# Glossary

The chapter in which the term is first defined is set in parentheses following the definition.

## A

**Access control list:** These lists contain information that defines the access privileges for all valid users of the resource. An access control list assigned to each resource controls access to system resources such as directories, files, programs, and printers. (16)

**Access controls:** Controls that ensure that only authorized personnel have access to the firm's assets. (3)

**Access method:** The technique used to locate records and navigate through the database. (2)

**Access tests:** Tests that ensure that the application prevents authorized users from unauthorized access to data. (17)

**Access token:** These contain key information about the user, including user ID, password, user group, and privileges granted to the user. (16)

**Accounting information systems (AIS):** Specialized subset of information systems that processes financial transactions. (1)

**Accounting record:** A document, journal, or ledger used in transaction cycles. (2)

**Accounts payable pending file:** File containing a copy of the purchase requisition. (5)

**Accounts receivable (AR) subsidiary ledger:** An account record that shows activity by detail for each account type containing, at minimum, the following data: customer name; customer address; current balance; available credit; transaction dates; invoice numbers; and credits for payments, returns, and allowances. (4)

**Accuracy:** Information must be free from material errors. However, materiality is a difficult concept to quantify. It has no absolute value; it is a problem-specific concept. This means that in some cases, information must be perfectly accurate. (3)

**Accuracy tests:** Tests that ensure that the system processes only data values that conform to specified tolerances. (17)

**Activities:** Work performed in a firm. (7)

**Activity driver:** Factor that measures the activity consumption by the cost object. (7)

**Activity-based costing (ABC):** Accounting technique that provides managers with information about activities and cost objects. (7)

**Ad hoc reports:** This technology provides direct-inquiry and report-generation capabilities. (8)

**Advanced encryption standard (AES):** Also known as Rijndael, this is a private key (or symmetric key) encryption technique. (12)

**Agents:** Individuals and departments that participate in an economic event. (1)

**Algorithm:** Procedure of shifting each letter in the cleartext message the number of positions that the key value indicates. (12)

**Alphabetic codes:** Alphabetic characters assigned sequentially. (8)

**Alphanumeric codes:** Codes that allow the use of pure alphabetic characters embedded within numeric codes. (8)

**Analytical review:** Balances to identify relationships between accounts and risks that are not otherwise apparent. (11)

**Anomalies:** Improperly normalized tables can cause DBMS processing problems that restrict, or even deny, users access to the information they need; such tables exhibit negative operational symptoms called anomalies. (9)

**AP subsidiary ledger:** The records controlling the exposure in the cash disbursements subsystems. (5)

**Application controls:** Ensure the integrity of specific systems. (3)

**Application-level firewall:** Provides high-level network security. (12)

**Approved credit memo:** The credit manager evaluates the circumstances of the return and makes a judgment to grant (or disapprove) credit. (4)

**Approved sales order:** These contain sales order information for the sales manager to review once it is approved. (4)

**Architecture description:** A formal description of an information system that identifies and defines the structural properties of the system. (13)

**Archive file:** File that contains records of past transactions that are retained for future reference. (2)

**Asset acquisition:** Usually begins with the departmental manager (user) recognizing the need to obtain a new asset or replace an existing one. (6)

**Asset disposal:** A disposal report describing the final disposition of the asset. (6)

**Asset maintenance:** Involves adjusting the fixed asset subsidiary account balances as the assets (excluding land) depreciate over time or with usage. (6)

**Association:** The relationship among record types. (9)

**Assurance services:** Professional services, including the attest function, that are designed to improve the quality of information, both financial and nonfinancial, used by decision makers. (1)

**Attendance file:** File created by the timekeeping department upon receipt of approved time cards. (6)

**Attest function:** Public confidence in the reliability of internally produced financial statements rests directly on their being validated by an independent expert auditor. (1)

**Attributes:** Equivalents to adjectives in the English language that serve to describe the objects. (9)

**Audit objectives:** The task of creating meaningful test data. (17)

**Audit procedures:** This involves a combination of tests of application controls and substantive tests of transaction details and account balances. (17)

**Audit risk:** Probability that the auditor will render unqualified opinions on financial statements that are, in fact, materially misstated. (17)

**Audit trail:** Accounting records that trace transactions from their source documents to the financial statements. (2)

**Audit trail controls:** Ensures that every transaction can be traced through each stage of processing from its economic source to its presentation in financial statements. (17)

**Audit trail test:** Ensures that the application creates an adequate audit trail. (17)

**Auditing:** Form of independent attestation performed by an expert who expresses an opinion about the fairness of a company's financial statements. (1)

**Auditor:** An expert who expresses an opinion about the fairness of a company's financial statements. (1)

**Authenticity tests:** Tests verifying that an individual, a programmed procedure, or a message attempting to access a system is authentic. (17)

**Authority:** The right to make decisions pertaining to areas of responsibility. (8)

**Automated storage and retrieval systems (AS/RS):** Computer-controlled conveyor systems that carry raw materials from stores to the shop floor and finished products to the warehouse. (7)

**Automation:** Involves using technology to improve the efficiency and effectiveness of a task. (4)

# B

**Back-order:** These records stay on file until the inventories arrive from the supplier. Back-ordered items are shipped before new sales are processed. (4)

**Back-order file:** Contains customer orders for out-of-stock items. (4)

**Backbone systems:** Basic system structure on which to build. (1)

**Backup controls:** Ensure that in the event of data loss due to unauthorized access, equipment failure, or physical disaster the organization can recover its files and databases. (16)

**Balanced scorecard (BSC):** A management system that enables organizations to clarify their vision and strategy and translate them into action. (13)

**Base case system evaluation (BCSE):** Variant of the test data technique, in which comprehensive test data are used. (17)

**Batch:** A group of similar transactions accumulated over time and then processed together. (2)

**Batch control totals:** Record that accompanies the sales order file through all of the data processing runs. (4)

**Batch controls:** Effective method of managing high volumes of transaction data through a system. (17)

**Batch systems:** Systems that assemble transactions into groups for processing. (2)

**Big bang:** An attempt by organizations to switch operations from their old legacy systems to the new system in a single event that implements the ERP across the entire company. (11)

**Bill of lading:** Formal contract between the seller and the shipping company that transports the goods to the customer. (4)

**Bill of materials:** Document that specifies the types and quantities of the raw materials and subassemblies used in producing a single unit of finished product. (7)

**Biometric devices:** Devices that measure various personal characteristics, such as fingerprints, voice prints, retina prints, or signature characteristics. (16)

**Blind copy:** A copy of the purchase order that contains no price or quantity information. (5)

**Block code:** A coding scheme that assigns ranges of values to specific attributes such as account classifications. (8)

**Bolt-on software:** Software provided by third-party vendors used in conjunction with already purchased ERP software. (11)

**Botnets:** Collections of compromised computers. (12)

**Bribery:** Involves giving, offering, soliciting, or receiving things of value to influence an official in the performance of his or her lawful duties. (3)

**Budget:** This process helps management achieve its financial objectives by establishing measurable goals for each organizational segment. (8)

**Budget master file:** Contains budgeted amounts for revenues, expenditures, and other resources for responsibility centers. (8)

**Business ethics:** Pertains to the principles of conduct that individuals use in making choices and guiding their behavior in situations that involve the concepts of right and wrong. (3)

# C

**Caesar cipher:** The earliest encryption method is called the Caesar Cipher, which Julius Caesar is said to have used to send coded messages to his generals in the field. (12)

**Call-back device:** Hardware component that asks the caller to enter a password and then breaks the connection to perform a security check. (16)

**Cardinality:** The numerical mapping between entity instances. (2)

**Cash disbursement vouchers:** Provide improved control over cash disbursements and allow firms to consolidate several payments to the same supplier on a single voucher, thus reducing the number of checks written. (5)

**Cash disbursements journal:** Contains the voucher number authorizing each check and provides an audit trail for verifying the authenticity of each check written. (5)

**Cash receipts journal:** Records that include details of all cash receipts transactions, including cash sales, miscellaneous cash receipts, and cash received. (4)

**Centralized database:** Database retained in a central location. (9)

**Centralized data processing:** Under this model, all data processing is performed by one or more large computers housed at a central site that serve users throughout the organization. (1)

**Certification authorities (CAs):** Trusted third parties that issue digital certificates. (12)

**Changed data capture:** The technique that can dramatically reduce the extraction time by capturing only newly modified data. (11)

**Chart of accounts:** A listing of an organization's accounts showing the account number and name. (8)

**Check digit:** Method for detecting data coding errors. A control digit is added to the code when it is originally designed to allow the integrity of the code to be established during subsequent processing. (17)

**Check register:** A record of all cash disbursements. (5)

**Checkpoint feature:** This feature suspends all data processing while the system reconciles the transaction log and the database change log against the database. (16)

**Client-server model:** A form of network topology in which a user's computer or terminal (the client) accesses the ERP programs and data via a host computer called the server. (11)

**Closed accounts payable file:** The check number is recorded in the voucher register to close the voucher and transfer the items to the closed AP file. (5)

**Closed database architecture:** A database management system used to provide minimal technological advantage over flat file systems. (11)

**Closed purchase order file:** The prepare purchase order function receives the purchase requisitions, which are sorted by vendor if necessary. The last copy is filed in the open/closed purchase order file which is sent to the vendor. (5)

**Closed sales order file:** The batch program prepares and mails customer bills and transfers the closed sales records to the closed sales order file, which is also called as sales journal. (4)

**Closed voucher file:** A file that contains the voucher packets of all paid (closed) accounts payable items. (5)

**Cohesion:** Number of tasks a module performs. (14)

**Cold turkey cutover:** Process of converting in which a firm switches to a new system on a particular day and simultaneously terminates the old system. (14)

**Competency analysis:** Provides a complete picture of the organization's effectiveness as seen via four strategic filters: resources, infrastructure, products/services, and customers. (13)

**Compilers:** Language translation modules of the operation system. (16)

**Completeness:** A report should provide all necessary calculations and present its message clearly and unambiguously. (3)

**Completeness tests:** Tests identifying missing data within a single record and entire records missing from a batch. (17)

**Composite key:** Comprises two attributes: INVOICE NUM and PROD NUM. (9)

**Computer ethics:** The analysis of the nature and social impact of computer technology and the corresponding formulation and justification of policies for the ethical use of such technology. Includes details about software as well as hardware and concerns about networks connecting computers as well as computers themselves. (3)

**Computer fraud:** The theft, misuse, or misappropriation of assets by altering computer-readable records and files, or by altering the logic of computer software, or the illegal use of computer-readable information, or intentional destruction of computer software or hardware. (3)

**Computer numerical control (CNC):** Computer-controlled machines that replace skilled labor. The computer contains programs for all parts being manufactured by the machine. (7)

**Computer-aided design (CAD):** Use of computers to design products to be manufactured. (7)

**Computer-aided manufacturing (CAM):** Use of computers in factory automation. (7)

**Computer-aided software engineering (CASE):** Technology that involves the use of computer systems to design and code computer systems. (14)

**Computer-assisted audit tools and techniques (CAATTs):** To illustrate how application controls are tested and to verify the effective functioning of application controls. (17)

**Computer-integrated manufacturing (CIM):** Completely automated environment. (7)

**Conceptual system:** The production of several alternative designs for the new system. (1)

**Conceptual user views:** Description of the entire database. (14)

**Concurrency control:** To ensure that transactions processed at each site are accurately reflected in the databases at all other sites. (9)

**Conflict of interest:** Outlines procedures for dealing with actual or apparent conflicts of interest between personal and professional relationships. (3)

**Consolidation:** The aggregation or roll-up of data. (11)

**Construct:** To design and build working software that is ready to be tested and delivered to its user community. This phase involves modeling the system, programming the applications, and application testing. (14)

**Control activities:** Policies and procedures used to ensure that appropriate actions are taken to deal with the organization's risks. (3)

**Control environment:** The foundation of internal control. (3)

**Controller:** The cash receipts department typically reports to the treasurer, who has responsibility for financial assets. Accounting functions report to the controller. Normally these two general areas of responsibility are performed independently. (4)

**Conversion cycle:** Cycle comprising the production system and the cost accounting system. (2)

**Cookies:** Files containing user information that are created by the web server of the site being visited and are then stored on the visitor's own computer hard drive. (12)

**Core applications:** The applications that operationally support the day-to-day activities of the business. (11)

**Corporate IT function:** The corporate IT function is a leaner unit with a different mission than that of the centralized IT function. (15)

**Corrective controls:** Actions taken to reverse the effects of errors detected in the previous step. (3)

**Cost accounting system:** The process of tracking, recording, and analyzing costs associated with the products or activities of an organization. (7)

**Cost center:** Organizational unit with responsibility for cost management within budgetary limits. (8)

**Cost objects:** Reasons for performing activities. (7)

**Cost-benefit analysis:** Process that helps management determine whether (and by how much) the benefits

received from a proposed system will outweigh its costs. (13)

**Coupling:** Measure of the degree of interaction between modules. (14)

**Credit authorization:** Consent for authorizing credit. (4)

**Credit memo:** Document used to authorize the customer to receive credit for the merchandise returned. (4)

**Credit records file:** Provides customer credit data. (4)

**Currency of information:** A problem associated with the flat-file model because of failing to update all the user files affected by a change in status that results in decisions based on outdated information. (1)

**Customer open order file:** File containing a copy of the sales order. (4)

**Customer order:** Document that indicates the type and quantity of merchandise being requested. (4)

**Cutover:** Process of converting from the old system to the new system. (14)

**Cycle billing:** Method of spreading the billing process out over the month. (4)

# D

**Data:** Facts, which may or may not be processed (edited, summarized, or refined) and have no direct effect on the user. (1)

**Data attribute:** The most elemental piece of potentially useful data in the database. (9)

**Data collection:** It is the first operational stage in the information system. (1)

**Data collision:** Collision of two or more signals due to simultaneous transmission that destroys both messages from the transmitting and the receiving nodes. (12)

**Data currency:** When the firm's data files accurately reflect the effects of its transactions. (9)

**Data definition language (DDL):** Programming language used to define the database to the database management system. (9)

**Data dictionary:** Description of every data element in the database. (9)

**Data encryption:** Technique that uses an algorithm to scramble selected data, making it unreadable to an intruder browsing the database. (16)

**Data flow diagram:** Diagram that uses a set of symbols to represent the processes, data sources, data flows, and process sequences of a current or proposed system. (2)

**Data manipulation language (DML):** Language used to insert special database commands into application programs written in conventional languages. (9)

**Data mart:** A data warehouse organized for a single department or function. (11)

**Data mining:** The process of selecting, exploring, and modeling large amounts of data to uncover relationships and global patterns that exist in large databases but are hidden among the vast amount of facts. (8)

**Data model:** The blueprint for what ultimately will become the physical database. (2)

**Data modeling:** The task of formalizing the data requirements of the business process as a conceptual model. (14)

**Data processing:** This group manages the computer resources used to perform the day-to-day processing of transactions. (1)

**Data redundancy:** The state of data elements being represented in all user files. (9)

**Data sources:** Financial transactions that enter the information system from both internal and external sources. (1)

**Data storage:** An efficient information system captures and stores data only once and makes this single source available to all users who need it. (1)

**Data structures:** Techniques for physically arranging records in a database. (2)

**Data updating:** Periodic update of data stored in the files of an organization. (1)

**Data warehouse:** A database constructed for quick searching, retrieval, ad hoc queries, and ease of use. (8)

**Database:** Physical repository for financial data. (1)

**Database administrator (DBA):** The individual responsible for managing the database resource. (9)

**Database authorization table:** Table containing rules that limit the actions a user can take. (16)

**Database conversion:** The transfer of data from its current form to the format or medium the new system requires. (14)

**Database lockout:** Software control that prevents multiple simultaneous access to data. (9)

**Database management:** A special software system that is programmed to know which data elements each user is authorized to access. (1)

**Database management fraud:** Includes altering, deleting, corrupting, destroying, or stealing an organization's data. (3)

**Database management system (DBMS):** Software system that controls access to the data resource. (1)

**Database model:** An organization can overcome the problems associated with flat files by implementing this to data management. (1)

**Database tables:** This flexible database approach permits the design of integrated systems applications capable of supporting the information needs of multiple users from a common set of integrated database tables. (1)

**Deadlock:** A "wait" state that occurs between sites when data are locked by multiple sites waiting for the removal of the locks from the other sites. (9)

**Decision-making process:** A cognitive process leading to the selection of a course of action among variations. (8)

**Deep packet inspection (DPI):** To determine when an attack is in progress. It uses a variety of analytical and statistical techniques to evaluate the contents of message packets. (16)

**Deletion anomaly:** The unintentional deletion of data from a table. (9)

**Denial of service attack (Dos):** An assault on a web server to prevent it from servicing its legitimate users. (12)

**Deposit slip:** A written notification accompanying a bank deposit which specifies and categorizes the funds (such as checks, bills, and coins) being deposited. (4)

**Depreciation schedule:** Record used to initiate depreciation calculations. (6)

**Design phase:** To produce a detailed description of the proposed system that both satisfies the system requirements identified during systems analysis and is in accordance with the conceptual design. (14)

**Detailed design report:** Constitutes a set of blueprints that specify input screen formats, output report layouts, database structures, and process logic. (14)

**Detailed feasibility study:** A step in the system evaluation and selection process where the feasibility factors that were evaluated on a preliminary basis as part of the systems proposal are reexamined. (13)

**Detective controls:** Devices, techniques, and procedures designed to identify and expose undesirable events that elude preventive controls. (3)

**Digest:** A mathematical value calculated from the text content of the message. (16)

**Digital certificate:** A sender's public key that has been digitally signed by trusted third parties. (12)

**Digital envelope:** An encryption method where both DES and RSA are used together. (12)

**Digital signature:** An electronic authentication technique that ensures the transmitted message originated with the authorized sender and that it was not tampered with after the signature was applied. (12)

**Direct access files:** Files in which each record has a unique location or address. (2)

**Direct access structures:** Stores data at a unique location, known as an address, on a hard disk or floppy disk. (2)

**Disaster recovery plan (DRP):** Comprehensive statement of all actions to be taken before, during, and after a disaster, along with documented, tested procedures that will ensure the continuity of operations. (15)

**Discovery model:** A model that uses data mining to discover previously unknown but important information that is hidden within the data. (8)

**Discretionary access privileges:** Grants access privileges to other users. For example, the controller, who is the owner of the general ledger, may grant read-only privileges to a manager in the budgeting department. (16)

**Disseminating:** Provides knowledge to the recipients in a usable form. The most difficult of these processes to automate is refining. (14)

**Distributed data processing (DDP):** Involves reorganizing the IT function into small information processing units (IPUs) that are distributed to end users and placed under their control. (1)

**Distributed databases:** Databases distributed using either the partitioned or replicated technique. (9)

**Distributed denial of services (DDos):** A distributed denial of service (DDos) attack may take the form of a SYN flood or smurf attack. The distinguishing feature of the DDos is the sheer scope of the event. (12)

**Distribution level:** Organizations operating on this use the Internet to sell and deliver digital products to customers. (12)

**Document flowchart:** Flowchart that shows the relationship among processes and the documents that flow between them. (2)

**Document name:** A component of the URL that indicates the name of the file/document. (12)

**Documentation:** Written description of how the system works. (14)

**Domain name:** An organization's unique name combined with a top-level domain (TLD) name. (12)

**Drill-down:** Operations permitting the disaggregation of data to reveal the underlying details that explain certain phenomena. (11)

**Duality:** REA's semantic features derive from the elements of an economic transaction. (10)

**Dynamic virtual organization:** Electronic partnering of business enterprises sharing costs and resources for the purpose of benefits to all parties involved. (12)

# E

**Eavesdropping:** Involves listening to output transmissions over telecommunications lines. (3)

**Echo check:** Technique that involves the receiver of the message returning the message to the sender. (16)

**Economic events:** Phenomena that affect changes (increases or decreases) in resources. (10)

**Economic extortion:** Economic extortion is the use (or threat) of force (including economic sanctions) by an individual or organization to obtain something of value. The item of value could be a financial or economic asset, information, or cooperation to obtain a favorable decision on some matter under review. (3)

**Economic feasibility:** Pertains to the availability of funds to complete the project. (13)

**Economic order quantity (EOQ) model:** Inventory model designed to reduce total inventory costs. (7)

**EDE3:** Encryption that uses one key to encrypt the message. (16)

**EEE3:** Encryption that uses three different keys to encrypt the message three times. (16)

**Electronic data interchange (EDI):** The intercompany exchange of computer-processable business information in standard format. (4)

**Electronic input techniques:** Form of electronic data collection, which falls into two basic types: input from source documents and direct input. (14)

**Embedded audit module (EAM):** Technique in which one or more specially programmed modules embedded in a host application select and record

predetermined types of transactions for subsequent analysis. (17)

**Embedded instructions:** Embedded instructions are contained within the body of the form itself rather than on a separate sheet. (14)

**Employee file:** A file used with the attendance file to create an online payroll register. (6)

**Employee fraud:** Performance fraud by nonmanagement employees generally designed to directly convert cash or other assets to the employees' personal benefit. (3)

**Employee payroll records:** The system an employer uses to calculate, track, and report employee pay. (6)

**Empty shell:** Arrangement that involves two or more user organizations that buy or lease a building and remodel it into a computer site, but without the computer and peripheral equipment. (15)

**Encryption:** Technique that uses a computer program to transform a standard message being transmitted into a coded (cipher text) form. (16)

**End users:** Users for whom the system is built. (1)

**Enterprise resource planning (ERP):** A system assembled of prefabricated software components. (1)

**Entity:** A resource, event, or agent. (2)

**Entity relationship (ER) diagram:** Documentation technique used to represent the relationship among activities and users in a system. (2)

**Ethical responsibility:** Organization managers have the responsibility to seek a balance between the risks and benefits to these constituents that result from their decisions. (3)

**Ethics:** Principles of conduct that individuals use in making choices in guiding their behavior in situations that involve the concepts of right and wrong. (3)

**Event monitoring:** Summarizes key activities related to system resources. (16)

**Event-driven language:** Visual Basic, or object-oriented programming (OOP) languages such as Java or C++. (14)

**Events:** Phenomena that affect changes in resources. (1)

**Existence or occurrence:** Affirms that all assets and equities contained in the balance sheet exist and that all transactions in the income statement actually occurred. (17)

**Expenditure cycle:** Acquisition of materials, property, and labor in exchange for cash. (2)

**Exposure:** Absence or weakness of a control. (3)

**External agent:** The economic agents outside the organization with discretionary power to use or dispose of economic resources. (10)

**Extranet:** A password-controlled network for private users rather than the general public. (12)

# F

**Fault tolerance:** Ability of the system to continue operation when part of the system fails because of hardware failure, application program error, or operator error. (15)

**Feedback:** A form of output that is sent back to the system as a source of data. Feedback may be internal or external and is used to initiate or alter a process. (1)

**File Transfer Protocol (FTP):** Used to transfer text files, programs, spreadsheets, and databases across the Internet. (12)

**Financial transaction:** An economic event that affects the assets and equities of the organization, is measured in financial terms, and is reflected in the accounts of the firm. (1)

**Firewall:** Software and hardware that provide a focal point for security by channeling all network connections through a control gateway. (12)

**First normal form (1NF):** Low degree of normalization of relational database tables. (9)

**Fixed assets:** The property, plant, and equipment used in the operation of a business. (6)

**Flat file:** Many so-called legacy systems are characterized by the **flat-file** approach to data management. In this environment, users own their data files. (9)

**Flat-file approach:** An organizational environment in which users own their data exclusively. (2)

**Flat-file model:** Describes an environment in which individual data files are not related to other files. (1)

**Foreign key:** Using this key we can physically connected logically related tables to achieve the associations described in the data model. (9)

**Formalization of tasks:** When organizational areas are subdivided into tasks that represent full-time job positions. (8)

**Fraud:** Denotes a false representation of a material fact made by one party to another party with the intent to deceive and induce the other party to justifiably rely on the fact to his or her detriment. (3)

# G

**Gantt chart:** Horizontal bar chart that presents time on a horizontal plane and activities on a vertical plane. (14)

**Gathering:** A process in knowledge management that brings data into the system. (14)

**General computer controls:** Specific activities performed by persons or systems designed to ensure that business objectives are met. (15)

**General controls:** Pertain to entity-wide concerns such as controls over the data center, organization databases, systems development, and program maintenance. (3)

**General ledger change report:** Report that presents the effects of journal voucher transactions on the general ledger accounts. (8)

**General ledger history file:** File that presents comparative financial reports on a historic basis. (8)

**General ledger master file:** The principal file in the GLS database. This file is based on the organization's published chart of accounts. (8)

**General ledger/financial reporting system (GL/ FRS):** Produces the traditional financial statements, such as the income statement, balance sheet, statement of cash flows, tax returns, and other reports required by law. (1)

**General model for viewing AIS applications:** A model that describes all information systems, regardless of their technological architecture. The elements of the general model are end users, data sources, data collection, data processing, database management, information generation, and feedback. (1)

**Generalized audit software (GAS):** Software that allows auditors to access electronically coded data files and perform various operations on their contents. (17)

**Give event:** An economic event is mirrored by another event in the opposite direction. These dual events constitute the give event and receive event of an economic exchange. (10)

**Goal congruence:** The merging of goals within an organization. (8)

**Group codes:** Codes used to represent complex items or events involving two or more pieces of related data. (8)

**Group memory:** Makes an organization more effective just as human beings become more effective and mature with the accumulation of thoughts and memories. (14)

# H

**Hard copy:** The issue of whether the output should be hard copy (paper) or electronic must also be addressed. (14)

**Hash total:** Control technique that uses nonfinancial data to keep track of the records in a batch. (17)

**Hashing structure:** Structure employing an algorithm that converts the primary key of a record directly into a storage address. (2)

**Hierarchical indexed direct access method (HIDAM):** In this method, the root segment (customer file) of the database is organized as an indexed file. (9)

**Hierarchical model:** A database model that represents data in a hierarchical structure and permits only a single parent record for each child. (9)

**Home page:** When an Internet user visits a website, his or her point of entry is typically the site's home page. (12)

**Human resource management (HRM) system:** Captures and processes a wide range of personnel-related data, including employee benefits, labor resource planning, employee relations, employee skills, and personnel actions (pay rates, deductions, and so on), as well as payroll. HRM systems need to provide real-time access to personnel files for purposes of direct inquiries and recording changes in employee status as they occur. (6)

**HyperText Markup Language (HTML):** Provide the formatting for a web page as well as hypertext links to other web pages. The linked pages may be stored on the same server or anywhere in the world. (12)

**HyperText Transfer Protocol (HTTP):** A communications protocol used to transfer or convey information on the World Wide Web. (12)

**HyperText Transport Protocol–Next Generation (HTTP–NG):** An enhanced version of the HTTP protocol that maintains the simplicity of HTTP while adding important features such as security and authentication. (12)

# I

**Illegal gratuity:** Involves giving, receiving, offering, or soliciting something of value because of an official act that has been taken. (3)

**Implementation:** The carrying out, execution, or practice of a plan, a method, or any design for doing something. Short-term planning involves the implementation of specific plans that are needed to achieve the objectives of the long-range plan. (8)

**Inappropriate performance measures:** Behavior and performance measures inconsistent with the objectives of the firm. (8)

**Independence:** The separation of the record keeping function of accounting from the functional areas that have custody of physical resources. (1)

**Indexed random file:** Randomly organized file that is accessed via an index. (2)

**Indexed sequential file:** Sequential file structure that is accessed via an index. (9)

**Indexed structure:** A class of file structure that use indexes for its primary access method. (2)

**Industry analysis:** Provides management with an analysis of the driving forces that affect its industry and its organization's performance. (13)

**Information:** Facts that cause the user to take an action that he or she otherwise could not, or would not, have taken. (1)

**Information content:** The ability of a report to reduce uncertainty and influence behavior of the user. (8)

**Information flows:** Flow of information in and out of an organization. (1)

**Information generation:** The process of compiling, arranging, formatting, and presenting information to users. (1)

**Information level:** The level of activity in which an organization uses the Internet only to display information about the company, its products, services, and business policies. (12)

**Information overload:** When a manager receives more information than can be assimilated. (8)

**Information system:** The set of formal procedures by which data are collected, processed into information, and distributed to users. (1)

**Information technology controls:** Include controls over IT governance, IT infrastructure, security, and access to operating systems and databases, application acquisition and development, and program changes. (15)

**Inheritance:** Each object instance inherits the attributes and operations of the class to which it belongs. (14)

**Insertion anomaly:** The unintentional insertion of data into a table. (9)

**Instance:** Single occurrence of an object within a class. (14)

**Integrated test facility (ITF):** Automated technique that enables the auditor to test an application's logic and controls during its normal operation. (17)

**Intelligent control agents:** Computer programs that embody auditor-defined heuristics that search electronic transactions for anomalies. (12)

**Intelligent forms:** Forms that help the user complete the form and that make calculations automatically. (14)

**Internal agent:** The economic agents inside the organization with discretionary power to use or dispose of economic resources. (10)

**Internal auditing:** An appraisal function housed within the organization. (1)

**Internal control system:** Policies a firm employs to safeguard the firm's assets, ensure accurate and reliable accounting records and information, promote efficiency, and measure compliance with established policies. (3)

**Internal view:** The physical arrangement of records in the database. (9)

**International Standards Organization:** A voluntary group comprising representatives from the national standards organizations of its member countries. The ISO works toward the establishment of international standards for data encryption, data communications, and protocols. (12)

**Internet Message Access Protocol (IMAP):** The most popular protocol for transmitting e-mail messages. Other e-mail protocols are Post Office Protocol (POP) and Internet Message Access Protocol (IMAP). (12)

**Internet Relay Chat (IRC):** A popular interactive service on the Internet that lets thousands of people from around the world engage in real-time communications via their computers. (12)

**Interpreters:** Language translation modules of the operation system that convert one line of logic at a time. (16)

**Intrusion Prevention Systems (IPS):** Employ deep packet inspection (DPI), to determine when an attack is in progress. (16)

**Inventory subsidiary file:** Updated by a batch program after the data processing department creates the receiving report file from data provided by the receiving report documents. (5)

**Inventory subsidiary ledger:** This ledger has inventory records updated from the stock release copy by the inventory control system. (4)

**Inverted list:** A cross reference created from multiple indexes. (9)

**Investment center:** Organizational unit that has the objective of maximizing the return on investment assets. (8)

**IP broadcast address:** An IP broadcast address is a 32-bit number that identifies each sender or receiver of information that is sent in packets across the Internet. (12)

**IP spoofing:** A form of masquerading to gain unauthorized access to a web server and/or to perpetrate an unlawful act without revealing one's identity. (12)

**Islands of technology:** An environment where modern automation exists in the form of islands that stand alone within the traditional setting. (7)

**IT auditing:** Usually performed as part of a broader financial audit. (1)

# J

**Job tickets:** Capture the time that individual workers spend on each production job. (6)

**Join:** Builds a new physical table from two tables consisting of all concatenated pairs of rows, from each table. (9)

**Journal:** A record of a chronological entry. (2)

**Journal voucher:** Accounting journal entries into an accounting system for the purposes of making corrections or adjustments to the accounting data. For control purposes, all JVs should be approved by the appropriate, designated authority. (4)

**Journal voucher file:** A compilation of all journal vouchers posted to the general ledger. (4)

**Journal voucher history file:** Contains journal vouchers for past periods. (8)

**Journal voucher listing:** Listing that provides relevant details about each journal voucher received by the GL/FRS. (8)

**Just-in-time (JIT):** Philosophy that attacks manufacturing problems through process simplification. (7)

# K

**Key:** A mathematical value that the sender selects. (12)

**Keystroke monitoring:** Involves recording both the user's keystrokes and the system's responses. (16)

**Knowledge management:** A concept consisting of four basic processes: gathering, organizing, refining, and disseminating. (14)

# L

**Labor distribution summary:** A summarization of labor costs in work-in-process accounts. (6)

**Labor usage file:** The cost accounting department enters job cost data (real time or daily) to create this file. (6)

**Lapping:** Use of customer checks, received in payment of their accounts, to conceal cash previously stolen by an employee. (3)

**Lean manufacturing:** Improves efficiency and effectiveness in product design, supplier interaction, factory operations, employee management, and customer relations. (7)

**Ledger:** A book of accounts that reflects the financial effects of the firm's transactions after they are posted from the various journals. (2)

**Ledger copy:** The billing department clerk receives the customer invoice and this copy of the sales order from the sales department. (4)

**Legacy systems:** Large mainframe systems that were implemented in the late 1960s through the 1980s. (1)

**Legal feasibility:** Ensures that the proposed system is not in conflict with the company's ability to discharge its legal responsibilities. (13)

**Line error:** Line errors are caused when the bit structure of the message can be corrupted through noise on the communications lines. (16)

**Log-on procedure:** The operating system's first line of defense against unauthorized access. (16)

**Logical key pointer:** A pointer containing the primary key of the related record. (2)

# M

**Management assertion:** Involves a combination of tests of application controls and substantive tests of transaction details and account balances. (17)

**Management by exception:** The concept that managers should limit their attention to potential problem areas rather than being involved with every activity or decision. (8)

**Management control decisions:** Technique for motivating managers in all functional areas to use resources as productively as possible. (8)

**Management fraud:** Performance fraud that often uses deceptive practices to inflate earnings or to forestall the recognition of either insolvency or a decline in earnings. (3)

**Management information system (MIS):** System that processes nonfinancial transactions that are not normally processed by traditional accounting information systems. (1)

**Management report:** A discretionary report used for internal decision making. Management reports are not mandated like income statements, balance sheets, etc. (8)

**Management reporting system (MRS):** System that provides the internal financial information needed to manage a business. (1)

**Management responsibility:** This concept holds that the establishment and maintenance of a system of internal control. (3)

**Manufacturing flexibility:** Involves the physical organization of production facilities and the employment of automated technologies. (7)

**Manufacturing resources planning (MRP II):** System that incorporates techniques to execute the production plan, provide feedback, and control the process. (7)

**Master file:** File containing account data. (2)

**Materials requirements planning (MRP):** System used to plan inventory requirements in response to production work orders. (7)

**Materials requisition:** Document that authorizes the storekeeper to release materials to individuals or work centers in the production process. (7)

**Message sequence number:** A sequence number inserted in each message to foil any attempt by an intruder in the communications channel to delete a message from a stream of messages, change the order of messages received, or duplicate a message. (16)

**Message transaction log:** All incoming and outgoing messages, as well as attempted (failed) access, should be recorded in this log. (16)

**Methods:** Actions that are performed on or by objects that may change their attributes. (14)

**Mirrored data center:** Reflects current economic events of the firm. (15)

**Mnemonic codes:** Alphabetic characters in the form of acronyms that convey meaning. (8)

**Monitoring:** The process by which the quality of internal control design and operation can be assessed. (3)

**Move ticket:** Document that records work done in each work center and authorizes the movement of the job or batch from one work center to the next. (7)

# N

**Navigational model:** Model that possesses explicit links or paths among data elements. (9)

**Net present value method:** The method in which the present value of the costs is deducted from the present value of the benefits over the life of the system(13)

**Network model:** Variation of the hierarchical model. (9)

**Network News Transfer Protocol (NNTP):** Network used to connect to Usenet groups on the Internet. (12)

**Network-level firewall:** Provides basic screening of low-security messages (for example, e-mail) and routes them to their destinations based on the source and destination addresses attached. (12)

**Nonfinancial transactions:** Events that do not meet the narrow definition of a financial transaction. For example, adding a new supplier of raw materials to the list of valid suppliers is an event that may be processed by the enterprise's information system as a transaction. (1)

# O

**Object class:** Logical grouping of individual objects that share the same attributes and operations. (14)

**Object-oriented design:** Building information systems from reusable standard components or modules. (14)

**Object-oriented programming (OOP) language:** Programming language containing the attributes and operations that constitute the object modules represented in the ER diagram at the implementation phase of the SDLC. (14)

**Objects:** Equivalent to nouns in the English language. (14)

**Occurrence:** Used to describe the number of instances or records that pertain to a specific entity. (9)

**Off-site storage:** A storage procedure used to safeguard the critical resources. (15)

**On-demand reports:** Reports triggered by events. (8)

**Online analytical processing (OLAP):** An enterprise resource planning tool used to supply management with real-time information and also permits timely decisions that are needed to improve performance and achieve competitive advantage. (11)

**Online documentation:** To guide the user interactively in the use of the system. Such as tutorials and help features. (14)

**Online transaction processing (OLTP):** Events consisting of large numbers of relatively simple transactions such as updating accounting records that are stored in several related tables. (11)

**One-time passwords:** Network passwords that constantly change. (16)

**Open accounts payable file:** File organized by payment due date and scanned daily to ensure that debts are paid on the last possible date without missing due dates and losing discounts. (5)

**Open purchase order file:** The last copy of the multipart purchase order along with the purchase requisition is filed in the open PO file. (5)

**Open purchase requisition file:** A copy of purchase requisitions are filed here. (5)

**Open sales order file:** Shows the status of customer orders. (4)

**Open System Interface (OSI):** Provides standards by which the products of different manufacturers can interface with one another in a seamless interconnection at the user level. (12)

**Open vouchers payable file:** A file in which the source documents such as PO, receiving report, and invoice are transferred after recording the liability. (5)

**Operating system security:** Controls the system in an ever-expanding user community sharing more and more computer resources. (16)

**Operating systems:** Computer's control program. (15)

**Operational control decisions:** Technique that ensures that the firm operates in accordance with pre-established criteria. (8)

**Operational feasibility:** Pertains to the degree of compatibility between the firm's existing procedures and personnel skills and the operational requirements of the new system. (13)

**Operations control reports:** Identifies the activities that are about to go out of control and ignore those that are functioning within normal limits. (14)

**Operations fraud:** The misuse or theft of the firm's computer resources. (3)

**Organization:** Refers to the way records are physically arranged on the secondary storage device (for example, a disk). (2)

**Organizational chart:** Shows some typical job positions in a manufacturing firm. (8)

**Organizing:** Associates data items with subjects, giving them context. (14)

**Ownership:** Ownership is the state or fact of exclusive rights and control over property, which may be an object, land/real estate, intellectual property, or some other kind of property. (3)

## P

**Packet switching:** Messages that are divided into small packets for transmission. (12)

**Packing slip:** Document that travels with the goods to the customer to describe the contents of the order. (4)

**Parallel operation cutover:** Process of converting in which the old system and the new system are run simultaneously for a period of time. (14)

**Parallel simulation:** Technique that requires the auditor to write a program that simulates key features of processes of the application under review. (17)

**Parity check:** Technique that incorporates an extra bit into the structure of a bit string when it is created or transmitted. (16)

**Partial dependency:** Occurs when one or more non-key attributes are dependent on (defined by) only part of the primary key, rather than the whole key. (9)

**Partitioned database:** Database approach that splits the central database into segments or partitions that are distributed to their primary users. (9)

**Password:** Secret code entered by the user to gain access to the data files. (16)

**Payback method:** A variation of break-even analysis. The break-even point is reached when total costs equal total benefits. (13)

**Paycheck:** A bank check given as salary or wages. (6)

**Payroll imprest account:** An account into which a single check for the entire amount of the payroll is deposited. (6)

**Payroll register:** Document showing gross pay, deductions, overtime pay, and net pay. (6)

**Personnel action form:** Document identifying employees authorized to receive a paycheck; is used to reflect changes in pay rates, payroll deductions, and job classification. (6)

**PERT chart:** Chart that reflects the relationship among the many activities that constitute the implementation process. (14)

**Phased cutover:** Process of converting to the new system in modules. (14)

**Phased-in:** The approach for implementing ERP systems in a phased manner. (11)

**Physical address pointer:** Contains the actual disk storage location (cylinder, surface, and record number) that the disk controller needs. (2)

**Physical database:** The lowest level of the database containing magnetic spots on magnetic disks. (9)

**Physical system:** The medium and method for capturing and presenting the information. (1)

**Ping:** An internet maintenance tool used to test the state of network congestion and determine whether a particular host computer is connected and available on the network. (12)

**Point-of-sale (POS) system:** A revenue system in which no customer accounts receivable are maintained and inventory is kept on the store's shelves, not in a separate warehouse. (4)

**Pointer structure:** A structure in which the address (pointer) of one record is stored in the field on a related record. (2)

**Polling:** Actively sampling the status of an external device by a client program as a synchronous activity. (12)

**Post Office Protocol (POP):** Protocol for transmitting e-mail messages. (12)

**Prenumbered documents:** These (sales orders, shipping notices, remittance advices, and so on) are sequentially numbered by the printer and allow every transaction to be identified uniquely. (4)

**Presentation and disclosure:** Contingencies not reported in financial accounts are properly disclosed in footnotes. (17)

**Preventive controls:** Passive techniques designed to reduce the frequency of occurrence of undesirable events. (3)

**Primary key:** Characteristics that uniquely identify each record in the tables. (9)

**Privacy:** Full control of what and how much information about an individual is available to others and to whom it is available. (3)

**Privacy Enhanced Mail (PEM):** A standard for secure e-mail on the Internet. It supports encryption, digital signatures, and digital certificates as well as both private and public key methods. (12)

**Privacy violation:** A factor that is detrimental to a client entity. (12)

**Private Communications Technology (PCT):** A security protocol that provides secure transactions over the web. (12)

**Private key:** A method of encryption. (12)

**Proactive management:** Management that stays alert to subtle signs of problems and aggressively looks for ways to improve the organization's systems. (13)

**Procedural language:** Specifies the precise order in which the program logic is executed. (14)

**Process simplification:** Process of improving the way work is done by providing value-added services, which deliver the results necessary to transform and grow the business faster, better, and cheaper than the competitor. (7)

**Product documents:** Documents that result from transaction processing. (2)

**Product family:** Product families share common processes from the point of placing the order to shipping the finished goods to the customer. (7)

**Production schedule:** Formal plan and authorization to begin production. (7)

**Profit center:** Organizational unit with responsibility for both cost control and revenue generation. (8)

**Program flowchart:** Diagram that provides a detailed description of the sequential and logical operations of the program. (2)

**Program fraud:** Includes the following techniques: (1) creating illegal programs that can access data files to alter, delete, or insert values into accounting records; (2) destroying or corrupting a program's logic using a computer virus; or (3) altering program logic to cause the application to process data incorrectly. (3)

**Programmed reports:** Reports that provide information to solve problems that users have anticipated. (8)

**Project:** Extracts specified attributes (columns) from a table to create a virtual table. (9)

**Project feasibility:** Analysis that determines how best to proceed with a project. (13)

**Protocol:** Rules and standards governing the design of hardware and software that permit network users to communicate and share data. (12)

**Protocol prefix:** A general format for a URL, i.e., http:// is a protocol prefix. (12)

**Prototyping:** Technique for providing users a preliminary working version of the system. (14)

**Pseudocode:** English-like code that describes the logic of a program without specific language systems. (14)

**Public Company Accounting Oversight Board (PCAOB):** The PCAOB is empowered to set auditing, quality control, and ethics standards; to inspect registered accounting firms; to conduct investigations; and to take disciplinary actions. (3)

**Public key encryption:** Technique that uses two keys: one for encoding the message, the other for decoding it. (12)

**Public key infrastructure (PKI):** Constitutes the policies and procedures for administering this activity. (12)

**Pull processing:** Principle characterizing the lean manufacturing approach where products are pulled into production as capacity downstream becomes available. Products are pulled from the consumer end (demand). (7)

**Purchase order:** A document based on a purchase requisition that specifies items ordered from a vendor or supplier. (5)

**Purchase requisition:** A document that authorizes a purchase transaction. (5)

# Q

**Quality assurance group:** An independent group of programmers, analysts, users, and internal auditors to simulate the operation of the system to uncover errors, omissions, and ambiguities in the design. (14)

# R

**REA diagram:** Consists of three entity types (resources, events, and agents) and a set of associations linking them. (10)

**REA (resources, events, and agents) model:** An alternative accounting framework for modeling an organization's critical resources, events, and agents and the relationships between them. (1)

**Reactive management:** Management that responds to problems only when they reach a crisis state and can no longer be ignored. (13)

**Real-time systems:** Systems that process transactions individually at the moment the economic event occurs. (2)

**Reasonable assurance:** Assurance provided by the internal control system that the four broad objectives of internal control are met in a cost-effective manner. (3)

**Receive event:** Each economic event is mirrored by another event in the opposite direction. These dual events constitute the give event and receive event of an economic exchange. (10)

**Receiving report:** Report that lists quantity and condition of the inventories. (5)

**Receiving report file:** A copy of the receiving report (stating the quantity and condition of the inventories) is placed in the receiving report file. (5)

**Record layout diagrams:** Used to reveal the internal structure of the records that constitute a file or database table. The layout diagram usually shows the name, data type, and length of each attribute (or field) in the record. (2)

**Recovery module:** Uses the logs and backup files to restart the system after a failure. (16)

**Recovery operations center (ROC):** Arrangement involving two or more user organizations that buy or lease a building and remodel it into a completely equipped computer site. (15)

**Redundancy tests:** Tests that determine that an application processes each record only once. (17)

**Redundant arrays of independent disks (RAID):** Involves using parallel disks that contain redundant elements of data and applications. (15)

**Reengineering:** The identification and elimination of nonvalue-added tasks by replacing traditional procedures with those that are innovative and different. (4)

**Reference file:** File that stores data that are used as standards for processing transactions. (2)

**Refining:** Adds value by discovering relationships between data, performing synthesis, and abstracting. (14)

**Relational database model:** Permits the design of integrated systems applications capable of supporting the information needs of multiple users from a common set of integrated database tables. (1)

**Relational model:** The relational model is a more flexible model that allows users to create new and unique paths through the database to solve a wider range of business problems. (9)

**Relative address pointer:** Contains the relative position of a record in the file. (2)

**Relevance:** The contents of a report or document must serve a purpose. (3)

**Reliability:** The value of information to a user is determined by its reliability. (1)

**Remittance advice:** Source document that contains key information required to service the customers account. (4)

**Remittance list:** A cash prelist, where all cash received is logged. (4)

**Reorder point:** Lead time times daily demand. (7)

**Repeating group:** Repeating group data is the existence of multiple values for a particular attribute in a specific record. (9)

**Replicated database:** Database approach in which the central database is replicated at each site. (9)

**Report attributes:** To be effective, a report must possess the following attributes: relevance, summarization, exception orientation, accuracy, completeness, timeliness, and conciseness. This is called the report attributes. (8)

**Request-response technique:** Technique in which a control message from the sender and a response from the sender are sent at periodic synchronized intervals. (16)

**Request for proposal (RFP):** Systems requirements are summarized in a document called a request for proposal (RFP) that is sent to each prospective vendor. (14)

**Resources:** Assets of an organization. (1)

**Responsibility:** An individual's obligation to achieve desired results. (8)

**Responsibility accounting:** Concept that implies that every economic event affecting the organization is the responsibility of and can be traced to an individual manager. (8)

**Responsibility center file:** Contains the revenues, expenditures, and other resource utilization data for each responsibility center in the organization. (8)

**Responsibility centers:** Organization of business entities into areas involving cost, profit, and investment. (8)

**Responsibility reports:** Reports containing performance measures at each operational segment in the firm, which flow upward to senior levels of management. (8)

**Restrict:** Extracts specified rows from a specified table. (9)

**Return slip:** When items are returned, the receiving department employee counts, inspects, and prepares a return slip describing the items. (4)

**Reusable password:** A network password that can be used more than one time. (16)

**Revenue cycle:** Cycle comprising of sales order processing and cash receipts. (2)

**Rights and obligations:** A management assertion. (17)

**Risk:** Risk is the possibility of loss or injury that can reduce or eliminate an organization's ability to achieve its objectives. In terms of electronic commerce, risk relates to the loss, theft, or destruction of data as well as the use of computer programs that financially or physically harm an organization. (12)

**Risk assessment:** The identification, analysis, and management of risks relevant to financial reporting. (3)

**Rivest-Shamir-Adleman (RSA):** One of the most trusted public key encryption methods is Rivest-Shamir-Adleman (RSA). This method is, however, computationally intensive and much slower than private key encryption. (12)

**Robotics:** CNC machine used in hazardous environments or to perform dangerous and monotonous tasks that are accident prone. (7)

**Rounding error tests:** Tests that verify the correctness of rounding procedures. (17)

**Route sheet:** Document that shows the production path a particular batch of product follows during manufacturing. (7)

**RSA (Rivest-Shamir-Adleman):** A highly secure public key cryptography method. (16)

**Run:** Each program in a batch system. (2)

**Run manual:** Documentation describing how to run the system. (14)

**Run-to-run controls:** Controls that use batch figures to monitor the batch as it moves from one programmed procedure to another. (17)

# S

**Safe Harbor Agreement:** A two-way agreement between the United States and the European Union establishing standards for information transmittal. (12)

**Safety stock:** Additional inventories added to the reorder point to avoid unanticipated stock-out conditions. (7)

**Salami fraud:** Fraud in which each victim is unaware of being defrauded. (17)

**Sales invoice:** The customer's bill that formally depicts the charges to the customer. (4)

**Sales journal:** A special journal used for recording completed sales transactions. (4)

**Sales journal voucher:** Represents a general journal entry and indicates the general ledger accounts affected. (4)

**Sales order:** Source document that captures such vital information as the name and address of the customer making the purchase; the customer's account number; the name, number, and description of product; quantities and unit price of items sold; and other financial information. (4)

**Sales order (credit copy):** A copy of sales order sent by the receive-order task to the check-credit task, which is used to check the credit-worthiness of a customer. (4)

**Sales order (invoice copy):** A copy of the sales order to be reconciled with the shipping notice, which describes the products that were actually shipped to the customer. (4)

**Sarbanes-Oxley Act:** The most significant securities law that has many provisions designed to deal with specific problems relating to capital markets, corporate governance, and the auditing profession. (3)

**Scalability:** The system's ability to grow smoothly and economically as user requirements increase. (11)

**Scavenging:** Involves searching through the trash of the computer center for discarded output. (3)

**Schedule feasibility:** Relates to the firm's ability to implement the project within an acceptable time. (13)

**Scheduled reports:** Reports produced according to an established time frame. (8)

**Schema (conceptual view):** Description of the entire database. (9)

**Screening router:** A firewall that examines the source and destination addresses that are attached to incoming message packets. (16)

**Second normal form (2NF):** One or more of these anomalies will exist in tables that are not normalized or are normalized at a low level, such as first normal form (1NF) or second normal form (2NF). (9)

**Secure Electronic Transmission (SET):** An encryption scheme developed by a consortium of technology firms and banks, to secure credit card transactions. (12)

**Secure Sockets Layer (SSL):** A low-level encryption scheme used to secure transmissions in higher-level HTTP format. (12)

**Security:** An attempt to avoid such undesirable events as a loss of confidentiality or data integrity. (3)

**Segments:** Business organizations consist of functional units or segments. (1)

**Segregation of duties:** Separation of employee duties to minimize incompatible functions. (3)

**Semantic models:** Captures the operational meaning of the user's data and provides a concise description of it. (10)

**Sequential access method:** The method in which all records in the file are accessed sequentially. (2)

**Sequential codes:** Codes that represent items in some sequential order. (8)

**Sequential files:** Files that are structured sequentially and must be accessed sequentially. (2)

**Sequential structure:** A data structure in which all records in the file lie in contiguous storage spaces in a specified sequence arranged by their primary key. (2)

**Shipping log:** Specifies orders shipped during the period. (4)

**Shipping notice:** Document that informs the billing department that the customer's order has been filled and shipped. (4)

**Simple Network Mail Protocol (SNMP):** The most popular protocol for transmitting e-mail messages. (12)

**Slicing and dicing:** Operations enabling the user to examine data from different viewpoints. (11)

**Smurf attack:** Involves three parties: the perpetrator, the intermediary, and the victim. (12)

**S.O. pending file:** A file used to store the sales order (invoice copy) from the receive-order task until receipt of the shipping notice. (4)

**Sophisticated users:** These users of financial reports understand the conventions and accounting principles that are applied and that the statements have information content that is useful. (8)

**Source documents:** Documents that capture and formalize transaction data needed for processing by their respective transaction cycles. (2)

**Span of control:** Number of subordinates directly under a manager's control. (8)

**Spooling:** When applications are designed to direct their output to a magnetic disk file rather than to the printer directly. (17)

**Stakeholders:** Entities either inside or outside an organization that have direct or indirect interest in the firm. (1)

**Standard cost system:** Organizations that carry their inventories at a predetermined standard value regardless of the price actually paid to the vendor. (5)

**Statement on Auditing Standards No. 78:** The current authoritative document for specifying internal control objectives and techniques, based on the COSO framework. (3)

**Statement on Auditing Standards No. 99:** The authoritative document, which defines fraud as an intentional act that results in a material misstatement in financial statements. (3)

**Steering committee:** An organizational committee consisting of senior-level management responsible for systems planning. (13)

**Stock flow:** Economic events that effect changes (increases or decreases) in resources. (10)

**Stock records:** The formal accounting records for controlling inventory assets. (4)

**Stock release:** Document that identifies which items of inventory must be located and picked from the warehouse shelves. (4)

**Storekeeping:** Location where records are maintained. (7)

**Strategic planning decisions:** Planning with a long-term time frame and that is associated with a high degree of uncertainty. (8)

**Structure diagram:** Diagram that divides processes into input, process, and output functions. (14)

**Structured design:** Disciplined way of designing systems from the top down. (14)

**Structured model:** The data elements for predefined structured paths. (9)

**Structured problem:** Problem in which data, procedures, and objectives are known with certainty. (8)

**Structured query language (SQL):** A data processing tool for the end users and professional programmers to access data in the database directly without the need for conventional programs. (9)

**Subdirectory name:** The general format for a URL. (12)

**Substantive tests:** Tests that determine whether database contents fairly reflect the organization's transactions. (17)

**Subsystem:** A system viewed in relation to the larger system of which it is a part. (1)

**Summarization:** Information aggregated in accordance with the user's need in detailed manner. (3)

**Supervision:** A control activity involving the critical oversight of employees. (3)

**Supplier's invoice:** The bill sent from the seller to the buyer showing unit costs, taxes, freight, and other charges. (5)

**Supply chain management (SCM):** A class of application software that supports the set of activities associated with moving goods from the raw materials stage through to the consumer. (11)

**Support events:** Include control, planning, and management activities that are related to economic events but do not effect a change in resources. (10)

**Symmetric key:** To encode a message, the sender provides the encryption algorithm with the key. (12)

**SYN flood attack:** Server that keeps signaling for acknowledgement until the server times out. (12)

**SYNchronize-ACKnowledge (SYN-ACK):** A receiving server that acknowledges the request. (12)

**System:** Group of two or more interrelated components or subsystems that serve a common purpose. (1)

**System audit trails:** The logs that record activity at the system, application, and user level. (16)

**System flowcharts:** Flowcharts used to show the relationship between the key elements—input sources, programs, and output products—of computer systems. (2)

**System survey:** Determination of what elements, if any, of the current system should be preserved as part of the new system. (13)

**Systems analysis:** Two-step process that involves a survey of the current system and then an analysis of the user's needs. (13)

**Systems analysis report:** The event that marks the conclusion of the systems analysis phase is the preparation of a formal report. (13)

**Systems design:** Reflects the analysts' perception of information needs rather than the perception of accountants and other users. (14)

**Systems development life cycle (SDLC):** A software development process. (13)

**Systems evaluation and selection:** An optimization process that seeks to identify the best system. (13)

**Systems professionals:** Analysts, designers, and programmers who are expertise in the specific areas that the feasibility study covers. (13)

**Systems project proposal:** Provides management with a basis for deciding whether to proceed with the project. (13)

**Systems selection report:** The deliverable portion of the systems selection process that will go to the next phase. (13)

**Systems strategy:** The understanding of the strategic business needs of the organization based on the mission statement. (13)

# T

**Tactical planning decisions:** Planning performed by the middle-level manager to achieve the strategic plans of the organization. (8)

**Task-data dependency:** The user's inability to obtain additional information as his or her needs change. (1)

**Technical feasibility:** Determination of whether the system can be developed under existing technology or if a new is required. (13)

**TELNET:** A terminal emulation protocol used on TCP/IP-based networks. (12)

**TELOS:** Provides guidance for assessing project feasibility. (13)

**Temporary inconsistency:** During accounting transactions, account balances pass through a state where the values are incorrectly stated. (9)

**Test data method:** Technique used to establish application integrity by processing specially prepared sets of input data through production applications that are under review. (17)

**Tests of controls:** Tests that establish whether internal controls are functioning properly. (17)

**Third normal form (3NF):** The normalization that occurs by dividing an unnormalized database into

smaller tables until all attributes in the resulting tables are uniquely and wholly dependent on (explained by) the primary key. (9)

**Third-generation languages:** Procedural languages in which the programmer must specify the sequence of events used in an operation. (14)

**Three-tier model:** A model where the database and application functions are separated. (11)

**Time cards:** Captures the time the employee is at work. (6)

**Timeliness:** Information must be no older than the time period of the action it supports. (3)

**Toyota Production System (TPS):** The lean manufacturing based on the just-in-time production model. (7)

**Tracing:** Test data technique that performs an electronic walk-through of the application's internal logic. (17)

**Trading partners:** Category of external user, including customer sales and billing information, purchase information for suppliers, and inventory receipts information. (1)

**Traditional systems:** Include flat-file and early database systems. (1)

**Transaction:** An event that affects an organization and that is processed by its information system as a unit of work. (1)

**Transaction authorization:** Procedure to ensure that employees process only valid transactions within the scope of their authority. (3)

**Transaction file:** Temporary file that holds transaction records that will be used to change or update data in a master file. (2)

**Transaction fraud:** Involves deleting, altering, or adding false transactions to divert assets to the perpetrator. (3)

**Transaction level:** Organizations involved in this use the Internet to accept orders from customer and/or to place them with their suppliers. (12)

**Transaction log:** A feature providing an audit trail of all processed transactions. (16)

**Transaction processing system (TPS):** Activity comprising three major subsystems—the revenue cycle, the expenditure cycle, and the conversion cycle. (1)

**Transcription errors:** Type of errors that can corrupt a data code and cause processing errors. (17)

**Transfer Control Protocol/Internet Protocol (TCP/IP):** The basic protocol that permits communication between Internet nodes. (12)

**Transitive dependency:** The purchase order and receiving report entities contain attributes that are redundant with data in the inventory and supplier entities. (9)

**Transposition error:** Error that occurs when digits are transposed. (17)

**Triple-DES encryption:** An enhancement to an older encryption technique for transmitting transactions. (16)

**Turnaround documents:** Product documents of one system that become source documents for another system. (2)

**Turnkey systems:** Completely finished and tested systems that are ready for implementation. (1)

**Two-tier model:** A model where the server handles both application and database duties. (11)

# U

**Uniform Resource Locator (URL):** The address of the target site in the web browser to access the website. (12)

**Uninterruptible power supplies:** In the event of a power supply failure, help prevent data loss and system corruption. (15)

**Universal product code (UPC):** A label containing price information (and other data) that is attached to items purchased in a point-of-sale system. (4)

**Unstructured problem:** Problem for which there are no precise solution techniques. (8)

**Update anomaly:** The unintentional updating of data in a table, resulting from data redundancy. (9)

**User view (subschema):** The set of data that a particular user needs to achieve his or her assigned tasks. (9)

**User handbook:** A reference manual of commands for getting started. (14)

**User-defined procedure:** Allows the user to create a personal security program to provide more positive user identification than a password can. (16)

**Users:** Select data visually by pointing and clicking at the desired attributes. (9)

# V

**Valid vendor:** Vendors with whom the firms do regular business. (5)

**Valid vendor file:** A file containing vendor mailing information. (5)

**Valuation or allocation:** The process of stating accounts receivable at net realizable value. (17)

**Value-added network:** A value-added network (VAN) is a hosted service offering that acts as an intermediary between business partners sharing standards based or proprietary data via shared business processes. (12)

**Value chain:** Activities that use cash to obtain resources and employ those for revenues. (10)

**Value chain analysis:** An organization can look beyond itself and maximize its ability to create value. (10)

**Value stream:** A process that includes all the essential to in producing a product. (7)

**Value stream accounting:** The complexity of ABC has caused many firms to abandon and favored a simpler one where it captures costs by its value rather than activity. (7)

**Value stream map (VSM):** A graphical representation of the business process to identify aspects that are wasteful and should be removed. (7)

**Variance:** The difference between the expected price—the standard—and the price actually paid. (8)

**Vendor-supported systems:** Custom systems that organizations purchase from commercial vendors. (1)

**Vendor's invoice:** A commercial document issued by a vendor to a buyer, indicating the products, quantities, and agreed prices for products or services with which the vendor has already provided the buyer. An invoice indicates that payment is due from the buyer to the vendor, according to the payment terms. (5)

**Verification model:** Uses a drill-down technique to either verify or reject a user's hypothesis. (8)

**Verification procedures:** Independent checks of the accounting system to identify errors and misrepresentations. (3)

**Verified stock release:** After picking the stock, the order is verified for accuracy and the goods are released. (4)

**View integration:** Combining the data needs of all users into a single schema or enterprise-wide view is called view integration. (9)

**View modeling:** Determines the associations between entities and document them with an ER diagram. (9)

**Virtual private network (VPN):** A private network within a public network. (12)

**Virtual storage access method (VSAM):** Structure used for very large files that require routine batch processing and a moderate degree of individual record processing. (2)

**Voucher packet:** A packet that contains the voucher and/or supporting documents. (5)

**Voucher register:** A register reflecting a firm's accounts payable liability. (5)

**Vouchers payable file:** Equivalent to the open AP file. (5)

**Vouchers payable system:** Under this system, the AP department uses cash disbursement vouchers and maintains a voucher register. (5)

# W

**Walk-through:** Analysis of system design to ensure the design is free from conceptual errors that could become programmed into the final system. (14)

**Wall of code:** An impenetrable wall of code around the data that prevents direct access to the object's internal structure. (14)

**Web page:** The fundamental format for the web is a text document called a web page that has embedded Hypertext Markup Language (HTML) codes that provide the formatting for the page as well as hypertext links to other pages. (12)

**Websites:** Computer servers that support Hypertext-Transfer Protocol (HTTP). The pages are accessed and read via a web browser such as Internet Explorer. (12)

**Work order:** A document that draws from bills of materials and route sheets to specify the materials and production for each batch. (7)

**World-class company:** A company that profitably meets the needs of its customers. Its goal is not simply to satisfy customers, but to positively delight them. (7)

# X

**XBRL (eXtensible Business Reporting Language):** An XML-based language that was designed to provide the financial community with a standardized method for preparing, publishing, and automatically exchanging financial information, including financial statements of publicly held companies. (12)

**XBRL instance document:** The mapping of the organization's internal data to XBRL taxonomy elements. (12)

**XBRL taxonomies:** Classification schemes that are compliant with the XBRL Specifications to accomplish a specific information exchange or reporting objective such as filing with the Securities and Exchange Commission. (12)

**XML (eXtensible Markup Language):** Metalanguage for describing markup languages which can be used to model the data structure of an organization's internal database. (12)

## Z

**Zombie:** A virtual army of so-called bot (robot) computers used to launch a DDos attack. (12)

**Zones:** Areas on the form that contain related data. (14)