

Assignment 5: and IT Infra-DB,BI,IS, BP

Question 1

Read Chapter 6 and 13 from the textbook. From each chapter, list 15 important and interesting terms with their description. (Total of 30 terms.)

Chapter 6

1. **Analytic Platform:** Analytic platforms using both relational and non-relational technologies are optimized for analyzing large data sets. Analytic platforms have hardware and software systems that are already set up and designed for query processing and analytics.
2. **Entity:** Person, place, thing, or event on which we store and maintain information.
3. **Attribute:** Each characteristic or quality describing a particular entity is called an attribute.
4. **Data Redundancy:** The existence of duplicate data in several data files, resulting in the same data being kept in more than one area or location, is referred to as data redundancy.
5. **Data Inconsistency:** When the same data appears in several tables in different formats. This is known as data inconsistency. In other words, separate files contain different information about the same thing or person. This can lead to untrustworthy and illogical data. Data inconsistency is caused by data redundancy.
6. **Blockchain:** Blockchain is a distributed database technology that allows businesses and organizations to originate and verify transactions on a network almost instantly and without the need for a central authority.
7. **Program-data dependence:** Program-data dependence refers to the coupling of data stored in files and the specific programs required to update and maintain those files such that changes in programs require changes to the data.
8. **Distributed Database:** A distributed database is one that is stored in multiple physical locations. Parts or copies of the database are physically stored in one location and other parts, or copies are maintained in other locations.
9. **Sentiment Analysis:** Text comments in an email message, blog, social media interaction, or survey form can be mined by sentiment analysis software to determine favorable and unfavorable attitudes about certain themes.

- 10. Data Mining:** Data mining is more focused on discovery. Data mining uncovers hidden patterns and correlations in massive datasets and infers rules from them to anticipate future behavior, providing insights into business data that OLAP cannot.
- 11. Data Lake:** A data lake is a store for raw unstructured or structured data that has not yet been examined, and the data can be accessed in a variety of ways.
- 12. Data Quality Audit:** A data quality audit, which is a methodical assessment of the accuracy and completeness of data in an information system, is often the first step towards improving data quality. Data quality audits can be conducted by surveying complete data files, sampling data files, or polling end users about their perceptions of data quality.
- 13. Data Dictionary:** A data dictionary is an automated or manual file that stores definitions of data elements and their characteristics.
- 14. Data Cleaning:** Data cleansing, also known as data scrubbing, is the process of finding and fixing inaccurate, incomplete, incorrectly structured, or redundant data in a database. Data cleaning not only corrects mistakes, but also ensures consistency among various sets of data that originated in different information systems.
- 15. Data warehouse:** A data warehouse is a database that stores current and historical data of potential interest to decision makers throughout the company.

Chapter 13

1. **Acceptance testing:** Acceptance testing is the last confirmation that a system is ready for usage in a production environment. Users access system testing, and management reviews the results. When all parties are satisfied that the new system satisfies their requirements, it is formally authorized for implementation.
2. **Agile development:** Agile development emphasizes the quick delivery of functioning software by dividing a major project into a succession of tiny subprojects that are finished in short time periods utilizing iteration, constant feedback, and continual user participation.
3. **System testing:** System testing evaluates the information system's operation. It aims to determine if different components will function as planned and if there are any discrepancies between how the system operates and how it was intended. Considerations include performance time, capacity for file storage and managing peak loads, recovery and restart capabilities, and manual procedures.
4. **Direct cutover strategy:** In the direct-cutover implementation methodology, the organization selects a particular date that the old system will not be used anymore.
5. **Phased approach strategy:** The strategy for a phased approach installs the new system progressively, either via functions or organizational units. If the system is introduced function by function, for instance, a new payroll system may begin with hourly employees who are paid weekly, and then six months later add salaried employees (who are paid monthly). If the system is adopted by organizational unit, the corporate headquarters may be converted first, followed by outlying operational units four months later.
6. **Pilot study strategy:** The pilot study technique only presents the new system to a small portion of the organization, such as a single department or operating unit. When the pilot version is ready and operational, it is deployed throughout the organization, either simultaneously or in stages.
7. **Information requirement:** A new system's information requirements include determining who needs what information, where, when, and how. Requirements analysis establishes the goals of the new or updated system and creates a detailed description of the functions that the new system must accomplish.

8. **System design:** systems design shows how the system will fulfill this objective. The design of an information system is the plan or model for that system. Like the blueprint of a building or house, it consists of all the specifications that give the system its form and structure.
9. **No-code development:** No-code development platforms (NCDPs) allow programmers and non-programmers to create application software through graphical user interfaces and configuration instead of traditional computer programming. No-code development platforms are closely related to low-code development platforms as both are designed to expedite the application development process.
10. **DevOps:** DevOps is an organizational strategy that draws on agile development principles to create a culture and environment that promotes speedy and agile development methods. DeuOps is an acronym that stands for "development and operations," and it emphasizes strong collaboration between software developers who create apps and IT operational employees who manage and maintain them.
11. **Low-code development:** Low-code development is a software development method that enables the delivery of applications more quickly and with less hand-coding by assembling and customizing programs using graphical modeling. These tools may produce completely working applications with minimal further coding. Low-code development platforms reduce the amount of manual coding necessary to produce useable software, enabling a larger variety of individuals (in some cases, business end users) to build business applications more quickly.
12. **Rapid application development (RAD):** Rapid application development (RAD) is the process of producing useable systems in a very little amount of time while preserving some adaptability as the project advances. RAD encompasses the use of visual programming and other tools for designing graphical user interfaces, the iterative prototyping of significant system components, the automation of program code production, and the close cooperation of end users and information systems experts.

- 13. Prototype:** A prototype is a working version of an information system or portion of one, however it is only intended to be an early model. Once operational, the prototype will be improved until it precisely meets the needs of the consumers. Once the design is complete, the prototype can be transformed into a polished production system.
- 14. Offshore outsourcing:** Offshore outsourcing refers to the practice of employing an external organization to undertake some business operations (Outsourcing) in a country other than the one where the products or services are developed or manufactured (Offshore).
- 15. Paradigm shift:** A paradigm shift is a significant change in one's worldview, concepts, and behaviors regarding how something works or is performed. A paradigm shift can occur in a variety of circumstances, ranging from scientific study to industry.