

Visual Basic 2012 How to Program, 6/e

Chapter 1 – Introduction to Computers, the Internet and Visual Basic

1.1 Introduction

1. Computers process data, using sets of instructions called _____.

- a) softgoods
- b) computer programs
- c) recipes
- d) hardware

Answer: b. Computer programs.

2. _____-oriented programming models real-world entities with software counterparts.

- a) Action
- b) Model
- c) Object
- d) Procedure

Answer: c. Object.

1.2 Hardware and Moore's Law

1. The cost of computing power and communications bandwidth has been

- a) about the same each year.
- b) going up.
- c) going down dramatically.
- d) undetermined.

Answer: c. Going down dramatically.

2. _____ Law states that every year or two, the computing power of computers approximately doubles without any increase in price.

- a) Gate's
- b) Moore's
- c) Henderson's
- d) None of the above.

Answer: b. Moore's.

1.3 Data Hierarchy

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

- a. The impressive functions performed by computers involve only the simplest manipulations of 1s and 2s.
- b. ASCII is a popular subset of Unicode.

- c. Fields are composed of characters or bytes.
- d. On some operating systems, a file is viewed simply as a sequence of bytes.

Answer: a. The impressive functions performed by computers involve only the simplest manipulations of 1s and 2s . It's 1s and 0s.

2. Which of the following data items are arranged from the smallest to the largest in the data hierarchy.

- a. records, characters, fields, bits, files.
- b. bits, files, fields, records, characters.
- c. fields, characters, bits, files, records.
- d. bits, characters, fields, records, files.

Answer: d. bits, characters, fields, records, files.

1.4 Computer Organization

1. Every computer can be divided into six basic units. They are:

- a) monitor, mouse, keyboard, hard drive, processor and disk drives.
- b) input, output, primary storage, secondary storage, memory and ALU.
- c) input, output, memory, ALU, CPU and secondary storage.
- d) input, output, primary storage, secondary storage, CPU, memory.

Answer: c. Input, output, memory, ALU, CPU and secondary storage.

2. The purpose of the ALU is:

- a) to store permanent data.
- b) to store temporary data.
- c) to cool the computer down and prevent overheating.
- d) to perform basic math and logical comparisons for the computer.

Answer: d. To perform basic math and logical comparisons for the computer.

3. Input devices are things such as a keyboard or mouse that allow the computer to receive data.

Answer: True.

4. The CPU supervises the operation of a computer's input unit, output unit, memory unit, secondary storage unit and arithmetic and logic unit.

Answer: True.

5. Secondary storage stores data only while the computer is turned on.

Answer: False. Secondary storage is used for long term storage of data, even when the computer is turned off.

1.5 Machine Languages, Assembly Languages and High-Level Languages

1. The order of simplicity to a human of the three basic types of languages is: (easiest to hardest)

- a) high-level, assembly, machine
- b) assembly, machine, high-level
- c) machine, high-level, assembly
- d) machine, assembly, high-level

Answer: a. High-level, assembly, machine.

2. Machine languages _____.

- a) are machine dependent.
- b) are universal between all machines.
- c) consist of numbers and letters.
- d) need to be translated in order for the machine to understand commands.

Answer: a. Are machine dependent.

3. An assembler converts assembly language programs into machine language.

Answer: True

4. High-level computer language programs are directly understood by a computer.

Answer: False. They are easily understood by humans, but must be converted into machine language in order for a computer to understand them.

1.6 Object Technology

1. The color, size, weight and speed of an object are examples of its _____.

- a) attributes.
- b) behaviors.
- c) classes.
- d) requirements.

Answer: a. Attributes.

2. Almost any _____ can be reasonably represented as an object.

- a) verb
- b) behavior
- c) adjective
- d) noun

Answer: d. Noun.

3. Objects normally are not allowed to know how other objects are implemented. This is called _____.

- a) incarceration
- b) information hiding
- c) blindfolding

d) inheritance

Answer: b. Information hiding.

1.7 Internet and the World Wide Web

1. The W3C is an organization that:

- a) maintains and runs the internet.
- b) removes junk and broken links from the web.
- c) developed e-mail.
- d) helps to develop web technologies.

Answer: d. Helps to develop web technologies.

2. The _____ is a collection of hardware and software associated with the Internet that allows computer users to locate and view multimedia-based documents on almost any subject.

- a) HyperText Markup Language
- b) HyperText Transfer Protocol
- c) World Wide Web
- d) CERN

Answer: c. World Wide Web.

3. One of W3C's primary goals was to make the web universally accessible to everyone regardless of disabilities, language or culture.

Answer: True.

1.8 Visual Basic

1. Which of the following is/are *true* about Visual Basic:

- a) It's object oriented.
- b) It makes Windows programming easier.
- c) It's event driven.
- d) All of the above.

Answer: d. All of the above.

2. Visual Basic evolved from the _____ programming language.

- a) assembly
- b) BASIC
- c) DOS
- d) Java.

Answer: b. BASIC.

3. Visual Basic _____.

- a) was intended for expert programmers.
- b) makes the development of Windows applications easier.

- c) was derived from BASIC.
- d) a and b.
- e) b and c.

Answer: e. Both (b) and (c).

4. What was the most important capability of C++ that C did not provide?

- a) networking technology
- b) data type technology
- c) object-oriented technology
- d) adding dynamic content to web pages.

Answer: c. Object-oriented technology.

5. Visual Basic is an event-driven, fully object-oriented visual programming language.

Answer: True.

6. C “spruces up” C++ with object-oriented programming capabilities.

Answer: False. C++ “spruces up” C with object-oriented programming capabilities.

7. C# is an object-oriented language that has roots in C, C++ and Java.

Answer: True.

8. Unlike C#, Visual Basic is object oriented and contains a powerful class library.

Answer: False. Object-oriented capabilities and a powerful class library are similarities between these two languages.

1.9 Microsoft's .NET

1. Part of the .NET Initiative is Microsoft's _____ technology, which enables you to create web applications:

- a) class library
- b) VM
- c) CLR
- d) ASP.NET

Answer: d. ASP.NET.

2. Microsoft's .NET Framework _____ .

- a) executes applications.
- b) contains a class library
- c) provides many capabilities for building Visual Basic applications.
- d) All of the above.

Answer: d. All of the above.

3. Developers can create .NET applications only in Visual Basic.

Answer: False. Developers can create a .NET application in any .NET-compatible language.

1.10 Microsoft Windows® Operating System

1. In the mid-1980s, Microsoft developed the _____ operating system based on a graphical user interface with buttons, textboxes, menus and other graphical elements.

- a) Unix
- b) Macintosh
- c) Linux
- d) Windows

Answer: d. Windows.

2. _____ are software systems that make using computers more convenient for users, application developers and system administrators.

- a) Operating systems
- b) Applications
- c) GUIs
- d) None of the above.

Answer: a. Operating systems.

1.11 Windows 8 for Smartphones

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

- a) Windows Phone 8 is a pared down version of Windows 8 designed for smartphones.
- b) Windows Phone 8 has the same core operating systems services as Windows 8, including a common file system, security, networking, media and Internet Explorer 10 (IE10) web browser technology.
- c) Windows Phone 8 has all of the features of Windows 8 plus the features necessary for smartphones.
- d) None of the above.

Answer: c. Windows Phone 8 has *only* the features necessary for smartphones, allowing them to run efficiently, minimizing the burden on the device's resources.

1.12 Windows Azure™ and Cloud Computing

1. Microsoft's _____ is a cloud computing platform that allows you to develop, manage and distribute your apps in the cloud.

- a) Common Language Runtime
- b) Windows Azure
- c) virtual machine
- d) Windows 8

Answer: b. Windows Azure.

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

- a) Cloud computing allows you to use software, hardware and information stored in the “cloud”—i.e., accessed on remote computers via the Internet and available on demand—rather than having it stored on your personal computer.

b) Cloud computing services allow you to increase or decrease resources to meet your needs at any given time, so they can be more cost effective than purchasing expensive hardware to ensure that you have enough storage and processing power to meet your needs at their peak levels.

c) Businesses using cloud computing services must still manage the applications, which can be costly.

d) Both (a) and (c).

Answer: c. Businesses using cloud computing services must still manage the applications, which can be costly.

1.13 Visual Studio Integrated Development Environment

1. Visual Basic programs are created using Microsoft's Visual Studio—a collection of software tools called a(n) _____.

a) operating system

b) Integrated Programming Environment

c) Integrated Development Environment

d) Class Library.

Answer: c. Integrated Development Environment.

1.14 Test-Driving the Visual Basic Advanced Painter Application

No questions.