
Glossary

Access control list a list of bona fide IP addresses in devices such as firewalls.

Access security a restriction of AIS access to bona fide users.

Accounting information system (AIS) the information subsystem within an organization that accumulates and processes information (both financial and non-financial) from the entity's various subsystems and communicates this information to the organization's users.

Action query (Microsoft Access) a query that manipulates, and typically alters, one or more tables in an Access database.

Activity-based costing systems help managers in describing processes, identifying cost drivers of each process, and then determining the unit costs of products associated with drivers.

Advanced electronic tags input technologies that replace manual data entry with automated technologies, such as barcode scanners, radio frequency (RF) technology, and RFIDs. These input technologies can be used individually or combined to significantly reduce input errors and support fast, accurate, real-time production and data collection.

Advanced planning and scheduling systems (APS) systems that work to synchronize the flow of materials within the supply chain.

Alphanumeric codes codes that use numbers and letters.

Analysis paralysis the condition where a problem is studied to the point that the study overshadows the problem.

Antivirus software computer programs such as Norton Antivirus or MacAfee that end users typically install in their computers to guard against computer viruses.

Applet a small program that is stored in a Web page and is designed to run by Web browser software. Friendly applets animate Web pages, allow users to play games, or perform processing tasks.

Application controls a major category of computer controls that are designed and implemented to prevent, detect, and correct errors and irregularities in transactions as they

flow through the input, processing, and output stages of data processing work.

Application service provider (ASP) a source through which companies can rent rather than buy software.

Application software computer software that performs specific tasks such as accounting tasks, spreadsheet tasks, marketing tasks, or word-processing tasks.

Applications portfolio a set of software applications belonging to an organization.

Association of Certified Fraud Examiners (ACFE) an international professional organization committed to detecting, deterring, and preventing fraud and white-collar crime.

Attributes the characteristics of entities, or the data fields describing them.

Audio input computer inputs that use sound frequencies. An alternate term is "speech recognition system."

Audit Control Language (ACL) specialized software for auditing tasks used in forensic accounting.

Audit trail enables information users within a company's system to follow the flow of data through the system.

Auditing around the computer audit approach whereby an auditor follows a company's audit trail up to the point where accounting data enter the computer and then picks these data up again when they reappear in processed form as computer output.

Auditing through the computer audit approach whereby an auditor follows a company's audit trail through the internal computer operations phase of automated data processing.

Auditing with the computer audit approach whereby the auditor uses the computer to aid in performing various auditing procedures (e.g., selecting a sample of accounts receivable data for confirmation).

Automated workpaper software software that aids an auditor in performing such accounting functions as generating trial balances, recording adjusting journal entries, and preparing income statements and balance sheets.

Back-office a reference to internal functions and processing within an organization, such as human resources and accounting.

Backup additional copies of data that may be used to restore computer operations (e.g., after a disaster or in the event that files are accidentally deleted or corrupted).

Balanced scorecard an approach to performance measurement that uses measures in four categories (financial performance, customer knowledge, internal business processes, and learning and growth) to evaluate and promote certain activities and behaviors.

Bar code reader a device that interprets the familiar barcode stripes printed on merchandise packages, shipping labels, and similar documents, and inputs the data into a computer.

Batch control total (BCT) typically, a manual total that is compared to a computer total to determine whether data were processed correctly.

Benchmark test an approach for examining the operating efficiency of a particular system whereby a computer vendor's system performs a data processing task that a company's new system must perform and company representatives then examine the processing outputs for accuracy, consistency, and efficiency.

Best-of-breed an approach to systems development where each application may be acquired from a separate vendor and represents the best program in that category of need.

Biometric scanners a method of authenticating system users based on who they are. Examples include voice and fingerprint recognition systems.

Block codes sequential codes in which specific blocks of numbers are reserved for particular uses.

Blogs (or Web logs) collaboration tools that allow users with Web browsers and easy-to-use software to publish a personalized diary online.

Bolt-ons software from a variety of suppliers when employing a "best-of-breed" approach.

Boot-sector virus a virus that hides in the boot sector of a disk, where the operating system (OS) accesses the virus every time the OS accesses the disk itself.

Bound control (databases) a form control such as a textbox or label that displays the underlying data from a database table.

- Business continuity plan (BCP)** management's policies and procedures to continue the organization. This includes risk identification, scenario planning, and practicing the plan.
- Business event** an activity that may or may not impact financial statements, but is important to the business.
- Business intelligence (BI) tools** data analysis software that helps managers obtain the most information from their customer relationship management systems.
- Business process** a collection of activities or flow of work in an organization that creates value.
- Business process management software** software solutions that help companies collect corporate knowledge, data, and business rules into a business system to improve core business processes.
- Business process outsourcing (BPO)** an approach where an organization chooses to have some of its basic functions, often related to IT, performed by an external organization.
- Business process reengineering (BPR)** techniques used by organizations to redesign their business processes from scratch.
- Business-to-business (or B2B) e-commerce** businesses buying and selling goods and services to each other over the Internet.
- Business-without-boundaries** a new business model that arose from the combination of networked enterprises and globalization.
- CAATs (computer-assisted audit techniques)** used by auditors when auditing through the computer. CAATs can aid in the performance of compliance testing to ensure that a company's controls are in place and working as prescribed.
- Canned software** software acquired from independent vendors.
- Cardinalities** a notation reflecting the nature of relationships among entities as one-to-one, one-to-many, none-to-one, none-to-many, or many-to-many.
- CASE tools** computer-assisted software engineering tools that automate documentation tasks such as drawing or modifying flowcharts, generating graphics and screen designs, and developing report formats.
- Cash control** physical safeguards for cash, which is especially susceptible to theft by employees, and to human error when employees handle large amounts of it.
- CD-ROM** an acronym for "compact disk-read only memory." CD-ROM disks can store approximately 640 megabytes of data.
- Central database** a comprehensive database that holds all the data for multiple applications or processes.
- Central processing unit (CPU)** the component of a computer that performs the processing tasks of the system. The processor part of the CPU is typically a single silicon chip that can manipulate data—e.g., perform mathematical functions such as addition, as well as logic operations such as comparing text or number values.
- Certificate authority** an entity that issues digital certificates—for example, to authenticate the legitimacy of a bid or financial purchase.
- Certified Information Systems Auditor (CISA)** a professional information systems auditor who meets certification requirements of the Information Systems Audit and Control Association.
- Certified Information Technology Professional** a designation given by the AICPA for CPAs who meet specified additional requirements related to information technologies.
- Change management** a systematic approach to introducing dynamic change or disruption in an organization.
- Chart of accounts** what provides the organizational structure for the general ledger. The chart of accounts makes use of a block coding structure.
- Checkpoint** a control that is performed at periodic intervals during processing. A company's computer network system temporarily does not accept new transactions. Instead, it completes updating procedures for all partially processed transactions and then generates an exact copy of all data values and other information needed to restart the system. The checkpoint is recorded on a separate tape or disk file. This process is executed several times per hour. Should a hardware failure occur, the system is restarted by reading in the last checkpoint and then reprocessing only those transactions that have occurred since the checkpoint.
- Child record** the lower-level record of two adjacent records in a hierarchical data structure.
- Client/server computing** an alternate to mainframe computing in which processing tasks are shared between a centralized host computer called the "server" and a smaller microcomputer called the "client."
- COBIT** Control Objectives for Information and Related Technology (COBIT) is a project undertaken by the Information Systems Audit and Control Foundation to develop a definition of internal control.
- Cold backup** a backup that is performed while the database is off-line and unavailable to its users.
- Cold site** a location where power and environmentally controlled space are available to install processing equipment on short notice. If a disaster recovery plan designates a cold site, then separate arrangements are also necessary to obtain computer equipment matching the configuration of equipment lost in the disaster.
- Collaborative business partnerships** situations in which organizations work with other businesses, even their competitors, to increase their power to meet customer demands.
- Computer abuse** the unauthorized use of, or access to, a computer for purposes contrary to the wishes of the owner of the computer.
- Computer crime** the manipulation of a computer or computer data, by whatever method, to dishonestly obtain money, property, or some other advantage of value, or to cause loss.
- Computer facility controls** policies and procedures that prevent both unintentional and intentional harm to the firm's computer assets.
- Computer Fraud and Abuse Act of 1986** the act that defines computer fraud as any illegal act for which knowledge of computer technology is essential for its perpetration, investigation, or prosecution.
- Computer record** a set of data fields about one file entity—for example, one employee, one inventory item, or one sales transaction.
- Computer Security Institute (CSI)** the organization that conducts an annual survey to help determine the scope of computer crime in the United States.
- Computer virus** a computer program that rogue programmers embed in other programs, emails, or computer files, and that (when executed) typically perform such destructive acts as erasing files, disrupting emails,

- or interfering with operating system functions.
- Computer worms** reproducing programs that do not actually destroy data, but replicate themselves repeatedly until the user runs out of internal memory or disk space.
- Computer-assisted audit techniques (CAATs)** used by auditors when auditing through the computer; CAAT's can aid in the performance of compliance tests to ensure that a company's controls are in place and working as prescribed.
- Concurrency controls** controls that prevent two or more users of a database from accessing the same record from the same file at the same time.
- Consensus-based protocols** a fault tolerant system that contains an odd number of processors. If one processor disagrees with the others, it is thereafter ignored.
- Context diagram** high-level data flow diagram that provides an overall picture of an application or system.
- Contingency planning** the process of planning for events that could impede a company's data processing function.
- Continuous auditing** the use of tools (such as embedded audit modules) that allow auditing to occur even when an auditor is not present; it is particularly effective when most of an application's data are in electronic form.
- Control Activities** the policies and procedures that the management of a company develops to help protect all of the different assets of the firm.
- Control break (databases)** a change of value in an important data field (e.g., department number) of the records of a database table that requires additional computations in an output listing—for example, a subtotal.
- Control environment** a component of internal control that establishes the tone of a company, which influences the control awareness of the company's employees.
- Control Objectives for Information and Related Technology (COBIT)** a project undertaken by the IT Governance Institute to develop a framework for internal control relative to information technology.
- Cookie** a small text file that stores information about your browsing habits and interests, as well as other information that you may supply by logging onto a website.
- Corporate governance** managing an organization in a fair, transparent, and accountable manner to protect the interests of all the stakeholder groups.
- Corrective controls** control procedures within a company's internal control system that are designed to remedy problems discovered through detective controls.
- COSO Report: 1992** a committee established by the Treadway Commission to develop a common definition for internal control and to provide guidance for judging the effectiveness of internal control as well as improving it.
- COSO Report—2004** "Enterprise Risk Management—Integrated Framework" focuses on enterprise risk management (ERM). The ERM Framework includes the five components of internal control (control environment, risk assessment, control activities, information and communication, and monitoring) and adds three additional components: objective setting, event identification, and risk response.
- Cost accounting subsystem** generally associated with manufacturing firms, this subsystem provides important control information (such as variance reports) and is usually either job costing or process costing.
- CPA WebTrust** a set of services offered through the AICPA where auditors provide third-party assurance over a client's Web site and Internet services.
- Critical path** the longest path to project completion within a PERT diagram, which is also the shortest completion time of the entire project.
- Customer relationship management (CRM)** employed to gather, maintain, and use data about a company's customers with the objective of improving customer satisfaction and company profitability.
- Dashboards** a graphic technique that shows an organization's performance metrics and compares actual data with planned.
- Data communications protocol** the settings that create a communications standard for a specific data communications application. Examples of such settings include the transmission speed, parity bit, duplex setting, or synchronous-versus-asynchronous transmission type.
- Data definition language (DDL)** part of a DBMS that enables its users to define the record structure of any particular database table.
- Data dictionary** a description of the data fields in each database record of a database system.
- Data diddling** changing data before, during, or after they are entered into a computer system.
- Data encryption** scrambling the data in a message in a systematic way in order to prevent competitors from electronically monitoring confidential data transmissions.
- Data encryption standard (DES)** an encryption methodology initially adopted in 1976 and enjoying widespread usage. It is now considered insecure because of a small (56-bit) key size.
- Data flow diagram** primarily used in the systems development process to document the flow of data through an AIS.
- Data hierarchy** storing data electronically in the following ascending order: bit, character, data field, record, table, database.
- Data integrity controls** edit tests contained in the software used to create databases that guard databases from erroneous data entries.
- Data manipulation controls** methods of controlling data processing, such as examining software documentation, system flowcharts, program flowcharts, data flow diagrams, and decision tables because they help systems analysts do a thorough job in planning data processing functions.
- Data manipulation language (DML—databases)** commands that allow an end-user to perform queries and similar tasks on the records in a database.
- Data mart** a form of data warehouse that allows users to perform predefined analytical tasks on the data.
- Data mining** a set of data analysis and statistical tools that enables companies to detect relationships, patterns, or trends among stored data within a database.
- Data modeling** a term used to describe the process of designing databases.
- Data** raw facts about events that have no organization or meaning.
- Data transcription** the task of converting manually-prepared source documents such as credit-card application forms to computer-readable file records. Where possible, AIS developers try to avoid data transcription because it is costly, labor intensive, time-consuming, and likely to introduce errors into the data.
- Data type** similar to data format, this term specifies whether data is, for example, numerical, text, or currency

- Data validation rule** a custom edit test that enables a spreadsheet or database to reject entries—e.g., regular hours worked that exceed 40.
- Data warehouses** large collections of historical data that organizations use to integrate their functions, thus allowing managers (and to some extent external parties) to obtain the information needed for planning, decision making, and control.
- Data-access controls** processing controls that are used at the time of data access, such as batch control totals, hash totals, and financial control totals.
- Database** a large collection of related data that are typically stored in computerized, linked files and manipulated by specialized software packages called database management systems.
- Database administrator** the person responsible for supervising the design, development, and installation of a large database system; this person is also responsible for maintaining, securing, and revising the data within the database system.
- Database management system (DBMS)** a separate software system that enables users to create database records, delete records, access specific information, query records for viewing or analysis, alter database information, and reorganize records as needed.
- Database structure** the particular method used to organize the records in a database.
- Decision table** a matrix of conditions and processing tasks for a computer program that indicates the appropriate action to take for each possibility.
- Decomposition (documentation)** the creation of finer levels of detail in flowcharts and data flow diagrams.
- Default value** specifying a value, such as the number “40” for an hours-worked data field, as an input control on the data fields of new records.
- Denial of service attack** an attack on an online company (such as eBay) when hackers “flood” the company’s Web site with bogus traffic.
- Detailed systems design** the systems design work that involves specifying the outputs, processing procedures, and inputs for a new system.
- Detective controls** control procedures within a company’s internal control system that provide feedback to management regarding whether or not operational efficiency and adherence to prescribed managerial policies have been achieved.
- Dialback systems** a password safeguard that initially disconnects all login users but reconnects users after checking their passwords against lists of bona fide user codes.
- Digital certificate** an authenticating document issued by an independent third party called a certificate authority used, for example, to authenticate documents (such as purchase orders) by including a portion of a document’s message in an encrypted format (which reflects the digital signature).
- Digital signature standard (DSS)** Federal Information Processing Standard 186 by which the presence of a digital signature authenticates a document.
- Digital subscriber line (DSL)** a set of technologies that enable users to send and receive digital messages over telephone lines. Transmission rates range between 128 and 24,000 kbits per second.
- Digital time stamping** the process of attaching time stamps to business transactions to authenticate the time and possibly the place of individual transactions.
- Digital video disk (DVD)** an optically read disk similar in size and shape to a CD but that is capable of storing as much as 17 gigabytes of data.
- Direct conversion** method of systems implementation in which a company’s old system is immediately dropped and the new system takes over the complete processing of the company’s transactions.
- Disaster recovery plan** part of contingency planning that describes the procedures to be followed if a company’s data processing center becomes disabled.
- Discrepancy report** a way to note any differences between quantities or amounts on the purchase order, the receiving report, and the purchase invoice.
- Disk mirroring** also known as disk shadowing. This process involves writing all data in parallel to two disks. Should one disk fail, the application program can automatically continue using the good disk.
- Disk shadowing** also known as disk mirroring. This process involves writing all data in parallel to two disks. Should one disk fail, the application program can automatically continue using the good disk.
- Distributed denial-of-service attacks** a single virus or worm program which manages to enlist the aid of innocent “zombie computers” that then send email messages to, or request services from, the target system.
- Document Control** when certain organizational documents are valuable and must be protected by such means as fireproof safes or storage in rented vaults offsite.
- Document flowchart** a means of tracing the physical flow of documents through an organization.
- Documentation** all the flowcharts, narratives, and other written communications that describe the inputs, processing, and outputs of an AIS.
- Domain address** an Internet address, also referred to as a universal resource locator (URL).
- Dot-matrix printer** an impact printer that uses a print head of tiny wires, arranged in a grid (e.g., 5 wires in each of 7 rows) to create our familiar letters and other printing characters. Many cash registers still use dot-matrix printers today.
- Dumpster diving** stealing personal information from garbage cans.
- Dynaset** a subset of database information typically selected dynamically with a query. A dynaset can be a set of selected records from a single, large table, a limited number of data fields selected from each record in a table, a set of related data fields from the records in several tables, or a combination of these items.
- E-business** conducting business over the Internet or dedicated proprietary networks.
- E-commerce** largely buying and selling transactions within e-business.
- E-wallet** software applications that store a consumer’s personal information, including credit card numbers, allowing them to pay for online purchases by providing their associated account numbers to online vendors.
- Economic events** those events that impact an organization’s financial statements and AISs therefore record data about them in accounting transactions.

- Economic event** an activity that involves an increase and/or decrease in dollar amounts on financial statements.
- Economic feasibility** the process of analyzing the cost-effectiveness of a proposed system.
- Edit programs** also called “input validation routines.” These are programs or subroutines that check the validity and accuracy of input data after the data have been entered and recorded on a machine-readable file.
- Edit tests** tests that examine selected fields of input data and reject those transactions (or other types of data input) whose data fields do not meet the preestablished standards of data quality.
- Electronic commerce** conducting business (often over the Internet) with computers and data communications.
- Electronic conferencing** a means of enabling accountants and others to use computers and phone lines to communicate with clients, etc., through the use of high-end groupware communications packages.
- Electronic Data Gathering and Retrieval (EDGAR) database** the database that contains the financial report filings of U.S. publicly held companies.
- Electronic Data Interchange (EDI)** a communications technique that allows organizations to transmit standard business documents over high-speed data communications channels.
- Electronic eavesdropping** unauthorized access to a computer system and its data to observe transmissions intended for someone else.
- Electronic funds transfer (EFT)** a cash management technique whereby the transfer of funds is electronic or computer-to-computer.
- Electronic mail (email)** creating a message on your microcomputer and then sending it electronically to someone else using the recipient’s email address.
- Electronic payments (e-payments)** the use of a third party to act as an intermediary in an online transaction, thereby eliminating credit card use.
- Electronic procurement** the use of modern computer technology to purchase goods and raw materials electronically (e.g., over the Internet).
- Electronic Systems Assurance and Control (eSAC)** a framework developed by the Institute of Internal Auditors for evaluating controls over e-business.
- Electronic vaulting** creating backup copies of files that are electronically transmitted to a remote site rather than physically delivered to an off-site storage location.
- Encryption key** a (typically long) set of bits that is used to encrypt a message for transmission over public data transmission lines.
- End-user computing** the ability of non-computer employees to create computer applications of their own.
- Enterprise application integration (EAI)** a useful interface to businesses that allows companies with legacy applications and databases to integrate and continue to use those systems.
- Enterprise asset management (EAM) systems** a means of automating the management of a broad spectrum of assets.
- Enterprise-wide database** a large repository of organizational data that comes from, and is available to, a wide range of a company’s employees.
- Enterprise mashups** a dashboard that managers use to quickly view critical business information that collects data from a variety of sources—both inside and outside the firm.
- Enterprise resource planning (ERP) systems** software (e.g., *Oracle*) that provides for integration among all of an organization’s major business processes through the use of a central database; ERP II systems are extended with e-business and other front-office capabilities.
- Enterprise risk management (ERM)** also called the 2004 COSO Framework. ERM helps an organization determine if their objectives are aligned with their strategy and that goals are consistent with the level of risk the organization is willing to take.
- Entities** data about objects of interest contained in databases including business and economic events, plus information about “who” and “what” were involved in those activities.
- Entity-relationship (E-R) diagram** a graphical documentation technique used by database designers to depict database elements and their direct relationships.
- Event-driven programming language** a computer programming language such as Visual Basic, that enables a computer to respond to specific events (e.g., clicking on a menu choice).
- E-wallet** also known as a “digital wallet,” e-wallets function like conventional wallets, but enable their users to buy and sell merchandise over the Internet.
- Exception report** a report that lists exceptional condition(s) that typically draw management’s attention to a potential problem.
- Expected loss** an example of a loss measure, computed as: expected loss = risk x exposure
- Extended application interfaces (EAI)** software application interfaces that allow different software applications to share information among them.
- Extensible business reporting language** see XBRL.
- Extranets** a means of enabling selected outside users to access organizations’ intranets.
- Fault-tolerant systems** systems designed to tolerate faults or errors that are often based on the concept of redundancy.
- Feasibility evaluation** the first major procedure in systems design work whereby the design team determines the practicality of alternative proposals.
- Fidelity bond** organizational coverage (from an insurance company) to reduce the risk of loss caused by employee theft of assets.
- Field properties** settings as “field size” and “format” in each data field specified in a table.
- File server** a computer whose principle task is to store and output the contents of computer files. For example, most Internet applications use file servers to store and output Web page files.
- Financial accounting information system** the component of an AIS in which the major objective is to provide relevant information (primarily economic) to individuals and groups outside an organization’s boundaries.
- Financial planning models** information systems that aid financial managers in selecting an optimum strategy for acquiring and investing financial resources.
- Financing process** the process by which a company acquires and uses financial resources such as cash, other liquid assets, and investments.
- Firewall** a software program or hardware device designed to prevent unauthorized data communications between

- hackers and the information resources within an internal, trusted network.
- First normal form (1NF)** when all the record attributes (data fields) within a database are well defined and the information can thus be stored as a flat file.
- Fixed asset management** management of the purchase, maintenance, valuation, and disposal of an organization's fixed assets.
- Flat files** files with no sequence or order to them, except perhaps a chronological sequence.
- Flying-start site** a disaster recovery location that includes everything contained in a hot site plus up-to-date backup data and software.
- Follow-up and maintenance phase** the continued monitoring of a newly implemented system to ensure that the system continues to operate properly and meets the organization's information needs.
- Foreign keys** data fields within some accounting records that enable these records to reference one or more records in other tables.
- Forensic accountants** also called fraud auditors. These individuals concern themselves with the prevention and detection of fraud and white-collar crime.
- Form (databases)** a user interface that typically uses text boxes, labels, and similar form controls to create or display records in a database table
- Fraud triangle** three elements that create a fraud. These are motive, opportunity, and the rationalization by the individual perpetrating the fraud that the behavior is appropriate or justified.
- Front-office** a reference to external functions and processes of an organization, such as those that involve customers, suppliers, and other business partners.
- Gantt chart** a tool for planning and controlling a systems implementation project.
- Generalized audit software (GAS)** computer packages that enable auditors to review computer files without continually rewriting processing programs.
- General-use software** the software used by auditors as productivity tools for improving their work; e.g., the use of a word processing program by an auditor when writing an audit report.
- Gigabyte** a unit of disk storage approximately equal to one billion bytes.
- Graphical documentation** the depiction, through the use of symbols and logic diagrams, of existing or proposed AISs by accountants, consultants, and system developers.
- Graphical user interface (GUI)** one or more visual computer screens that enable an end-user to communicate with a computer—typically by selecting items from menus or clicking on choices using a computer mouse. Computer programs that did not use GUIs typically were command-driven systems that required users to memorize and type in system commands and instructions.
- Group code** is the combination of two or more subcodes creating a group code, which is often used as a product code in sales catalogs.
- Groupware** a means of allowing users to send and receive email, plus perform a wide range of other document-editing tasks.
- Hacker** a person who breaks into the computer files of others for fun or personal gain.
- Hash total** the manual and perhaps meaningless sum of the customers' account numbers in a batch of transactions that is used for comparison purposes to control for missing or transposed numerical data.
- Hierarchical structures** the way accounting data may be organized, with successive levels of data in an inverted, tree-like pattern.
- HIPAA** the privacy requirements of the Health Insurance Portability and Accountability Act.
- Hosted solution** an approach to acquisition of software where the package is rented over the Internet, rather than purchased.
- Hot backup** a backup performed while the database is online and available for read/write.
- Hot site** a disaster recovery location that includes a computer system configured similarly to the system currently in use by a company for its data processing activities.
- HTML** an acronym for hypertext markup language—the editing language that tells a Web browser how to display information from the World Wide Web.
- Human resource management** an activity of an organization that includes the personnel function and the payroll function.
- Hyperlink** a word, phrase, or graphic that allows users to display new information in a Web browser or computer screen, typically by clicking on the hypertext element with a mouse.
- Hypertext** a text retrieval system enabling a user to access specific document locations
- Hypertext Markup Language (HTML)** a language used to create Web pages.
- Hypertext transfer protocol (HTTP)** a communications protocol designed to transfer information on the World Wide Web.
- I/O-bound computer** a computer whose input speeds and/or output speeds are slower than its computational speed.
- Ideal control** a control procedure within a company's internal control system that reduces to practically zero the risk of an undetected error or irregularity.
- Identity theft** the intentional misuse of someone else's personal information with the intent to deceive another.
- Identity Theft and Assumption Deterrence Act (ITADA) of 1998** the law under which the Department of Justice prosecutes ID theft violations.
- Image processing** storing, manipulating, or outputting the graphical information that usually first appear on hard-copy documents such as contracts, architectural plans, machinery schematics, or real-estate photos.
- Information Systems Audit and Control Association (ISACA)** the professional association of information technology auditors.
- Information systems risk assessment** method used by an auditor to evaluate the desirability of IT-related controls for a particular aspect of business risk.
- Information technology (IT)** the hardware and software used in computerized information systems.
- Information technology (IT) auditing** process that involves evaluating the computer's role in achieving audit and control objectives.
- Information technology (IT) auditors** auditors who concern themselves with analyzing the risks associated with all aspects of information technologies.
- IT governance** the process of using IT resources effectively to meet organizational objectives.

- Ink-jet printer** a printer that uses very small nozzles to spray ink onto blank pages to create printed outputs. An advantage of ink-jet printers over dot matrix printers is their ability to print in color. But ink-jet printers are slower and more costly, per-page, than laser printers.
- Input controls** computer application controls that attempt to ensure the validity, accuracy, and completeness of the data entered into a company's AIS; e.g., edit tests.
- Input mask** a set of characters that dictate the required format for input data. For example, in Microsoft Access, the mask "(###) ###-####" specifies the sequence of numeric digits (represented by # signs) required for a phone.
- Input validation routines** programs or subroutines that check the validity and accuracy of input data after the data have been entered and recorded on a machine-readable file.
- Input-processing-output cycle** the three steps that a computer uses to process computer records—i.e., inputting a record, processing the information it contains, and outputting the results. A classic example is creating payroll checks from time-card data.
- Instant Messaging (IM)** the use of special software to communicate with others over the Internet in real time. Many IM programs such as MSN IM and Yahoo IM also support audio and video conferencing as well as text messaging.
- Integrated accounting software programs** software packages that can process all types of accounting transactions and provide a variety of reports, including financial statements and budgets.
- Integrated Computer-Assisted Surveillance System (ICASS)** designed to protect computer systems from crimes, abuses, and fraud by automatically searching for anomalies and printing exception conditions on control reports.
- Integrated security** an integrated approach to security involves managers combining a number of key security technologies to protect the organization. This might include the following: firewalls, intrusion detection systems, content filtering, vulnerability management, virus protection, and virtual private networks.
- Integrated services digital network (ISDN) lines** high-speed data transmission lines, typically using fiber optics, that end users can rent from phone companies and that support transmission rates up to 1.5 million bits per second (Mbps).
- Integrated test facility (ITF)** used by auditors to test a company's computer programs; particularly useful for auditing in an operational setting and/or for evaluating integrated online systems or complex programming logic.
- Interactive data and electronic applications (IDEA)** managed by the Securities and Exchange Commission, IDEA is a particularly important source of financial information, containing XBRL data for over 10,000 companies.
- Internal control** defined by the COSO as a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories—effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations.
- Internet** a global collection of tens of thousands of interconnected business, government, military, and education networks that communicate with each other.
- Internet connectivity** software that permits small businesses to create Web sites and engage in electronic commerce.
- Internet protocol (IP) address** the numeric address into which a text-based domain address is converted for transmission purposes.
- Internet service provider (ISP)** the means of enabling users to connect to the Internet; examples are America Online, AT&T, and Sprint.
- Intranets** networks using the same software as the Internet, but which are internal (for communications purposes) to the companies that created them.
- Intrusion detection system (IDS)** computer software that enables users to identify, document, and perhaps mislead hackers attempting to access a protected system.
- Inventory Control** a means of protecting inventory by keeping it in a storage area accessible only to employees with custodial responsibility.
- IT general controls** controls over data processing to provide reasonable assurance that (1) development of, and changes to, computer programs are authorized, tested, and approved before their usage, and (2) access to data files is restricted to authorized users and programs to increase the likelihood that processed accounting data are accurate and complete.
- IT governance** ensuring that information technology risks are controlled and also that IT in an organization is deployed strategically to meet objectives.
- Job-costing information system** a system of costing that keeps track of the specific costs for raw materials, labor, and overhead associated with each product or group of products.
- Job stream** the flow of electronic data through a computer system.
- Just-in-Time System** an inventory system whose objective is to minimize inventories at all levels of production.
- K(kilobytes)** exactly 1,024 bytes of computer storage.
- Key performance indicators (KPIs)** important metrics that convey information about operational performance against plans or budgets.
- Knowledge management** distribution of expertise within an organization via technologies such as groupware.
- Knowledge process outsourcing (KPO)** an approach where an organization chooses to have some of its functions and activities related to research and acquisition of knowledge performed by an external organization.
- Laser printer** a type of printer that uses a laser to sensitize portions of a rotating drum. These sensitized portions attract small graphite particles called toner that can then be transferred to a blank piece of paper and permanently "fixed" to the page with heat.
- Lean Accounting** performance measurement systems used in lean manufacturing.
- Lean production/manufacturing** the concept that a company makes the commitment to eliminate waste throughout the organization (not just in production).
- Legacy system** a business's older, customized computer system that typically runs on a mainframe computer and is often too large and expensive to replace.
- Legal feasibility** determining whether or not there will be any conflict between

- a newly proposed system and a company's legal obligations.
- Level 0 data flow diagram** the least detailed data flow diagram, showing only in broad terms what tasks a system performs.
- Level 1 data flow diagram** the decomposition of a single symbol from within a level 0 data flow diagram to more fully document the system.
- Local area network (LAN)** a collection of microcomputers, printers, file servers, and similar electronic components that are physically located near one another—for example, in the same building—and connected together for communication purposes.
- Lock-box system** a tool used by a company to reduce the float period during which checks clear the bank.
- Lock-out system** a password safeguard that disconnects telephone users after a set number of unsuccessful login attempts.
- Logic bomb program** computer programs that remain dormant until some specified circumstance or date triggers them.
- Logical data flow diagram** the depiction of the tasks conducted by participants within a systems development process.
- Logical security** the use of technology to limit access by authorized individuals only to the organization's systems and information.
- Macro program flowchart** the highest-level program flowchart, providing an overview of the data processing logic.
- Magnetic (hard) disk** a secondary storage device that enables a computer to store billions of bytes of information. Unlike primary (RAM) memory, whose information is lost when its computer loses power, magnetic disk memory is permanent.
- Magnetic ink character recognition (MICR)** the technology used primarily by banks to encode magnetically readable symbols at the bottom of checks or similar financial documents. Because the magnetic flux of the ink used in these symbols loses strength over time, MICR is not widely used elsewhere.
- Mag-strip card** a credit card, hotel "key," employee badge, or similarly-sized plastic card with a magnetic stripe on one side that has been encoded with information about the user and/or account.
- Mainframe computer** a large, multi-user computer that enables large companies to centralize processing power in a single device.
- Make-or-buy decision** determining whether it is more cost effective to purchase an AIS or develop one in-house.
- Man trap** a small antechamber room between a public corridor and the entrance to a data processing center, set up for security purposes.
- Manufacturing resource planning (MRPII) system** a more complex version of the material requirements planning system that not only coordinates the purchase and use of raw material inventories in production, but also integrates with the purchasing and revenue processes.
- Mark-sense media** documents such as academic test forms, surveys, and similar papers that users complete with simple pencils or pens but that can be read and evaluated by computerized input devices.
- Master file** a file that stores permanent information about file entities (e.g., employees, customers, or financial assets). Its opposite is a transaction file, which typically stores temporary information about the transactions for a limited period of time.
- Material requirements planning (MRPI) system** a system that monitors the acquisition and use of raw materials needed by production processes.
- Megabyte** a unit of computer storage approximately equal to one million bytes.
- Message acknowledgment procedures** a control for computer network systems that is useful in preventing the loss of part or all of a company's transactions or messages on a computer network system.
- Metadata** data about data, contained in data dictionaries.
- Microprocessor** the portion of a CPU that performs the arithmetic and logic tasks of a computer, and that also interprets and executes computer instructions.
- Minicomputer** a multi-user computer with less processing power than a mainframe but typically more power than a personal, or microcomputer.
- Mnemonic codes** designed to help the user remember what they represent.
- Modem (modulator/demodulator)** a device for converting the digital data that a computer uses into sound pitches that can be transmitted over phone lines.
- Modular conversion** a method of systems implementation whereby the users involved in specific data processing tasks are divided into smaller units or modules; the data processing system is then installed module by module.
- Multidimensional databases** a means of storing large quantities of data, with the goal of enabling employees at various levels of an organization to define their own tables and reports in formats most useful to them.
- Multimedia databases** object-oriented databases that include graphics, audio information, and animation.
- Near field communication (NFC)** a means of enabling mobile devices such as cell phones, PDAs, and laptop computers to communicate with similar devices containing NFC chips.
- Network structure** used with AIS databases to link related records together and adequately capture the records' relationships.
- Non-value added waste** eliminated or reduced to improve overall customer value and to increase the profitability of the products or services that the organization offers.
- Normalization** the process of examining and arranging file data in a way that helps avoid problems when these files are used or modified later; data can be in first, second, or third normal form.
- Numeric codes** codes that use numbers only.
- Object-oriented database (OODB)** a database that contains both the text data of traditional databases and information about the set of actions that can be taken on these data files.
- Object-oriented programming (OOP) languages** computer programming languages that have strict rules (particularly "inheritance" and "encapsulation") that govern the properties, attributes, and operations of language objects (such as variables and form controls). OOP also includes the developer's ability to create new objects with these characteristics that can be used by other procedures and programs.
- Object-oriented software** programs that contain modular, reusable code

- helping programmers avoid writing duplicate programs and facilitating changes when needed.
- Offshoring** moving jobs offshore (e.g., to countries like India, China, Canada, Mexico, or Malaysia).
- Online analytical processing (OLAP)** a way to allow database users to extract multidimensional information from one or more database tables for the purpose of making complex decisions.
- Operating System (OS)** a set of software programs that helps a computer run itself as well as the application programs designed to run under it. Examples include Windows 2000, Windows XP, and Unix.
- Operational audits** are audits performed by a company's internal audit staff that focus on evaluating the efficiency and effectiveness of operations within a particular department.
- Operational feasibility** the examination of a proposed system's compatibility with the current operating environment (e.g., ensuring that the organizational structure would support the new system).
- Optical character recognition (OCR)** an older technique that enables computer input devices to interpret machine-printed (and to a limited extent, hand-written) data using optical technology.
- Organization-level controls** management's philosophy, operating style, integrity, policies, and procedures that influence the tone of a company. These characteristics help to establish the level of security and control consciousness in the organization, which is the basis for the control environment.
- Output controls** computer application controls that are designed to assure the validity, accuracy, and completeness of the output from a company's computer systems; e.g., regulating the distribution and use of printed output.
- Parallel conversion** a method of systems implementation where both the old and new system of a company operate simultaneously for a period of time.
- Parallel simulation technique** used by auditors to test a company's computer programs; the auditor uses live input data, rather than test data in a program that simulates all or some of the operations of the working program.
- Parent record** the higher-level record of two adjacent records in a hierarchical data structure.
- Partner relationship management (PRM)** software applications that track and coordinate various contacts and partners of an organization, including customers, suppliers, and other entities, such as not-for-profit organizational relationships.
- Password codes** general computer controls designed to limit access to a company's computers only to those individuals authorized to have this access.
- Payroll processing information systems** a means of paying employees for their work, maintaining employee earnings records, complying with government tax and reporting requirements, reporting on various deduction categories, and interacting with other personnel functions.
- Penetration testing** also sometimes called ethical hacking, auditors may use this approach to see if they can access resources within an information system.
- Performance measurement** the use of metrics and data to evaluate the efficiency and effectiveness of people, technologies, or processes.
- Peripheral equipment** devices such as keyboards, display monitors, and printers, that typically physically surround a computer processor.
- Personal data assistant (PDA) device** a computerized device that includes such functions as calculator, address book, memo storage, daily planner, and perhaps even provides wireless Internet access.
- Personal productivity software** software that typically runs on microcomputers (e.g., word processing and spreadsheet programs) and that helps individuals perform their jobs faster, easier, and more accurately.
- PERT (Program Evaluation and Review)** a technique for scheduling and monitoring the activities in large systems implementation projects.
- Phishing** an email from someone who falsely claims to be an established, legitimate company.
- Physical data flow diagram** the depiction of the first level of detail within a system, focusing on physical entities such as employees involved in the system, and hard-copy inputs and outputs.
- Physical security** any measures that an organization uses to protect its facilities, resources, or its proprietary data that are stored on physical media.
- Pivot tables** a feature that enables a database user to create two dimensional statistical summaries of database information.
- Pixels (picture elements)** the tiny dots that a monitor uses to create a complete screen image. For example, a monitor might have a pixel resolution of 1024 x 768, meaning the ability to display 1,024 pixels across the screen by 768 pixels down the screen.
- Point-of-sale (POS) device** an input device such as a barcode reader that enables a user to input data directly into a computer from a checkout stand in a supermarket or merchandise store and avoid manual keystrokes.
- Point-scoring analysis** an approach used to evaluate accounting software packages (as well as hardware) of vendors that meet most of a company's major IT requirements.
- Portals** Web sites that allow outsiders with authorized access to view a company's internal information systems.
- Predictive analytics** a technique using data stored in data warehouses to improve performance.
- Preliminary investigation** the first task performed by a systems study team whereby the team, for example, investigates current needs or problems in a company's present system and reports findings to the steering committee.
- Preventive controls** control procedures that are designed and implemented within a company's internal control system to *prevent* some potential problem from occurring when an activity is performed.
- Primary memory** the internal random access memory or RAM that a computer uses to temporarily store computer programs and immediate data.
- Privacy policy** a Web sites' policy that states the information it does and does not collect about you and how they might use that information.
- Process-costing information system** a system that uses averages to calculate the costs associated with goods in process and finished goods produced.
- Process map** a special type of flowchart used to better understand and communicate a company's current business processes.

- Processing controls** computer application controls that focus on the manipulation of accounting data after they are input to a company's computer system—for example, data-access controls.
- Production process** (sometimes called the conversion process) begins with a request for raw materials and ending with the transfer of finished goods to warehouses.
- Program change control** a set of internal control procedures developed to ensure against unauthorized program changes.
- Program flowchart** graphical documentation that outlines the processing logic for each part of a computer program and also indicates the sequence of processing steps.
- Programming language** a language such as Java or Visual Basic that enables a programmer to create instructions (called “code”) that a computer can understand.
- Project management software** software that can aid in planning and controlling the tasks involved in a systems implementation project.
- Prototyping an** approach to systems design work that involves developing a simplified model of a proposed information system that is experimented with by the system's users.
- Proxy server** a computer and related software that creates a transparent gateway to and from the Internet that can be used to control Web access.
- Public key encryption** encrypting messages using a scrambling key assigned by a public entity.
- Purchasing process** the process that begins with a request (or an order) for goods or services and ends with payment to the vendor.
- Queries** the means of allowing database users to create subschemas of interest to them.
- Radio frequency technology** an emerging technology that uses RFID tags (attached to products or pallets of products) for identification. These tags (transponders) can hold much more information than barcodes.
- Rapid application development (RAD)** the use of CASE tools to speed the planning and development of computer information systems.
- REA model** an approach to data modeling that focuses on resources (R), events (E), and agents (A).
- Record keys** may or may not be unique identifiers of individual or associated records.
- Record structure** the specific data fields in each record of a database table; this structure is fixed in many accounting applications.
- Redundant array of independent disks (RAID)** a set of magnetic disks that act as a single hard drive.
- Reengineering business processes** starting from scratch to redesign major processes in an organization (e.g., such as sales orders or purchasing).
- Referential integrity (databases)** a control that denies a user the ability to create a child record with no parent, or to delete a parent record that has child records.
- Relational database structure** a means of enabling database users to identify relationships either at the time the data are initially created or at a future time as new informational requirements are ascertained.
- Relationship table** an approach to represent relationships between two database tables when you have many-to-many relationships between database entities.
- Request for proposal (RFP)** report sent to computer vendors in systems design work that outlines the specific requirements of a company's desired system.
- Responsibility system of computer program development and maintenance** a series of steps that comprise a test of program change control. It is designed to ensure accountability and adequate supervisory controls.
- RFID tags** are computer chips and tiny antennas that are used to manage inventory.
- Right Networks ASP** an add-on for QuickBooks, enabling remote hosting of desktop applications.
- Risk assessment** a component of internal control that considers the risk factor when designing controls for a company.
- Risk matrix** a tool especially useful for prioritizing large risks that classifies each potential risk by mitigation cost and also by likelihood of occurrence.
- Risk-based audit approach** used by auditors to evaluate a company's internal control procedures.
- Rollback processing** a fault-tolerant system, at the transaction level, in which transactions are never written to disk until they are complete.
- Routing verification procedures** a control for computer network systems that helps to ensure that no transactions or messages of a company are routed to the wrong computer network system address.
- Salami technique** a computer crime whereby computer programmers steal small amounts of money from many accounts over a period of time.
- Sales process** a process that begins with a customer order for goods or services and ends with the collection of cash from the customer.
- Sandwich rule (flowcharting)** a rule that states that a processing symbol should always appear between an input symbol and an output symbol.
- Sarbanes-Oxley Act of 2002** sweeping financial legislation that emphasizes organizational internal controls and accountability.
- SAS No. 94** “The Effect of Information Technology on the Auditor's Consideration of Internal Control in a Financial Statement Audit.” a SAS rule that cautions external auditors that the way firms use IT might impact any of the five internal control components.
- Scalable** the ability for a software user to migrate easily to packages that handle increasingly large volumes of data and transactions.
- Scenario planning** found under “Event Identification” (of ERM) is a way for management to identify scenarios (from minor concern to major disasters) that could occur.
- Schedule feasibility** an evaluation that involves estimating the time frame for a new or revised system to become operational.
- Schema** a reflection of the totality of the information in a database and the relationships of its tables (i.e., records).
- Scope creep** a situation where the size of a task or project gradually becomes larger, and perhaps more complex and costly.
- Second normal form (2NF)** when a database is in first normal form and all the data items in each record depend on the record's primary record key.
- Secondary record keys** data fields that are typically not unique among records but that can also be used to search records for specific information.
- Secondary storage** computer equipment that stores data permanently

- (e.g., hard disks, CD Roms, and USB drives).
- Secret key cryptography** a data encryption method that uses a single cryptographic key that is shared by the communicating parties.
- Security policy** a comprehensive plan that management must develop to help protect the enterprise from internal and external threats.
- Select query** the creation of a dynaset of database information based on two types of user-specified criteria: those that determine which records to include, and those that determine which data fields to include *from* those records.
- Separation of duties** an activity of an internal control system that focuses on structuring work assignments among employees so that one employee's work activities serve as a check on those work activities of another employee.
- Sequence code** a sequential set of numbers used to identify customer accounts, employee payroll checks, customer sales invoices, and so forth.
- Sibling records** two records on the same level in a hierarchical data structure.
- Signed checklists** an example of establishing accountability by verifying that an accountant performed certain tasks, that a reviewer approved them, and that both individuals are accountable for their accuracy.
- Slack time** a description of the amount of delay time that can occur in each non-critical activity and still not delay a project.
- Smishing** a scam similar to phishing using text messages on cell phones in an attempt to get you to provide or "update" your personal information such as account number, credit card number, or password.
- Social engineering** a tactic hackers use to gain access to passwords, such as posing as a bona fide employee to convince a network administrator to give passwords over the telephone.
- Soft copy output** computer output on video screens, billboards, and similar devices; the opposite of hard copy (printed) output.
- Source code** the program commands that underlie a software application.
- Source document** a piece of paper or an electronic form that becomes the source of subsequent computer records and processing activities. Examples of source documents include time cards in payroll systems, employee application forms, doctor medical diagnoses, insurance claim forms, and personal bank checks.
- SOX, Section 404** a statement that management is responsible for establishing and maintaining an adequate internal control structure and at the end of each fiscal year must attest to the effectiveness and completeness of that structure.
- Spam** annoying, unsolicited email messages that are often illegal and increasingly costly to organizations.
- Spend management** a systematic approach to controlling an organization's expenses.
- Spoofing** masquerading as an authorized Internet user.
- Steering committee** a group consisting of a company's top management personnel and possibly one or more staff auditors that works with the systems study team throughout all phases of system development activities.
- Strong passwords** passwords that contain a variety of characters (letters, numbers, and symbols) and are 14 characters or longer. A 15-character password composed of random letters and numbers is about 33,000 times stronger than an 8-character password composed of characters from the entire keyboard.
- Structured programming** techniques used to develop large computer programs in a hierarchical fashion.
- Structured query language (SQL)** a popular data manipulation language for retrieving and manipulating data; auditors can use SQL to retrieve a client's data and display these data in a variety of formats for audit purposes.
- Structured walkthrough** a meeting in which the attendees review the logic of a computer program.
- Supercomputer** a computer that is faster and more powerful than a mainframe, and capable of performing trillions of operations per second.
- Supply chain management (SCM)** applications that enable an ERP system or other software to interface with a company's suppliers and customers.
- System development life cycle (SDLC)** comprised of the planning, analysis, design, and implementation phases of acquiring or developing a new information system.
- System flowchart** graphical documentation that depicts the logical flow of data and processing steps in an AIS.
- System maintenance** ensuring the continuing operations of a system.
- Systems analysis** the phase of a systems study in which the study team thoroughly familiarizes itself with a company's current operating system by focusing on strengths and weaknesses within the system.
- Systems approach** using a broad point of view in performing a systems study.
- Systems Auditability and Control (SAC) report** a guide developed by the Institute of Internal Auditors that provides auditors with guidance in the evaluation of IT-related internal controls.
- Systems implementation** the phase of a systems study in which the recommended changes from analysis, design, and development work are now put into operation.
- Systems specification report** a document that summarizes the findings of a design team regarding the needs for a new information system.
- Systems study** a formal investigation of a company's existing information systems.
- Systems survey** part of systems analysis in which the study team obtains a more complete understanding of a company's current operation information system and its environment.
- SysTrust** an assurance service introduced by the AICPA that evaluates the reliability of information systems with respect to their availability, security, integrity, and maintainability.
- Table (databases)** a set of related records that are stored together in a file using a database management system such as Microsoft Access.
- Technical feasibility** an analysis of the technical resources required by a particular information system.
- Test data** a set of transactions that examine the range of exception situations that might occur under normal processing conditions.
- Third normal form (3NF)** a database that is in second normal form and that contains no transitive dependencies.
- Third party assurance services** audit and assessment services offered by independent third parties to provide business users and individual consumers with some level of comfort over Internet transactions.

- Time and billing information systems** similar to job order costing systems, tracking hours and costs associated with each job (i.e., each client) and each employee (i.e., professional staff).
- Transaction controls** needed by AISs to ensure that the database system performs each transaction accurately and completely.
- Transaction file** a temporary file of accounting records that typically stores the transactions for a specific period of time.
- Transitive dependencies** when the same record does not contain two data fields in which data field *A* determines data field *B*.
- Trojan horse program** a destructive or deceptive computer program hidden inside an accepted program.
- Trust services** third party assurance services offered through the AICPA that provide guidance to practitioners to evaluate organizations in terms of their reliability, privacy, and security.
- Turnaround document** a hard-copy document such as a bank check or confirmation slip that a business creates, sends to a second party for completion or approval, and then receives back for further processing. For convenience, most turnaround documents are computer readable.
- Turnkey system** a computer system acquired from independent vendors that includes both software and hardware.
- Uninterruptible power system (UPS)** an auxiliary power supply that can smooth the flow of power to the computer, thereby preventing the loss of data due to momentary surges or dips in power.
- Universal resource locator (URL)** a text Internet address such as www.Wiley.com.
- Utility programs** computer programs that are typically included with computer operating systems, but which perform specific end-user tasks. Examples include programs that format disks, transfer file data from one medium to another, or test emails for viruses.
- Val IT** a governance framework developed by IT Governance Institute (ITGI) as a formal statement of principles and processes for IT management; it is tightly integrated with COBIT.
- Validation rule** see data validation rule.
- Value cards** credit-card size or key-ring size cards from retailers that have a barcode on the back side for the merchant to track purchases. In some cases, the merchant offers discounts or points that may be exchanged for goods or services. In other cases customers simply receive advance information for upcoming sales before the general public.
- Value-added networks (VANs)** proprietary networks that large IT organizations design and maintain for their customers in order to implement EDI or intranet applications.
- Value-added resellers (VARs)** special type of systems consultants who are licensed to sell particular software packages and provide organizations with consulting services related to those packages.
- Value stream management** a management process that controls activities that generate value in a product or service rather than by functional area.
- Vertical market** markets or industries that are distinct in terms of the services they provide or the goods they produce.
- View controls** a security feature within a database system that limits each user's access to information on a need-to-know basis.
- Virtual PBXs** are Internet-based PBX systems that enable organizations to outsource their PBX services.
- Virtual private network (VPN)** a mimic of a value-added network in many of its security features, but enjoys the benefit of transmitting messages cheaply over existing Internet connections.
- Virtual storage** a computer operating system technique that uses magnetic disk storage as a virtual extension of primary storage.
- Virus** a computer program that rogue programmers embed in other programs, emails, or computer files, and that (when executed) typically perform such destructive acts as erasing files, disrupting emails, or interfering with operating system functions.
- Voice over Internet Protocol (VoIP)** a technology that allows you to make telephone calls using a broadband Internet connection instead of a regular telephone line.
- Voice recognition system** computer hardware and software that enables a computer to hear and interpret voice commands.
- Volatile memory** computer memory that becomes inoperative when it loses power.
- VPN** a security appliance that runs behind an organization's firewall and allows remote users to access entity resources by using wireless, hand-held devices.
- Watchdog processor** a fault-tolerant system that uses two processors. If something happens to the first processor, the second processor takes over the processing work.
- Web browser** a software application that enables a user to display and interact with sites on the World Wide Web.
- Wide area network (WAN)** computer networks spanning regional, national, or global geographic areas.
- Wi-fi technology** technology that allows transmission and receipt of voice and data messages remotely and without hard-wired connections to a phone line.
- Wireless application protocol (WAP)** a data communication protocol mostly used by mobile phones and PDAs to connect to the Internet.
- World Wide Web** the graphics portion of the Internet.
- Worm program** a program that disrupts normal data processing and is usually able to replicate itself onto other files, computer systems, or networks. Examples of these viruses are boot sector viruses, worm programs, Trojan horse programs, and logic bomb programs.
- XBRL** an acronym for "extensible business reporting language"—a standardized set of markup (editing) tags and rules created with XML used by the financial reporting industry.
- XBRL instance document** an XML document that was created using XBRL standards.
- XBRL International Consortium** an organization of about 450 members, including many U.S. accounting firms; it is in charge of developing XBRL standards.
- XML** an acronym for extensible markup language—an extension of HTML that allows users to create their own markup (editing) tags.