

Essentials of Systems Analysis and Design, 6e (Valacich)
Chapter 2 The Sources of Software

1) A company may consider outsourcing if it feels that its core mission does not involve managing an information systems unit and that it might achieve more effective computing by turning over all of its operations to a more experienced, computer-oriented company.

Answer: TRUE

Explanation: Outsourcing is something that an organization may consider if it does not have in-house staff to manage the information system and its development.

L.O.: 2.1 Explain outsourcing.

CLLO: Explain how IS can be used to gain and sustain competitive advantage

Classification: Synthesis

AACSB: Information Technology, Reflective Thinking

2) Outsourcing can include having a firm develop and run another firm's application on its computers.

Answer: TRUE

Explanation: There are many applications today which are done as software as a service, where another organization runs an application on their own servers for a fee.

L.O.: 2.1 Explain outsourcing.

CLLO: Explain how IS can be used to gain and sustain competitive advantage

Classification: Application

AACSB: Information Technology, Application of Knowledge

3) For many organizations, the most cost-effective way to manage payroll operations is through in-house development.

Answer: FALSE

Explanation: Payroll, like many application domains, has had much software already developed. Often, it is more cost effective to find an existing application to use for payroll.

L.O.: 2.1 Explain outsourcing.

CLLO: Explain how IS can be used to gain and sustain competitive advantage

Classification: Application

AACSB: Information Technology, Application of Knowledge

4) Information technology services firms do not use the same methodologies, techniques, and tools that companies use to develop systems in-house.

Answer: FALSE

Explanation: Service firms will generally employ the same techniques, methodologies and tools that a company would use to develop systems in-house.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

5) In enterprise solutions, the difference between the modules and traditional approaches is that the modules are integrated to focus on the business functional areas, rather than on business processes.

Answer: FALSE

Explanation: The difference between the modules and traditional approaches is that the modules are integrated to focus on business processes rather than on business functional areas.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

6) One of the primary benefits of using an enterprise resource planning system is the short time period required for implementation.

Answer: FALSE

Explanation: Due to the complexity of the systems, they will often take a long time to implement.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

7) By 2015, it is predicted that the total global market for cloud computing will reach \$1.1 trillion.

Answer: TRUE

Explanation: Microsoft and IDC predicted that cloud computing will create 14 million new jobs by 2015 and that the total global market for cloud computing will reach \$1.1 trillion (USD) that year (McDougall, 2012).

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

8) Cloud computing is slower in allowing a user access to internal applications.

Answer: FALSE

Explanation: Cloud computing enables a user to have instant access to applications.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

9) Cloud computing is a low-cost access method to corporate-quality data.

Answer: FALSE

Explanation: Cloud computing is a low-cost access method to corporate-quality applications.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

10) Cloud computing always complies with government regulations.

Answer: FALSE

Explanation: One of the concerns that IT managers have about cloud computing is compliance with government regulations such as Sarbanes-Oxley.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

11) Open-source software is developed by employees of a particular company.

Answer: FALSE

Explanation: Open source software is developed by a community of interested people instead of employees of a company.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

12) The source code itself is not freely available for open-source software.

Answer: FALSE

Explanation: The end product as well as source code for open source software is freely available.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

13) Despite all the alternative sources of software, in-house development is still an option.

Answer: TRUE

Explanation: In-house development can be cost effective, especially with reuse of software.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

14) When resources and staff are available and a system must be built from scratch, the best option would be to go with a packaged software producer to obtain the software.

Answer: FALSE

Explanation: In-house development is the best choice in this case.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

15) Cloud computing is best when a supported task is generic and one does not need instant access.

Answer: FALSE

Explanation: Packaged software producers are the best choice in this case.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

16) Open-source software is best used when cost is an issue.

Answer: TRUE

Explanation: Since open-source software is free, it is a good choice for organizations without a large development budget.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

17) When choosing off-the-shelf software, the two most important criteria are functionality and ease of installation.

Answer: FALSE

Explanation: The two most important factors are vendor support and vendor viability.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

18) Purchased software cannot be modified.

Answer: FALSE

Explanation: Some purchased software cannot be modified, these we would call turnkey systems.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

19) If a company purchases application software, it does not necessarily need to conduct systems analysis.

Answer: FALSE

Explanation: Purchasing application software is not a substitute for conducting the systems analysis phase.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

20) Ease of installation is a measure of the difficulty of loading the software and making it operational.

Answer: TRUE

Explanation: Ease of installation is one of the measures used to evaluate software.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

21) Because existing pieces of software have already been tested, reusing them tends to result in higher-quality software with lower defect rates, decreasing maintenance costs.

Answer: TRUE

Explanation: This question deals with software reuse. Reusing software increases programmer productivity as well as cuts testing time.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

22) Component-based development's focus is on creating specific pieces of software that can only be used once.

Answer: FALSE

Explanation: Component-based development is similar to object-oriented development in that the focus is on creating general-purpose pieces of software that can be used interchangeably in many different programs.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

23) Research has found that reuse of object class libraries resulted in decreased productivity.

Answer: FALSE

Explanation: Some evidence suggests that reuse can be effective, especially for object classes. For example, one laboratory study found that reuse of object class libraries resulted in increased productivity, reduced defect density, and reduced rework.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

24) The reuse of object class libraries has been found to reduce defect density.

Answer: TRUE

Explanation: Some evidence suggests that reuse can be effective, especially for object classes. For example, one laboratory study found that reuse of object class libraries resulted in increased productivity, reduced defect density, and reduced rework.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

25) Rework can be reduced by reusing object class libraries.

Answer: TRUE

Explanation: Some evidence suggests that reuse can be effective, especially for object classes. For example, one laboratory study found that reuse of object class libraries resulted in increased productivity, reduced defect density, and reduced rework.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

26) Due to the low cost of developing a reusable component, most organizations can compete economically with established commercial organizations that focus on selling components as their main line of business.

Answer: FALSE

Explanation: Because of the considerable costs of developing a reusable component, most organizations cannot compete economically with established commercial organizations that focus on selling components as their main line of business.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

27) Strategic business goals of the organization must be matched to the organizations approach to off-the-shelf software.

Answer: FALSE

Explanation: When an organization's management decides to pursue reuse as a strategy, it is important for the organization to match its approach to reuse with its strategic business goals.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

28) The benefits of reuse grow as more corporate experience is gained from it.

Answer: TRUE

Explanation: The benefits of reuse grow as more corporate experience is gained from it, but so do the costs and the amount of resources necessary for reuse to work well.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

29) As more corporate experience is gained from reuse, costs and the amount of resources necessary for reuse to work will increase also.

Answer: TRUE

Explanation: The benefits of reuse grow as more corporate experience is gained from it, but so do the costs and the amount of resources necessary for reuse to work well.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

30) Storage refers to making software assets available for others to use.

Answer: TRUE

Explanation: Storage involves making software assets available for others to use.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

31) The practice of turning over responsibility of some or all of an organization's information systems applications and operations to an outside firm is referred to as:

A) realignment.

B) downsizing.

C) outsourcing.

D) time sharing.

E) system reassignment and deployment.

Answer: C

Explanation: C) Outsourcing is defined as the turning over responsibility for IS functions to an outside firm. The only other choice that is even remotely close is time sharing, the idea that one would share resources (such as a mainframe) with another organization.

L.O.: 2.1 Explain outsourcing.

CLLO: Explain how IS can be used to gain and sustain competitive advantage

Classification: Concept

AACSB: Information Technology

32) When developing information systems, an organization could use all of the following EXCEPT:

A) an information technology services firm.

B) open-source software.

C) cloud computing.

D) in-house development.

E) hardware maintenance firms.

Answer: E

Explanation: E) All choices except for E make sense, since, according to the text, all are possible ways to develop software.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

33) Packaged software producers create software such as:

- A) R/3.
- B) Excel.
- C) Linux.
- D) Firefox.

Answer: B

Explanation: B) Packaged software is off-the-shelf software.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

34) In many instances, off-the-shelf software can meet up to _____ percent of an organization's needs.

- A) 50
- B) 60
- C) 70
- D) 90
- E) 100

Answer: C

Explanation: C) A reasonable estimate is that off-the-shelf software can at best meet 70 percent of an organization's needs.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

35) A system that integrates individual traditional business functions into a series of modules so that a single transaction occurs seamlessly within a single information system rather than several separate systems best describes:

- A) enterprise resource planning (ERP).
- B) application service.
- C) storage area network.
- D) packaged software.
- E) system integration software.

Answer: A

Explanation: A) Enterprise resource planning systems consist of a series of modules for various business functions.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

36) All of the following are benefits of enterprise solutions, EXCEPT:

- A) a single repository of data for all business processes.
- B) module flexibility.
- C) immediate integration of new modules.
- D) shifting toward enterprise solutions means changing business processes.
- E) shifting from separate systems to a seamless, integrated system.

Answer: D

Explanation: D) The purpose of ERP systems is not to change business processes but rather to provide solutions for individual business functions.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

37) The provision of computing resources over the Internet so that customers do not need to invest in infrastructure is called:

- A) cloud computing.
- B) raindrop computing.
- C) leased computing.
- D) centralized computing.
- E) backbone computing.

Answer: A

Explanation: A) Cloud computing refers to the provision of applications over the Internet, where customers do not have to invest in the hardware and software resources needed to run and maintain the applications.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

38) All of the following are reasons to go with cloud computing EXCEPT:

- A) freeing internal IT staff.
- B) gaining access to applications faster.
- C) reduced development time.
- D) achieving lower cost access to corporate-quality applications.
- E) access to large and complex applications without having to implement the system in-house.

Answer: C

Explanation: C) There is no guarantee that cloud computing will result in reduced development time. It depends on the application.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

39) The primary concern about cloud computing is:

- A) cost.
- B) reliability.
- C) compliance with standards.
- D) dependability.
- E) sustainability.

Answer: B

Explanation: B) Reliability is a major concern for corporations since the entire application is dependent upon an outside vendor.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

40) One type of cloud computing service that allows companies to order server capacity and storage on demand is called:

- A) software as a service.
- B) leased computing.
- C) hardware as a service.
- D) storage on demand.
- E) middleware as a service.

Answer: C

Explanation: C) Cloud computing includes hardware as a service, the ability for an organization to order server capacity and storage on demand.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

41) One type of cloud computing service that allows companies to run applications on servers maintained by a service provider is called:

- A) software as a service.
- B) leased computing.
- C) hardware as a service.
- D) storage on demand.
- E) middleware as a service.

Answer: A

Explanation: A) Cloud computing includes software as a service (SaaS). Some examples of SaaS are Salesforce.com and Google Apps.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

42) Open-source software is developed by:

- A) in-house developers.
- B) employees of a particular company.
- C) communities of interested people.
- D) consultants.
- E) application service providers.

Answer: C

Explanation: C) The open source movement is supported by a dedicated community of volunteer developers.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

43) Money can be made from open source software by:

- A) selling source code.
- B) providing maintenance and other services.
- C) communities of interested people.
- D) adding to the code base.
- E) selling documentation to the open-source community.

Answer: B

Explanation: B) Companies and individuals can make money with open source by (1) providing maintenance and other services, or (2) providing one version of the software for free and selling a more fully featured version.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

44) In addition to operating systems, e-mail, databases and Web browsers, open source software also includes:

- A) hardware.
- B) machine code.
- C) software components and objects.
- D) firmware.
- E) proprietary software.

Answer: C

Explanation: C) Open source also applies to software components and objects.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

- 45) An organization should acquire software from in-house developers when:
- A) the supported task is generic.
 - B) complete systems that cross functional boundaries are needed.
 - C) the task requires custom support and the system cannot be built internally.
 - D) the resources and staff are available and the system must be built from scratch.
 - E) there is a pre-built option

Answer: D

Explanation: D) See Table 2-2.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

- 46) One possible source of software which involves in-house development with purchased solutions is called a(n):

- A) generic solution.
- B) hybrid solution.
- C) mid-point solution.
- D) composite solution.
- E) amalgamated solution.

Answer: B

Explanation: B) In-house development need not entail development of all of the software that will compose the total system. Hybrid solutions involving some purchased and some in-house software components are common.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

- 47) Which of the following describes the internal staffing requirements when software components are acquired from packaged software producers?

- A) Some internal staff are necessary, but mostly consultants are needed.
- B) Some information systems (IS) and user staff to define requirements and evaluate packages are needed.
- C) Internal staff may be needed, depending on the application.
- D) Internal staff are necessary, though staff size may vary.
- E) None of the above are correct.

Answer: B

Explanation: B) See Table 2-2.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

48) Which of the following describes the internal staffing requirements when software components are acquired from enterprise-wide solutions providers?

- A) Some internal staff are necessary, but mostly consultants are needed.
- B) Some IS and user staff to define requirements and evaluate packages are needed.
- C) Internal staff may be needed, depending on the application.
- D) Internal staff are necessary, though staff size may vary.
- E) None of the above are correct.

Answer: A

Explanation: A) See Table 2-2.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

49) All of the following are common criteria to consider when selecting off-the-shelf software EXCEPT:

- A) flexibility.
- B) vendor viability.
- C) functionality.
- D) cost.
- E) needs of staff.

Answer: E

Explanation: E) E is the logical choice since you really do not consider the needs of staff when selecting off-the-shelf software.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

50) Two criteria that are always among the most important when choosing software are:

- A) ease of installation and flexibility.
- B) response time and vendor support.
- C) vendor support and vendor viability.
- D) cost and functionality.
- E) functionality and documentation.

Answer: C

Explanation: C) The relative importance of these standards will vary from project to project and from organization to organization. If you had to choose two criteria that would always be among the most important, those two would probably be vendor support and vendor viability.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

51) In terms of criteria to consider when choosing off-the-shelf software, ease of customization is also referred to as:

- A) response time.
- B) documentation.
- C) functionality.
- D) flexibility.
- E) development time

Answer: D

Explanation: D) The relative importance of these standards will vary from project to project and from organization to organization. If you had to choose two criteria that would always be among the most important, those two would probably be vendor support and vendor viability.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

52) Software that cannot be modified to meet the particular needs of an organization is called a(n):

- A) Vanilla System.
- B) ERP system.
- C) Turnkey system.
- D) Software as a Service System.
- E) Turnbuckle System.

Answer: C

Explanation: C) Some off-the-shelf software systems cannot be modified to meet the specific, individual needs of a particular organization. Such application systems are sometimes called *turnkey* systems

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

53) In terms of criteria to consider when choosing off-the-shelf software, documentation refers to all of the following EXCEPT:

- A) user's manuals.
- B) technical documentation.
- C) the cost for multiple copies.
- D) the baseline project plan.
- E) how understandable the documentation is.

Answer: D

Explanation: D) Documentation includes the user's manual as well as technical documentation.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

54) Which of the following is not a way of validating purchased software information?

- A) Reviewing software documentation and technical marketing literature
- B) Sending prospective vendors a questionnaire asking specific questions about their packages
- C) Using the software yourself and running it through a series of tests based on the criteria for selecting software
- D) Obtaining feedback from other users of the software
- E) Purchasing the software first and then testing

Answer: E

Explanation: E) All of the following except for E are best practices for evaluating purchased software.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

55) The document sent to vendors asking them to propose hardware and software that will meet the requirements of your new system is called a:

- A) requirements statement.
- B) request for proposal (RFP).
- C) baseline project plan.
- D) business case.
- E) systems service request.

Answer: B

Explanation: B) If you decide that new hardware or system software is a strong possibility, you may want to issue a request for proposal (RFP) to vendors. The RFP will ask the vendors to propose hardware and system software that will meet the requirements of your new system.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

56) The use of previously written software resources is also referred to as:

- A) reuse.
- B) reengineering.
- C) reprocessing.
- D) re-analysis.
- E) restructuring.

Answer: A

Explanation: A) Reuse is the use of previously written software resources in new applications. Because so many bits and pieces of applications are relatively generic across applications, it seems intuitive that great savings can be achieved in many areas if those generic bits and pieces do not have to be written anew each time they are needed.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

57) Reuse typically refers to using previously written:

- A) objects and components.
- B) use cases.
- C) documentation.
- D) business cases.
- E) requests for proposals.

Answer: A

Explanation: A) Although reuse can conceivably apply to many different aspects of software, typically it is most commonly applied to two different development technologies: object-oriented and component-based development.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology

58) Which of the following are the basic steps in software reuse?

- A) Abstraction, storage, and recontextualization
- B) Overloading and overriding
- C) Developing a business plan and an implementation plan
- D) Contextualization and generalization
- E) Purchasing new software and integrating it into existing systems

Answer: A

Explanation: A) Software reuse has three basic steps: abstraction, storage, and recontextualization. Abstraction involves the design of a reusable piece of software, starting from existing software assets or from scratch. Storage involves making software assets available for others to use. Once an asset has been found, recontextualization—or making the reusable asset understandable to developers who want to use it in their systems—becomes important.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology

59) Reusing software can:

- A) increase the cost of software development.
- B) decrease development time.
- C) increase development time.
- D) increase schedule overruns.
- E) decrease programmer productivity.

Answer: B

Explanation: B) Software reuse can decrease development time if it is done right and an organization has experience with reusing components.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology

60) Which of the following is NOT a result of reuse?

- A) Higher-quality software
- B) Lower defect rates
- C) Decreased maintenance costs
- D) Higher defect rates
- E) Increased maintenance costs

Answer: D

Explanation: D) Reuse should increase programmer productivity, decrease development time, and result in higher-quality software with lower defect rates, decreasing maintenance costs.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

61) Technical issues related to reuse include all of the following EXCEPT:

- A) the over-reliance on class libraries.
- B) lack of a methodology for creating reusable components.
- C) lack of a methodology for clearly defining reusable components.
- D) the small number of reusable resources available.
- E) the small number of reliable resources available.

Answer: A

Explanation: A) Technical issues include the current lack of a methodology for creating and clearly defining and labeling reusable components for placement in a library and the small number of reusable and reliable software resources currently available. Key organizational issues include the lack of commitment to reuse, as well as the lack of proper training and rewards needed to promote it, the lack of organizational support for institutionalizing reuse, and the difficulty in measuring the economic gains from reuse.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

62) The four approaches to reuse include all of the following EXCEPT:

- A) ad hoc.
- B) facilitated.
- C) managed.
- D) designed.
- E) ex ante.

Answer: E

Explanation: E) An organization can take one of four approaches to reuse (see Table 2-3). The *ad hoc reuse* approach is not really an approach at all, at least from an official organizational perspective. With this approach, individuals are free to find or develop reusable assets on their own, but few, if any, organizational rewards are offered for reusing assets. Another approach to reuse is *facilitated reuse*. With this approach, developers are not required to practice reuse, but they are encouraged to do so. The organization makes available some tools and techniques that enable the development and sharing of reusable assets, and one or more employees may be assigned the role of evangelist to publicize and promote the program. *Managed reuse* is a more structured, and more expensive, mode of managing software reuse. With managed reuse, the development, sharing, and adoption of reusable assets is mandated. The most expensive and extensive approach to reuse is *designed reuse*. In addition to mandating reuse and measuring its effectiveness, the designed reuse approach takes the extra step of mandating that assets be designed for reuse as they are being designed for specific applications.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

63) The typical reuse level of facilitated reuse:

- A) varies.
- B) is low.
- C) is high.
- D) is very high.
- E) is moderate.

Answer: B

Explanation: B) See table 2-3.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology

64) The typical reuse level of designed reuse:

- A) varies.
- B) is low.
- C) is moderate.
- D) is high.
- E) is none to low.

Answer: D

Explanation: D) See table 2-3.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology

65) The relative cost of ad hoc reuse is:

- A) low.
- B) none.
- C) moderate.
- D) high.
- E) extremely high.

Answer: A

Explanation: A) See table 2-3.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology

66) When an organization invests in carefully designing assets for reuse, choosing assets for domain or product line, they are said to be engaged in:

- A) ad hoc reuse.
- B) facilitated reuse.
- C) designed reuse.
- D) managed reuse.
- E) ex ante reuse.

Answer: C

Explanation: C) The focus of designed reuse is more on developing reusable assets than on finding existing assets that might be candidates for reuse.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

67) When an organization encourages and supports use with limited resources, infrastructure, and policies to make reuse easier, they are said to be engaged in:

- A) ad hoc reuse.
- B) managed reuse.
- C) ex ante reuse.
- D) facilitated reuse.
- E) designed reuse.

Answer: D

Explanation: D) The focus of designed reuse is more on developing reusable assets than on finding existing assets that might be candidates for reuse. A corporate reuse office may be established to monitor and manage the overall methodology. Under such an approach, as much as 90 percent of software assets may be reused across different applications.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

68) With managed reuse, the development, sharing, and adoption of reusable assets is:

- A) encouraged.
- B) mandated.
- C) discouraged.
- D) minimal.
- E) All of the above are correct.

Answer: B

Explanation: B) With managed reuse, the organization establishes processes and policies for ensuring that reuse is practiced and that the results are measured.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

69) The first administrative information developed in the United States was:

- A) Digital Equipment Company's VAX minicomputer.
- B) a system developed by J. Lyons and Sons.
- C) the General Electric payroll system.
- D) the Internal Revenue Service's tax compliance system.
- E) Amazon.com's inventory management system.

Answer: C

Explanation: C) In the United States, the first administrative information system was the General Electric (GE) payroll system, which was developed in 1954.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

70) One reason that an organization would totally outsource its information systems is:

- A) to ensure a quality system.
- B) because of organizational problems.
- C) to maintain more local control.
- D) to avoid a hostile takeover.
- E) to keep the organization running smoothly.

Answer: B

Explanation: B) One reason may be to overcome operating problems the organization faces in its information systems unit. For example, the city government of Grand Rapids, Michigan, hired an outside firm to run its computing center forty years ago in order to manage its computing center employees better.

L.O.: 2.1 Explain outsourcing.

CLLO: Explain how IS can be used to gain and sustain competitive advantage

Classification: Concept

AACSB: Information Technology

71) By 2017 the outsourcing market is projected to be worth:

- A) \$1.2 million.
- B) \$178 billion.
- C) \$1.2 billion.
- D) \$178,000.
- E) \$9 million.

Answer: C

Explanation: C) Outsourcing is big business. Some organizations outsource the IT development and many of their IT functions, at a cost of billions of dollars. The global business process and information technology outsourcing market is projected to be worth \$1.2 billion (USD) by 2017.

L.O.: 2.1 Explain outsourcing.

CLLO: Explain how IS can be used to gain and sustain competitive advantage

Classification: Concept

AACSB: Information Technology

72) Which of the following companies is the top software producer?

- A) Microsoft
- B) IBM
- C) Apple
- D) Hewlett-Packard
- E) Oracle

Answer: B

Explanation: B) The purchase of the IT consulting arm of PricewaterhouseCoopers by IBM in 2002 solidified its move into services and consulting. IBM is also well known for its development of Web server and middleware software.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

73) Which of the following is a disadvantage of Enterprise Resource Planning Systems?

- A) The systems are too simple
- B) Lack of in-house expertise
- C) Always requires new hardware
- D) Become outdated quickly
- E) ERP systems are not secure

Answer: B

Explanation: B) Organizations typically do not have the necessary expertise in-house to implement the systems, so they must rely on consultants or employees of the software vendor, which can be expensive.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

74) When working with ERP systems, a _____ ensures more accurate and consistent data.

- A) software vendor
- B) depository
- C) single repository
- D) sentinel
- E) data guardian

Answer: C

Explanation: C) The benefits of the enterprise solutions approach include a single repository of data for all aspects of a business process and the flexibility of the modules. A single repository ensures more consistent and accurate data, as well as less maintenance.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

75) One major concern that IT managers have about cloud computing is:

- A) security.
- B) redundancy.
- C) ease of use.
- D) backward compatibility.
- E) overuse.

Answer: A

Explanation: A) The primary concern is reliability, but other concerns include security and compliance with government regulations such as Sarbanes-Oxley.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

76) Open-source software has enjoyed its success due to:

- A) the price.
- B) large software companies.
- C) the Internet.
- D) the SDLC.
- E) volume discounts.

Answer: C

Explanation: C) The open-source movement would not be having the success it enjoys without the availability of the Internet for providing access and organizing development activities.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

77) A software solution involving both in-house and purchased software is called:

- A) a mingled solution.
- B) a hybrid solution.
- C) an open-source solution.
- D) a proprietary solution.
- E) slackware.

Answer: B

Explanation: B) Hybrid solutions involving some purchased and some in-house software components are common.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

78) The best organization to go to when a supported task is generic is a(n):

- A) open-source software provider.
- B) cloud computing service provider.
- C) in-house development group.
- D) packaged software producer.
- E) IT service firm.

Answer: D

Explanation: D) See table 2-2.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

79) An enterprise solutions vendor is best used for:

- A) ill-defined systems.
- B) complete systems that cross functional boundaries.
- C) tasks which require custom support.
- D) applications that require instant access.
- E) generic tasks where cost is not an issue.

Answer: B

Explanation: B) See table 2-2.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

80) Open source software requires internal staff to:

- A) write the software.
- B) define requirements and evaluate software.
- C) debug the software.
- D) write more reports.
- E) contribute to the code base.

Answer: B

Explanation: B) See table 2-2.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

81) How long it takes for a software package to respond to user's requests is called:

- A) recurrent time.
- B) response time.
- C) activation time.
- D) lag time.
- E) run time.

Answer: B

Explanation: B) Response time refers to how long it takes the software package to respond to the user's requests in an interactive session.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

82) Besides response time, another measure of time would be:

- A) release time.
- B) how long it takes software to complete a running job.
- C) how long it takes software to produce output.
- D) turnaround time.
- E) resource usage time.

Answer: B

Explanation: B) Another measure of time would be how long it takes the software to complete running a job.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Concept

AACSB: Information Technology

83) Reusing software results in a higher quality application because:

- A) the software has been tested more when used previously.
- B) the cost is lower.
- C) there is less staff time needed to complete the project.
- D) the code is better written.
- E) the software is more efficient.

Answer: A

Explanation: A) Because existing pieces of software have already been tested, reusing them tends to result in higher-quality software with lower defect rates, decreasing maintenance costs.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology

84) An organization's approach to reuse must be matched to its:

- A) business process.
- B) strategic business goals.
- C) objectives.
- D) staffing.
- E) budget.

Answer: B

Explanation: B) When an organization's management decides to pursue reuse as a strategy, it is important for the organization to match its approach to reuse with its strategic business goals.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

85) As a company gains more experience with reuse, the firm gains more benefits. However, the firm also has to take into account:

- A) that cost will grow as well.
- B) that there will be a need for less staff.
- C) that the defect rate will increase.
- D) that the software may need to be completely rewritten.
- E) its business processes.

Answer: A

Explanation: A) The benefits of reuse grow as more corporate experience is gained from it, but so do the costs and the amount of resources necessary for reuse to work well.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

86) Making assets available for others involves:

- A) sorting.
- B) shelf-life.
- C) storage.
- D) cataloging.
- E) cloud computing.

Answer: C

Explanation: C) Storage involves making software assets available for others to use.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

87) A key part of reuse strategy is:

- A) expending capital on equipment.
- B) hiring the right staff.
- C) establishing standards and guidelines for reuse.
- D) establishing rewards, incentives and organizational support.
- E) buying the right software.

Answer: D

Explanation: D) A key part of a reuse strategy, as mentioned previously, is establishing rewards, incentives, and organizational support for reuse to help make it more worthwhile than developing your own assets.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

88) The one type of reuse that is mandated is called:

- A) ad hoc reuse.
- B) facilitated reuse.
- C) managed reuse.
- D) designed reuse.
- E) designated reuse.

Answer: D

Explanation: D) See table 2-3.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

89) More experienced developers are less likely to reuse code because:

- A) they think that it is less cost effective.
- B) they don't understand other programmer's code.
- C) they trust their own code more than someone else's.
- D) management would not allow them.
- E) they believe that reuse does not fit into the corporate culture.

Answer: C

Explanation: C) More experienced developers tend to trust their own coding skills more than they trust the skills of others, so they prefer to write and test their own code.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

90) Which type of project team is more likely to practice code reuse?

- A) permanent
- B) large
- C) agile
- D) transient
- E) translucent

Answer: D

Explanation: D) Transient project teams, which will only exist for a short time, are more likely to reuse than are established, more permanent project teams.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Application

AACSB: Information Technology, Application of Knowledge

91) Symantec is a leading software firm that specializes in:

- A) cloud computing.
- B) IT services.
- C) packaged software.
- D) enterprise software.
- E) open-source software.

Answer: C

Explanation: C) See table 2-1.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

92) Identify and discuss the six sources of software.

Answer: Information technology services firms help companies develop custom information systems for internal use. They develop, host, and run applications for customers, or they provide other services. Packaged software producers are companies who develop generic applications and then sell them in larger retail outlets. Enterprise solutions consist of a series of integrated modules that provide a single repository for all data. Application and managed service providers remotely host and run computer applications for other companies. Managed service providers, in addition, provide network-based services, customized applications, and even equipment. Open source software is developed by a community of interested people and is free, including the source code. Finally, in-house development occurs in the organization when resources and staff are available.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

93) Discuss cloud computing and how it can benefit an organization.

Answer: Cloud computing allows an organization to rent or license applications from third-party providers. The applications are run at remote sites, thus freeing the organization from maintaining the application and associated hardware. Users pay for the software on either a per-use basis or month-to-month. One example of a clouding computing application is Google apps.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

94) Discuss the future market for cloud computing.

Answer: According to Merrill Lynch, by 2013, twelve percent of corporate computing will be done by cloud computing. The total market for cloud computing is expected to be \$160 billion. Companies that are expected to profit most are the ones that can react quickly to adjust their profit lines to include cloud computing.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Synthesis

AACSB: Reflective Thinking

95) Identify four ways that purchased software information can be validated.

Answer: Information about purchased software can be collected from the vendor; you can actually use the software (software, training materials, documentation, and technical support facilities); you can obtain feedback from other users, and you can use independent software testing services.

L.O.: 2.2 Describe six different sources of software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

96) Identify the most common criteria for choosing off-the-shelf software. Which two criteria would be among the most important?

Answer: The most common criteria are cost, functionality, vendor support, vendor viability, flexibility, documentation, response time, and ease of installation. Cost involves comparing the cost of developing the same system in-house to the cost of purchasing or licensing the software package. Functionality refers to the tasks the software can perform and the mandatory, essential, and desired system features. While vendor support identifies the amount of support the vendor can be expected to provide, vendor viability examines the vendor's marketplace strength. Flexibility refers to the flexibility of customizing the software. The documentation criterion examines issues relating to the user's manual, technical documentation, and cost of acquiring additional copies of the documentation. Response time questions the length of time it takes the software package to respond to the user's requests in an interactive session and how long it takes the software to complete running a job. The ease of installation criterion examines the difficulty of loading the software and making it operational. Vendor support and viability will be among the most important.

L.O.: 2.3 Discuss how to evaluate off-the-shelf software.

CLLO: Discuss best practices for selecting, evaluating, and managing information systems projects

Classification: Application

AACSB: Information Technology, Application of Knowledge

97) What is reuse and why is it increasing in popularity?

Answer: Reuse is the use of previously written software resources in new applications. It is increasing in popularity because developers can use generic bits and pieces of code that do not have to be rewritten. This should increase programmer productivity, decrease development time, minimize scheduling overruns and tend to result in higher-quality software with lower defect rates, which can decrease maintenance costs.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

98) What are the four approaches to reuse?

Answer: An organization can take four approaches to reuse. Ad hoc reuse allows individuals to find or develop reusable assets on their own. Another approach, facilitated reuse, developers are not required to practice reuse but are encouraged to do so. Managed reuse mandates the development, sharing and adoption of reusable assets. The organization does this by establishing policies and procedures for reuse. The last approach, designed reuse, mandates that components are designed for reuse as they are being developed for a specific application.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Concept

AACSB: Information Technology, Application of Knowledge

99) Explain why reuse is not always valuable to all developers in an organization.

Answer: Since novice developers are more risk-adverse, they are more likely to reuse software. However, more experienced developers trust their own code more than someone else's. There also can sometimes be differences across development teams. For example, transient teams are more likely to reuse software.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Synthesis

AACSB: Reflective Thinking

100) What are the three basic steps involved in software reuse?

Answer: There are three basic steps: abstraction, storage and recontextualization. Abstraction involves the design of software, whether it be reused or something from scratch. When software assets are developed or acquired, they must be made available to others. This is storage. Once an asset has been found, then recontextualization is done in order to make the asset more understandable to the developers who will need to use the software.

L.O.: 2.4 Explain reuse and its role in software development.

CLLO: Compare and contrast different methods for developing information systems

Classification: Synthesis

AACSB: Reflective Thinking