Modern Database Management, **11e (Hoffer/Ramesh/Topi)**
Chapter 9 Data Warehousing

1) The analysis of summarized data to support decision making is called:
A) operational processing.
B) informational processing.
C) artificial intelligence.
D) data scrubbing.
Answer: B

2) The characteristic that indicates that a data warehouse is organized around key high-level entities of the enterprise is:
A) subject-oriented.
B) integrated.
C) time-variant.
D) nonvolatile.
Answer: A

3) When we consider data in the data warehouse to be time-variant, we mean:
A) that the time of storage varies.
B) data in the warehouse contain a time dimension so that they may be used to study trends and changes.
C) that there is a time delay between when data are posted and when we report on the data.
D) none of the above.
Answer: B

4) Which of the following advances in information systems contributed to the emergence of data warehousing?
A) Improvements in database technology, particularly the relational data model
B) Advances in computer hardware, especially affordable mass storage and parallel computer architectures
C) Advances in middleware products that enabled enterprise database connectivity across heterogeneous platforms
D) All of the above
Answer: D

5) Which of the following factors drive the need for data warehousing?
A) Businesses need an integrated view of company information.
B) Informational data must be kept together with operational data.
C) Data warehouses generally have better security.
D) None of the above
Answer: A
6) Which of the following organizational trends does not encourage the need for data warehousing?
A) Multiple, nonsynchronized systems
B) Focus on customer relationship management
C) Downsizing
D) Focus on supplier relationship management
Answer: C

7) Informational systems are designed for all of the following EXCEPT:
A) running a business in real time.
B) supporting decision making.
C) complex queries.
D) data mining.
Answer: A

8) Operational and informational systems are generally separated because of which of the following factors?
A) A data warehouse centralizes data that are scattered throughout disparate operational systems and makes them readily available for decision support applications.
B) A properly designed data warehouse adds value to data by improving their quality and consistency.
C) A separate data warehouse eliminates contention for resources that results when informational applications are confounded with operational processing.
D) All of the above
Answer: D

9) A data mart is a(n):
A) enterprisewide data warehouse.
B) smaller system built upon file processing technology.
C) data warehouse that is limited in scope.
D) generic on-line shopping site.
Answer: C

10) One characteristic of independent data marts is complexity for end users when they need to access data in separate data marts. This complexity is caused by not only having to access data from separate databases, but also from:
A) the possibility of a new generation of inconsistent data systems, the data marts themselves.
B) lack of user training.
C) denormalized data.
D) incongruent data formats.
Answer: A

11) All of the following are limitations of the independent data mart EXCEPT:
A) separate extraction, transformation, and loading processes are developed for each data mart.
B) data marts may not be consistent with one another.
C) there is no capability to drill down into greater detail in other data marts.
D) it is often more expedient to build a data mart than a data warehouse.
Answer: D

12) A dependent data mart:
A) is filled with data extracted directly from the operational system.
B) is filled exclusively from the enterprise data warehouse with reconciled data.
C) is dependent upon an operational system.
D) participates in a relationship with an entity.
Answer: B

13) An operational data store (ODS) is a(n):
A) place to store all unreconciled data.
B) representation of the operational data.
C) integrated, subject-oriented, updateable, current-valued, detailed database designed to serve the decision support needs of operational users.
D) small-scale data mart.
Answer: C

14) A logical data mart is a(n):
A) data mart consisting of only logical data.
B) data mart created by a relational view of a slightly denormalized data warehouse.
C) integrated, subject-oriented, detailed database designed to serve operational users.
D) centralized, integrated data warehouse.
Answer: B

15) All of the following are unique characteristics of a logical data mart EXCEPT:
A) logical data marts are not physically separate databases, but rather a relational view of a data warehouse.
B) the data mart is always up-to-date since data in a view is created when the view is referenced.
C) the process of creating a logical data mart is lengthy.
D) data are moved into the data warehouse rather than a separate staging area.
Answer: C

16) The real-time data warehouse is characterized by which of the following?
A) It accepts near-real time feeds of transaction data.
B) Data are immediately transformed and loaded into the warehouse.
C) It provides near-real-time access for the transaction processing systems to an enterprise data warehouse.
D) All of the above
Answer: D

17) _____ technologies are allowing more opportunities for real-time data warehouses.
A) Web
B) MOLAP
C) RFID
D) GPS
Answer: C

18) All of the following are some beneficial applications for real-time data warehousing EXCEPT:
A) just-in-time transportation.
B) e-commerce. For example, an abandoned shopping cart can trigger an email promotional message.
C) fraud detection in credit card transactions.
D) data entry.
Answer: D

19) Data that are detailed, current, and intended to be the single, authoritative source of all decision support applications are called _____ data.
A) reconciled
B) subject
C) derived
D) detailed
Answer: A

20) A database action that results from a transaction is called a(n):
A) transition.
B) event.
C) log entry.
D) journal happening.
Answer: B

21) Data that are never physically altered once they are added to the store are called _____ data.
A) transient
B) override
C) periodic
D) complete
Answer: C

22) Which of the following is an objective of derived data?
A) Ease of use for decision support systems
B) Faster response time for user queries
C) Support data mining applications
D) All of the above
Answer: D

23) A star schema contains both fact and _____ tables.
A) narrative
B) cross functional
C) dimension
D) starter
Answer: C

24) Every key used to join the fact table with a dimension table should be a _____ key.
A) primary
B) surrogate
C) foreign
D) secondary
Answer: B

25) The level of detail in a fact table determined by the intersection of all the components of the primary key, including all foreign keys and any other primary key elements, is called the:
A) span.
B) grain.
C) selection.
D) aggregation.
Answer: B

26) Conformed dimensions allow users to do the following:
A) share nonkey dimension data.
B) query across fact tables with consistency.
C) work on facts and business subjects for which all users have the same meaning.
D) all of the above.
Answer: D

27) Factless fact tables may apply when:
A) we are tracking events.
B) we are tracking sales.
C) we are taking inventory of the set of possible occurrences.
D) both A and C.
Answer: D

28) An expanded version of a star schema in which all of the tables are fully normalized is called a(n):
A) snowflake schema.
B) operational schema.
C) DSS schema.
D) complete schema.
Answer: A

29) All of the following are ways to handle changing dimensions EXCEPT:
A) overwrite the current value with the new value.
B) for each dimension attribute that changes, create a current value field and as many old value fields as we wish.
C) create a new dimension table row each time the dimension object changes.
D) create a snowflake schema.
Answer: D

30) _____ is/are a new technology which trade(s) off storage space savings for computing time.
A) Dimensional modeling
B) Column databases
C) Fact tables
D) Snowflake schemas
Answer: B

31) The use of a set of graphical tools that provides users with multidimensional views of their data is called:
A) on-line geometrical processing (OGP).
B) drill-down analysis.
C) on-line analytical processing (OLAP).
D) on-line datacube processing (ODP).
Answer: C

32) OLAP tools that use the database as a traditional relational database are called:
A) ROLAP tools.
B) MOLAP tools.
C) slice and dice.
D) none of the above.
Answer: A

33) Rotating the view of a multidimensional database for a particular data point is called data:
A) cubing.
B) drill-down.
C) dicing.
D) pivoting.
Answer: D

34) Which of the following is true of data visualization?
A) It is easier to observe trends and patterns in data.
B) Correlations and clusters in data can be easily identified.
C) It is often used in conjunction with data mining.
D) All of the above.
Answer: D

35) Going from a summary view to progressively lower levels of detail is called data:
A) cubing.
B) drill-down.
C) dicing.
D) pivoting.
Answer: B

36) Which of the following data mining techniques identifies clusters of observations with similar characteristics?
A) Case reasoning
B) Rule discovery
C) Clustering and signal processing
D) Neural nets
Answer: C

37) Which of the following data-mining techniques searches for patterns and correlations in large data sets?
A) Case reasoning
B) Rule discovery
C) Signal processing
D) Neural nets
Answer: B

38) Which of the following data mining applications identifies customers for promotional activity?
A) Population profiling
B) Target marketing
C) Usage analysis
D) Product affinity
Answer: B

40) The development of the relational data model did not contribute to the emergence of data warehousing.
Answer: FALSE

42) When multiple systems in an organization are synchronized, the need for data warehousing increases.
Answer: FALSE

44) A separate data warehouse causes more contention for resources in an organization.
Answer: FALSE

46) A data mart is a data warehouse that contains data that can be used across the entire organization.
Answer: FALSE

48) Independent data marts do not generally lead to redundant data and efforts.
Answer: FALSE

51) An operational data store (ODS) is not designed for use by operational users.
Answer: FALSE

53) An operational data store typically holds a history of snapshots of the state of an organization whereas an enterprise data warehouse does not typically contain history.
Answer: FALSE

55) Logical data marts are physically separate databases from the enterprise data warehouse.
Answer: FALSE

58) Reconciled data are data that have been selected, formatted, and aggregated for end-user decision support applications.
Answer: FALSE

60) Operational metadata are derived from the enterprise data model.
Answer: FALSE
Diff: 2 Page Ref:390

62) The status of data is the representation of the data after an event has occurred.
Answer: FALSE

64) Transient data are never changed.
Answer: FALSE
Diff: 1 Page Ref:391

65) A fact table holds descriptive data about the business.
Answer: FALSE

66) The grain of a data warehouse indicates the size and depth of the records.
Answer: FALSE

69) A conformed dimension is one or more dimension tables associated with only one fact table.
Answer: FALSE
Diff: 1 Page Ref:401

71) A snowflake schema is usually heavily aggregated.
Answer: FALSE

73) Multidimensional OLAP (MOLAP) tools use variations of SQL and view the database as a relational database, in either a star schema or other normalized or denormalized set of tables.
Answer: FALSE

76) The representation of data in a graphical format is called data mining.
Answer: FALSE