

Experiencing MIS, 9e (Kroenke)
Chapter 4 Hardware and Software

1) The _____ selects instructions, processes them, performs arithmetic and logical comparisons, and stores results of operations in memory.

- A) central processing unit (CPU)
- B) random access memory (RAM)
- C) hard disk
- D) plotter

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

2) A dual-processor computer has _____ CPUs.

- A) eight
- B) four
- C) two
- D) sixteen

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

3) _____ computers have four central processing units (CPUs).

- A) Quad-processor
- B) Dual-processor
- C) Tri-processor
- D) Tetra-processor

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

4) Which of the following statements is TRUE of a server?

- A) It stores the results of computations in the main memory.
- B) It provides access only for one user at a time.
- C) It supports processing requests from remote computers.
- D) It creates a backup of all information within a system.

Answer: C

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

5) A _____ typically includes a collection of thousands of servers.

- A) cache district
- B) bar server
- C) server farm
- D) client station

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

6) Computers represent data using binary digits called _____.

- A) dots
- B) pixels
- C) tags
- D) bits

Answer: D

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

7) Bits are grouped into 8-bit chunks called _____.

- A) bytes
- B) kilobytes
- C) terabytes
- D) megabytes

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

8) One _____ is equivalent to 1,024 kilobytes.

- A) terabyte
- B) megabyte
- C) gigabyte
- D) bit

Answer: B

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

9) One _____ is equivalent to 1,024 gigabytes.

- A) petabyte
- B) terabyte
- C) megabyte
- D) kilobyte

Answer: B

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

10) A _____ is a collection of 1,024 bytes.

- A) kilobyte
- B) megabyte
- C) gigabyte
- D) terabyte

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

11) The speed of a central processing unit (CPU) is expressed in cycles called _____.

- A) hertz
- B) bits
- C) bytes
- D) pixels

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

12) A device's cache and main memory are _____.

- A) volatile
- B) nonvolatile
- C) stable
- D) nonperishable

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

13) Which of the following is an example of nonvolatile memory?

- A) cache memory
- B) main memory
- C) magnetic disk
- D) RAM drive

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

14) The memory of a device is said to be nonvolatile if _____ when the system is restarted.

- A) its contents are destroyed
- B) the memory becomes unusable
- C) a new memory is replicated
- D) its contents are retained

Answer: D

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

15) If the contents of a device are lost when the power is turned off, the memory of the device is said to be _____.

- A) nonvolatile
- B) volatile
- C) random
- D) discrete

Answer: B

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

16) Computer hardware consists of electronic components that input, process, output, and store data.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

17) The central processing unit is referred to as the brain of a computer.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

18) High-end computers can have as many as 16 central processing units (CPUs).

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

19) The speed and costs of central processing units are the same across multiple hardware vendors.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

20) Some computers have two or more central processing units (CPUs).

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

21) The central processing unit (CPU) of a computer reads data and instructions only from a read-only memory.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

22) Optical disks are non-portable storage devices.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

23) USB flash drives are used to back up data and transfer it from one computer to another.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

24) Main memory is also called read-only memory.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

25) A hard drive is much faster than a solid-state storage device.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

26) A server farm can process only one service request per minute.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

27) A bit is either a zero or a one.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

28) A specification that a computing device has 100 million bytes of memory means that the device could hold up to 100 million characters.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

29) One gigabyte is equivalent to 1,024 terabytes.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

30) An exabyte is equivalent to 1,024 petabytes.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

31) A terabyte is a larger unit than a petabyte.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

32) A computer's performance depends on the speed of its central processing unit (CPU).

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

33) Magnetic and optical disks are examples of nonvolatile memory.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

34) Saving one's work frequently is advised to tackle the issue of memory volatility.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

35) Explain the basic constituents and the different types of computer hardware.

Answer: Computer hardware consists of electronic components and related gadgetry that input, process, output, and store data according to instructions encoded in computer programs or software. All hardware today has more or less the same components, at least to the level that is important to us. The common types of computer hardware used are:

- a. Personal computers (PCs): PCs are classic computing devices that are used by individuals.
- b. Server: It is a computer that is designed to support processing requests from many remote computers and users.
- c. Clients: PCs, tablets, phablets, and smartphones that access servers are called clients.
- d. Server farm: It is a collection of, typically, thousands of servers.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

36) Briefly describe the functions and working of a central processing unit (CPU).

Answer: Every computer has a central processing unit (CPU), which is sometimes called "the brain" of the computer. The CPU selects instructions, processes them, performs arithmetic and logical comparisons, and stores results of operations in memory. Some computers have two or more CPUs. A computer with two CPUs is called a dual-processor computer. Quad-processor computers have four CPUs. Some high-end computers have 16 or more CPUs. CPUs vary in speed, function, and cost. The CPU works in conjunction with main memory. The CPU reads data and instructions from memory, and then stores the results of computations in main memory. In addition to random access memory, RAM, and one or more CPUs, all computers also include storage hardware, which is used to save data and programs.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

37) Differentiate between client and server computers.

Answer: A server is a computer that is designed to support processing requests from many remote computers and users. Personal computers (PCs), tablets, and smartphones that access servers are called clients. A server is essentially a PC on steroids, and it differs from a PC principally because of what it does. The relationship between PCs and servers is similar to the relationship between clients and servers at a typical restaurant: In short, servers take requests from clients and then bring them things. In restaurants, these things are food, drinks, and silverware. Similarly, in computing environments, servers can send webpages, email, files, or data to PCs or other devices.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

38) The _____ refers to the idea in which objects are becoming connected to the Internet so that they can interact with other devices, applications, or services.

A) Premium Internet

B) Symbian

C) Internet of Things

D) Server Farm

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

39) Which of the following will likely be an advantage of self-driving cars?

A) Fewer cars will be shared by family members.

B) More auto loans will be taken.

C) More insurance policies will be taken.

D) Fewer accidents will occur.

Answer: D

AACSB: Analytical Thinking

Difficulty: 2: Moderate

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

40) Which of the following will likely be a disadvantage of self-driving cars?

- A) There will be more accidents.
- B) More parking lots will have to be built.
- C) More people will use cars and avoid planes or trains.
- D) There will be more stress during commute.

Answer: C

AACSB: Analytical Thinking

Difficulty: 2: Moderate

Course LO: Discuss the ethical and social issues raised by the use of information systems.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

41) Objects that are connected to the Internet are increasingly being embedded with hardware capable of sensing, processing, and transmitting data.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Discuss the role of information systems in supporting business processes.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

42) Objects connected to a network can share data with any other application, device, or service.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

43) How can the Internet of Things (Iot) act as a disruptive force to change the way in which businesses function?

Answer: The Internet of Things is the idea that objects are becoming connected to the Internet so that they can interact with other devices, applications, or services. In other words, everyday objects are increasingly being embedded with hardware capable of sensing, processing, and transmitting data. These objects can then connect to a network and share data with any other application, service, or device. Over time, mobile phones became smartphones by adding more processing power, more memory, Internet access, Wi-Fi connectivity, and the ability to interconnect with other devices and applications. People thus began to use their mobile phones much differently than before. This shift also changed the way businesses operate. This shift away from "dumb" devices to interconnected smart devices is not lost on businesses. Consumers like smart devices and are willing to pay more for them. Accordingly, businesses want to improve the existing devices they manufacture into smart devices, and then sell them for twice as much.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

44) A(n) _____ is a program that controls a computer's resources.

- A) cache
- B) operating system
- C) central processing unit
- D) data bus

Answer: B

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

45) Which of the following statements is TRUE of an operating system?

- A) It does a lot of application-specific work.
- B) It comes in particular versions that are written for particular types of hardware.
- C) It does only little or no memory management.
- D) It has to be the same across all computers in a network in order to process application programs.

Answer: B

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

46) _____ are programs that are written to use a particular operating system.

- A) Web applications
- B) Thin-client applications
- C) Native applications
- D) Vertical-market applications

Answer: C

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

47) Application programs that run within a browser, without the need to be preinstalled on client computers, are referred to as _____.

- A) thin-client applications
- B) native applications
- C) desktop programs
- D) thick-client applications

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

48) Which of the following statements is TRUE of thick-client applications?

- A) They are application programs that need not be preinstalled on the client computer.
- B) They mostly run on a single operating system.
- C) They do not need a server connection to run.
- D) They require nothing more than a browser to function.

Answer: B

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

49) Which of the following is an open-source operating system?

- A) Unisys
- B) Windows
- C) Linux
- D) Mac OS

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

50) Which of the following is the most widely used operating system in business?

- A) Linux
- B) Windows
- C) Unix
- D) Mac OS

Answer: B

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

51) Host operating systems that run one or more operating systems as applications are referred to as _____.

- A) application programs
- B) server farms
- C) server operating systems
- D) virtual machines

Answer: D

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

52) _____ is the process by which one physical computer hosts many different virtual computers within it.

- A) Machine coding
- B) Virtualization
- C) License sharing
- D) Cloud computing

Answer: B

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

53) When individuals buy a computer program, they buy a license to _____.

- A) convert the program into open source software
- B) modify the features of the program
- C) use the program
- D) sell the program

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Discuss the key issues involved in managing the components of IT infrastructure.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

54) _____ software provides capabilities that are common across all organizations and industries.

- A) Vertical-market application
- B) Custom-developed
- C) Horizontal-market application
- D) Off-the-shelf with alterations

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

55) McCann Systems, a leading IT firm, develops a customized billing software to meet the needs of its individual customers. In this case, the software developed by the firm is referred to as a(n) _____.

- A) vertical-market application software
- B) horizontal-market application software
- C) open source software
- D) application simulation software

Answer: A

AACSB: Reflective Thinking

Difficulty: 3: Challenging

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Application

56) Which of the following refers to software that is developed for a specific and unique need?

- A) simulation software
- B) horizontal-market application software
- C) one-of-a-kind application software
- D) open source software

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

57) Which of the following is an advantage of custom-developed software?

- A) They are less expensive than off-the-shelf software.
- B) They can be tailored according to an organization's requirements.
- C) They are easier to develop than using horizontal applications.
- D) They need not be adapted to changing needs.

Answer: B

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

58) _____ is a type of computer software that is installed into devices such as printers, print servers, and various types of communication devices.

- A) Firmware
- B) Freeware
- C) Slate
- D) Server farm

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

59) Although an operating system does a lot of application-specific work, it does little to make the computer usable.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

60) Both client and server computers must use the same operating system.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

61) Application programs can be processed by both clients and servers.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

62) Microsoft Access and Microsoft Word are examples of thin-client applications.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

63) Firefox, Chrome, Opera, and Edge (formerly Internet Explorer) are examples of thick-client applications.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

64) A virtual machine does not have a disk space.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

65) A host operating system controls the activities of the virtual machines it hosts.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

66) Modifying an existing firmware requires knowledge of special programs and techniques.

Answer: TRUE

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

67) What is an operating system? How is it different from an application program?

Answer: Every computer has an operating system, which is a program that controls that computer's resources. The functions of an operating system are to read and write data, allocate main memory, perform memory swapping, start and stop programs, respond to error conditions, and facilitate backup and recovery. In addition, the operating system creates and manages the user interface, including the display, keyboard, mouse, and other devices. Although the operating system makes the computer usable, it does little application-specific work. An application program is any program designed to perform a specific function for a user or for another application program. Both clients and servers can process application programs and the application's design determines whether the client, the server, or both, process it. If one wants to check the weather or access a database, he or she needs application programs such as an iPad weather application or Oracle's customer relationship management (CRM) software. Some application programs are general purpose, such as Microsoft Excel or Word. Other application programs provide specific functions.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

68) What are the two important software constraints? Explain with suitable examples.

Answer: First, remember that particular versions of an operating system are written for particular types of hardware. For example, Microsoft Windows works only on processors from Intel and from companies that make processors that conform to the Intel instruction set (i.e., the commands that a CPU can process). With other operating systems, such as Linux, many versions exist for many different instruction sets.

Second, be aware that two types of application programs exist: native and Web. Native applications are programs that are written to use a particular operating system, while Web applications run within a computer browser and can therefore run on any type of computer.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

69) Explain the four major nonmobile client operating systems and their functions.

Answer: The four major nonmobile client operating systems are Windows, Mac OS, Unix, and Linux.

1. The most popular operating system is Microsoft Windows. Some version of Windows resides on more than 88 percent of the world's desktops, and when considering just business users, the figure is more than 95 percent. The most recent client version of Windows is Windows 10.

2. Apple Computer, Inc. developed its own operating system for the Macintosh, Mac OS. The current version is macOS Mojave. Macintosh computers were first used primarily by graphic artists and workers in the arts community.

3. Unix is an operating system that was developed at Bell Labs in the 1970s. It has been the workhorse of the scientific and engineering communities since then.

4. Linux is a version of Unix that was developed by the open source community. This community is a loosely coupled group of programmers who mostly volunteer their time to contribute code to develop and maintain Linux. The open source community owns Linux, and there is no fee to use it. Linux can run on client computers, but is by far most popular as a server OS.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

70) What is unique about Linux as an operating system?

Answer: Linux is a version of Unix that was developed by the open source community. This community is a loosely coupled group of programmers who mostly volunteer their time to contribute code to develop and maintain Linux. The open source community owns Linux, and there is no fee to use it. Linux can run on client computers, but usually only when budget is of paramount concern. By far, Linux is most popular as a server OS. According to DistroWatch.com, the five most popular versions of Linux as of 2019.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

71) What is virtualization?

Answer: Virtualization is the process by which one physical computer hosts many different virtual (not literal) computers within it. One operating system, called the host operating system, runs one or more operating systems as applications. Those hosted operating systems are called virtual machines (vm). Each virtual machine has disk space and other resources allocated to it. The host operating system controls the activities of the virtual machines it hosts to prevent them from interfering with one another. With virtualization, each vm is able to operate exactly the same as it would if it were operating in a stand-alone, nonvirtual environment.

Three types of virtualization exist:

- PC virtualization
- Server virtualization
- Desktop virtualization

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the components of an information system (IS).

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

72) Explain how computer programs are licensed to individuals and organizations.

Answer: When a person buys a computer program, it does not mean actually buying that program. Instead, he is buying a license, which is the right to use that program.

Large organizations do not buy a license for each computer user. Instead, they negotiate a site license, which is a flat fee payment for the right to install the product (operating system or application) on all of that company's computers or on all of the computers at a specific site.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

73) What are the different categories of application programs?

Answer: Application software consists of programs that perform a service or a function. Some application programs are general purpose. Other application programs provide specific functions.

1. Horizontal-market application software provides capabilities common across all organizations and industries. Word processors, graphics programs, spreadsheets, and presentation programs are all horizontal-market application software. Examples of such software are Microsoft Word, Excel, and PowerPoint.

2. Vertical-market application software serves the needs of a specific industry. Examples of such programs are those used by dental offices to schedule appointments and bill patients. Vertical applications usually can be altered or customized.

3. One-of-a-kind application software is developed for a specific, unique need. The U.S. Department of Defense develops such software, for example, because it has needs that no other organization has.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

74) What are the drawbacks of developing custom application software for an organization?

Answer: Custom development is difficult and risky. Staffing and managing teams of software developers is challenging. Managing software projects can be daunting. Many organizations have embarked on application development projects only to find that the projects take twice as long, or longer, to finish than planned. Cost overruns of 200 and 300 percent are not uncommon while developing custom application software.

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

75) What is firmware?

Answer: Firmware is computer software that is installed into devices such as printers, print servers, and various types of communication devices. The computer software is coded just like other software, but it is installed into special, read-only memory in the printer or other device. In this way, the program becomes part of the device's memory; it is as if the program's logic is designed into the device's circuitry. Users do not need to load firmware into the device's memory. Firmware can be changed or upgraded, but this is normally a task for IS professionals. The task is easy, but it requires knowledge of special programs and techniques that most business users choose not to learn.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

76) _____ is a computer code that is written by humans and understandable by humans.

- A) Bar code
- B) Machine code
- C) Source code
- D) Overhead code

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.4: Is Open Source Software a Viable Alternative?

Classification: Concept

77) Open source software is typically free, modifiable, and its source code is publicly available.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.4: Is Open Source Software a Viable Alternative?

Classification: Concept

78) Any programmer or student can access and alter the source code of a closed source project.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.4: Is Open Source Software a Viable Alternative?

Classification: Concept

79) Modifications to the source code of an open source project cannot be added to the project.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.4: Is Open Source Software a Viable Alternative?

Classification: Concept

80) How do open source projects work? How is it different from closed source projects?

Answer: The term open source means that the source code of the program is available to the public. Source code is computer code as written by humans and that is understandable by humans. Source code is compiled into machine code that is processed by a computer. Machine code is, in general, not understandable by humans and cannot be modified. In a closed source project, like Microsoft Office, the source code is highly protected and only available to trusted employees and carefully vetted contractors. The source code is very well protected. Only those trusted programmers can make changes to a closed source project. With open source, anyone can obtain the source code from the open source project's Web site. Programmers alter or add to this code depending on their interests and goals. In most cases, programmers can incorporate open source code into their own projects. They may be able to resell those projects depending on the type of license agreement the project uses. Open source succeeds because of collaboration. A programmer examines the source code and identifies a need or project that seems interesting. He or she then creates a new feature, redesigns or reprograms an existing feature, or fixes a known problem. That code is then sent to others in the open source project to evaluate the quality and merits of the work and to add it to the product, if appropriate.

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.4: Is Open Source Software a Viable Alternative?

Classification: Concept

81) All of the following hardware is a type of tablet EXCEPT _____.

A) Mac Pro

B) iPad

C) Nexus

D) Surface

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

82) Solid-state storage is much faster than magnetic storage.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

83) A _____ combines the functionality of a smartphone with a screen the size of a tablet.

- A) phablet
- B) small laptop
- C) mini tablet
- D) server

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

84) An e-book reader is considered a type of tablet.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

85) All of the following items make a phone "smart" EXCEPT _____.

- A) having Wi-Fi connected
- B) having Internet access
- C) a bigger screen
- D) lots of processing power

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

86) Consumers like smart devices but will not pay a premium for them.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

87) The Internet of Things (IoT) using smart devices can help corporations use less energy.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

88) If you purchased a pair of glasses that showed you virtual arrows on the street so you know when to turn, the glasses use _____.

A) virtual reality

B) augmented reality

C) a sense of presence

D) mixed reality

Answer: B

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

89) Virtual reality uses _____ to create a completely immersive experience for the user.

A) a strong sense of presence

B) augmented reality

C) glasses

D) mixed reality

Answer: B

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

90) Explain the difference between augmented reality and mixed reality. Include examples.

Answer: Augmented reality is the altering of reality by overlaying digital information on real-world objects. Examples may vary. For example, users could read virtual emails in the air.

Mixed reality is the combination of the real physical world with interactive images or objects.

Examples may vary. For example, creating a 3D model of your city and showing a virtual tornado in the city with the ability to manipulate its path. Also, watching a live 3D sporting event in your living room.

AACSB: Information Technology

Difficulty: 3: Challenging

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

91) Because digital reality is still evolving, it is difficult to know how it will be used in the future.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

92) There are no self-driving cars on the road today.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

93) 3D printing is a disruptive force.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

94) 3D printing only prints plastic materials.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

95) Provide an example of 3D printing.

Answer: Examples may vary.

Nike has used 3D printing to improve the way it designs and creates shoes. It recently used a 3D printer to create custom 3D-printed running shoes called Nike Flyprint for marathon runner Eliud Kipchoge.

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Explain how IS can be used to gain and sustain competitive advantage.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

96) There are two types of application programs: native and non-native.

Answer: FALSE

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

97) _____ is a popular mobile client worldwide, but not so much in North America.

A) Windows

B) Linux

C) Symbian

D) Blackberry OS

Answer: C

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

98) Macintosh (MAC) computers only run the macOS operating system.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

99) Android is licensed by Windows.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

100) Open source succeeds primarily because _____.

A) of collaboration

B) it is free

C) it is easy to use

D) people are tired of Microsoft

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.4: Is Open Source Software a Viable Alternative?

Classification: Concept

101) Source code can only be viewed on closed source projects.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.4: Is Open Source Software a Viable Alternative?

Classification: Concept

102) According to the text, computer hardware is being integrated into all of the following devices EXCEPT _____.

A) dry erase markers

B) toothbrushes

C) glasses

D) watches

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

103) Which storage capacity size is considered the largest?

A) 4 terabytes (TB)

B) 1.2 zettabytes (ZB)

C) 12 gigabytes (GB)

D) 1026 bytes

Answer: B

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

104) Leon has a major paper due for class. His paper is located in main memory only. What should Leon do to make sure he does not lose his paper?

- A) Use different computers.
- B) Keep all of his roommates away from the power cord.
- C) Save frequently.
- D) Write on notebook paper first and then type it into the computer.

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.1: What Do Business Professionals Need to Know About Computer Hardware?

Classification: Concept

105) Cryptocurrencies are _____ that use cryptographic protections to manage and record secure transactions.

- A) digital-only currencies
- B) secret currencies
- C) bank backed currencies
- D) foreign currencies

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

106) Which of the following is an example of a cryptocurrency?

- A) Bonds
- B) Bitcoin
- C) PayPal
- D) Euro

Answer: B

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

107) Which of the following is NOT a benefit of using cryptocurrencies?

- A) Cryptocurrency is easier to use than traditional payments methods.
- B) Traditional payments are faster than cryptocurrency payments.
- C) Consumers holding cryptocurrencies are protected from inflation.
- D) Cryptocurrencies have little to no fees.

Answer: B

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

108) What is the smallest unit of bitcoin?

- A) Fiat
- B) Bit
- C) Satoshi
- D) Yen

Answer: C

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

109) _____ is the decentralized public ledgering system used to record cryptocurrency transactions.

- A) Satoshi
- B) The Federal Reserve method
- C) First-In/Last-Out (FILO)
- D) Blockchain

Answer: D

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

110) What is a cryptocurrency? Describe why it is an important disruptive force.

Answer: Cryptocurrencies are digital-only currencies that use cryptographic protections to manage and record secure transactions. Cryptocurrencies are an important disruptive force because of their potential to transform world economies.

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

111) Fiat is the smallest unit of a bitcoin.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

112) A benefit of cryptocurrency is the value can never be less than one dollar.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

113) Describe the benefits of cryptocurrencies.

Answer: There are lots of reasons to love cryptocurrencies. Compared to traditional payment methods, cryptocurrency transactions are faster, easier, and have little to no fees. Governments can't easily monitor, tax, or seize cryptocurrencies. Finally consumers holding cryptocurrencies are somewhat protected from inflation.

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.2: How Can New Hardware Affect Competitive Strategies?

Classification: Concept

114) Android is a mobile operating system licensed by _____.

A) Google

B) Microsoft

C) Apple

D) Debian

Answer: A

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

115) MacOS is only used by graphic artists and workers in the arts community.

Answer: FALSE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

116) With Intel processor the macOS can run Windows and the macOS.

Answer: TRUE

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.3: What Do Business Professionals Need to Know About Software?

Classification: Concept

117) Who is the father of the open source software movement?

A) Richard Matthew Stallman

B) Al Gore

C) Steve Jobs

D) Bill Gates

Answer: A

AACSB: Information Technology

Difficulty: 2: Moderate

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.4: Is Open Source Software a Viable Alternative?

Classification: Concept

118) Why is open source software being considered "free" less of an advantage than one might think?

Answer: In some instances, the support and operational costs related to an open source application swamp the initial licensing fee for an existing proprietary application that meets a company's needs.

AACSB: Information Technology

Difficulty: 1: Easy

Course LO: Describe the major types of computer hardware and software used by companies.

Learning Obj: LO 4.4: Is Open Source Software a Viable Alternative?

Classification: Concept