. `profilePictureBox.Invisible = true;`

    ANS: B

67. _____ are short notes placed in a program's source code, explaining how the program works.
    a. Sketches
    b. Tags
    c. Comments
    d. Labels

    ANS: C

68. A(n) _____ appears on one line in a program and begins with two forward slashes (`//`).
    a. line comment

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b. short comment
c. block comment
d. documentation comment

ANS: A

69. A(n) _____ can occupy multiple consecutive lines in a program. It starts with `/*` (a forward slash followed by an asterisk), and ends with `*/` (an asterisk followed by a forward slash).
    a. line comment
    b. block comment
    c. short comment
    d. documentation comment

    ANS: B

70. _____ are used by professional programmers to embed extensive documentation in a program' source code.
    a. Line comments
    b. Block comments
    c. Documentation comments
    d. Embedded comments

    ANS: C

**True or False**

1. When you use the *Properties* window to change a control's Visible property at design time, the control will become invisible in the *Designer*.

   ANS: F

2. A control's Visible property cannot be modified in code.

   ANS: F

3. When you write the values `true` or `false` in code, they must be written in all lowercase letters.

   ANS: T

4. When a method executes, the statements in the method always execute in the order that they appear, from the beginning of the method to the end of the method.

   ANS: T

5. Comments are short notes intended for the compiler to read and interpret.

   ANS: F

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6. In C#, there are three types of comments: line comments, block comments, and compilation comments.

   ANS: F

7. A line comment does not have to occupy an entire line, so a line comment can appear after an executable statement.

   ANS: T

8. Block comments make it easier to write long explanations because you do not have to mark every line with a comment symbol.

   ANS: T

9. Writing comments should be avoided, especially for large and complex programs.

   ANS: F

10. The indentation of statements inside methods, classes, and namespaces is a convention that virtually all programmers follow.

    ANS: T

11. The standard Windows close button is the only way to close a running application in Visual Studio.

    ANS: F

12. If you double-click an error message in the Error List window, the code editor will highlight and display the line of code that caused the error.

    ANS: T

13. Each form and control in an application's GUI is assigned a default name.

    ANS: T

14. The appearance and other characteristics of a GUI object are determined by the object's properties.

    ANS: T

15. The *Properties* window contains a scrollable list of properties, which has two columns: the left column shows each property's name, and the right column shows each property's value.

    ANS: T

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16. Changing a form's Text property will change the form's name.

    ANS: F

17. When the properties in the *Properties* window are displayed alphabetically, the (name) property appears at the bottom of the list.

    ANS: F

18. To add a control to a form, you find it in the *Toolbox* and then double-click it.

    ANS: T

19. You cannot click and drag controls from the *Toolbox* onto a form.

    ANS: F

20. Once a control has been added to a form, it cannot be deleted.

    ANS: F

21. To remove a control from a form, you select it and then press the F4 key on the keyboard.

    ANS: F

22. When you create Button controls, they are automatically given default names such as `button1`, `button2`, and so forth.

    ANS: T

23. When Button control is created, its Text property is initially set to the same value as the Button control's name.

    ANS: T

24. Text displayed on a button should hint at what the button will do when it is clicked.

    ANS: T

25. A control's name should reflect the purpose of the control.

    ANS: T

26. C# identifiers can contain spaces after the first character.

    ANS: F

27. The first character of a C# identifier must be one of the letters a through z or A through Z or an underscore character (_).

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ANS: T

28. A *Hello World* program is a simple program that merely displays the words "*Hello World*" on the screen.

ANS: T

29. The only way to run a program in Visual Studio is by clicking the *Start Debugging* button on the toolbar.

ANS: F

30. C# source code files always end with the .cs extension.

ANS: T

31. The Program.cs file contains auto-generated code that serves as an outline to which you should add your own code as you develop the application.

ANS: F

32. It is important that you do not modify the contents of the Form1.cs file because doing so will prevent the application from executing.

ANS: F

33. C# code is primarily organized in three ways: namespaces, classes, and methods.

ANS: T

34. C# code is organized using namespaces, which are contained inside classes, which are contained inside methods.

ANS: F

35. Each opening brace ({) of a code container must have a matching closing brace (}) later in the program.

ANS: T

36. You can detach the code editor window and use the mouse to drag it to another part of the screen.

ANS: T

37. When an event handler is generated for a control by Visual Studio, it doesn't do anything until you add your own code.

ANS: T

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38. The .NET Framework provides a method named `MessageBox.Show` that you can use in Visual C# to display a pop-up message box.

    ANS: T

39. Programmers refer to the act of executing a method as *calling* the method.

    ANS: T

40. Single quotation marks can be used in program code to mark the beginning and ending of a string.

    ANS: F

41. Ending a programming statement with a semicolon is not required in C#.

    ANS: F

42. If you wish to create a Click event handler for a control in Visual Studio, it is not necessary to double-click the control in the *Designer* first.

    ANS: F

43. In C#, string literals must be enclosed in double quotation marks.

    ANS: T

44. Programmers sometimes say that literals are values that are *soft coded* into a program because the value of a literal can be changed while the program is running.

    ANS: F

45. In a C# application, all buttons on a form must share the same Click event handler in form's source code file.

    ANS: F

46. At run time, you should not use the *Designer*, *Toolbox*, *Properties* window, or code editor to modify the program.

    ANS: F

47. The terms *run time*, *runtime*, and *run-time* all typically mean the same thing.

    ANS: T

48. Once you have placed a Label control on a form, set its Text property to the string you want to display.

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ANS: T

49. A Label control's Text property is initially set to the same value as the Label control's name.

ANS: T

50. A control's name should never be changed to something other than the default name that Visual Studio gives it.

ANS: F

51. A Label control's BorderStyle property is set to FixedSingle by default.

ANS: F

52. To change the BorderStyle property of a Label control in the *Designer*, select it in the *Properties* window and then click the down-arrow button that appears next to the value.

ANS: T

53. By default, a Label control's text is aligned with the top and left edges of the label's bounding box.

ANS: T

54. The assignment operator assigns the value that appears on its left side to the item that appears on its right side.

ANS: F

55. Because the Label control's Text property can accept only strings, you cannot display a number in a label.

ANS: F

56. In code, if you want to clear the text that is displayed in a Label control, you can assign an empty string (`""`) to the control's Text property.

ANS: T

57. When typing a statement in code, press the Tab key on the keyboard to accept suggestions made by the IntelliSense feature of Visual Studio.

ANS: T

58. In the *Designer*, the PictureBox tool is located in the *Common Controls* group in the *Toolbox* window.

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ANS: T

59. When the PictureBox control's SizeMode property is set to *AutoSize*, the PictureBox control is automatically resized to fit the size of the image being displayed.

ANS: T

60. PictureBox controls have a BorderStyle property, but it does not work like a Label control's BorderStyle property.

ANS: F

61. Buttons are the only controls that respond to Click events.

ANS: F

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