قواعد البيانات الموزعة والشيئية
9:11
السبت 26/6/2021
د/عمرو محمد عبد العزيز

1. الإسم الرباعي (بالعربي فقط) *

عائشة محمدصفوت عبدالرحمن محمد

2. رقم الجلوس *

1620175047

3. المستوي *

◯ الاول

◯ الثاني

◯ الثالث

○ رابعة 2013

○ رابعة 2014

○ رابعة 2015

○ رابعة 2016

◉ رابعة 2017

4. البرنامج *

○ عام

◉ بايو

○ هندسة

5. رقم المعمل *

○ ج٠

○ د٠

○ اب

○ اد

○ اهـ

○ أ٢

○ ب٢

○ ج٢

○ د٢

○ هـ٢

○ أ٣

○ ب٣

○ ج٣

○ د٣

○ هـ٣

○ أ٤

○ ب٤

6. رقم الكمبيوتر *

> 19

7. الكود (قد تمت مراجعة بيانات الطالب ورقم الجلوس) *

> 5vo1

8. The completeness of the integrated schema refers to:
   (2 Points)

   ○ The primary keys are consistent in integrated schema

   ● No structure from component schemas is lost

   ○ No duplicate in information

   ○ Information duplication exists

9. Each site or node in a distributed system is subject to the same types of failure as in a centralized system
   (2 Points)

   ● True

   ○ False

10. Which of the following transaction property will check whether all the operations of a transaction completed or none?
(2 Points)

○ ● Atomicity

○ Consistency

○ Isolation

○ Durability

11. The concept in which the same names are used by two different schemas to specify the same idea is called
(2 Points)

○ antonym

○ synonym

○ ● homonym

○ none of the above

12. If T1 and T2 are two relations, then which of the following is not a valid relational algebra expression?
(2 Points)

○ T1 - T2

○ T1 ∪ T2

○ T1 ∩ T2

○ ● All are valid expressions

13. Location transparency allows for which of the following
    (2 Points)

   ○ Users to treat the data as if it is at one location

   ○ Programmers to treat the data as if it is at one location

   ○ Manager to treat the data as if it is at one location

   ◉ All of the above

14. A distributed database is a collection of data which belong ─────── to the
    same system but are spread over the ─────── of the network.
    (2 Points)

   ◉ Logically, sites

   ○ Physically, sites

   ○ Database, DBMS

   ○ None of the above

15. Databases that are stored on computers at multiple locations and are not
    interconnected by a network are known as distributed databases.
    (2 Points)

   ○ True

   ◉ False

16. A distributed homogenous environment is which of the following?
    (2 Points)

   ◉ The same DBMS is used at each site and each DBMS works independently

   ○ The same DBMS is at each site and a central DBMS coordinates database access

○ A different DBMS is at each node and each DBMS works independently

○ None of the above

17. Dependency conflicts mean:
    (2 Points)

    ○ Two different entities that have identical names

    ○ The same object is represented by an attribute in one schema and by an entity in another schema

    ○ Different relationship modes

    ◉ Different relationship modes are used to represent the same thing in different schemas.

18. Replication should be used when which of the following exist?
    (2 Points)

    ○ When transmission speeds and capacity in a network prohibit frequent refreshing of large tables.

    ○ When using many nodes with different operating systems and DBMSs and database designs

    ◉ The application's data can be somewhat out-of-date

    ○ All of the above

19. In a distributed Database reduction of redundancy is obtained by ——————————
    (2 Points)

    ○ Data fragmentation

    ○ Data Replication

    ◉ Data Sharing

    ○ None of the above

20. Which of the following is a heterogeneous distributed database?
    (2 Points)

    ○ The same DBMS is used at each location and data are not distributed across all nodes

    ○ The same DBMS is used at each location and data are distributed across all nodes

    ○ A different DBMS is used at each location and data are not distributed across all nodes

    ◉ A different DBMS is used at each location and data are distributed across all nodes

21. The .... operation, denoted by −, allows us to find tuples that are in one relation but are not in another
    (2 Points)

    ○ Union

    ◉ Set-difference

    ○ Difference

    ○ Intersection

22. In which of the following some of the columns of a relation are from different sites?
    (2 Points)

    ○ Horizontal partition

    ◉ Vertical partition

    ○ Both a and b

    ○ None

23. Behavioral conflicts are implied by:
    (2 Points)

○ Different primary keys in intermediate schemas

⦿ Different modeling mechanism

○ Different relationship modes

○ Naming differences

24. .... produces the relation that has attributes of R1 and R2.
(2 Points)

⦿ Cartesian product

○ Difference

○ Intersection

○ Product

25. Data transformation include which of the following?
(2 Points)

○ A process to change data from a detailed level to a summary level

○ A process to change data from a summary level to a detailed level

⦿ Joining data from one source into various sources of data

○ Separating data from one source into various sources of data

26. A set of possible data values is called ....
(2 Points)

○ Attribute

○ Degree

○ Tuple

⦿ Domain

27. The strategy in which the resulting schema from the integration of the pairs of schemas are further integrated by pairing is classified as
(2 Points)

- ○ Mixed pairing strategy
- ● Schema pairing strategy
- ○ Ternary balanced strategy
- ○ Binary balanced strategy

28. OLAP stands for
(2 Points)

- ● Online analytical processing
- ○ Online advanced processing
- ○ Online transaction processing
- ○ Online aggregate processing

29. What do data warehouses support
(2 Points)

- ● OLAP
- ○ OLTP
- ○ OLAP and OLTP
- ○ Operational databases

30. A data warehouse is which of the following?
(2 Points)

○ Can be updated by end users

● Contains numerous naming conventions and formats

○ Organized around important subject areas

○ Contains only current data

31. Which of the following is a disadvantage of replication?
(2 Points)

○ Reduced network traffic

○ If the database fails at one site, a copy can be located at another site

● Each site must have the same storage capacity.

○ Each transaction may proceed without coordination across the network

32. With failure transparency, all of the actions of a transaction are committed or none of them are committed
(2 Points)

● True

○ False

33. The result of the UNION operation between R1 and R2 is a relation that includes
(2 Points)

○ all the tuples of R1

○ all the tuples of R2

○ all the tuples of R1 and R2

● all the tuples of R1 and R2 which have common columns

34. The minimality of the integrated schema means:
    (2 Points)

    ○ The primary keys are consistent in integrated schema

    ● No structure from component schemas is lost

    ○ No duplicate in information

    ○ Information duplication exists

35. Key conflicts occur when
    (2 Points)

    ○ Different modeling mechanisms are applied

    ○ Schema pairing strategy

    ● Different primary keys are selected

    ○ Information duplication exists

36. Homonyms and Synonyms are examples of :
    (2 Points)

    ● Naming Conflicts

    ○ Structural Conflicts

    ○ Behavioral Conflicts

    ○ Information duplication conflicts

37. Global conceptual schema (GCS) represents
    (2 Points)

    ○ A physical schema of the distributed databases

○ A logical schema of the distributed databases

◉ A physical schema of the central database

○ A logical schema of a single database

38. Which of the following is/are the main goals of a distributed database?
(2 Points)

○ Interconnection of database

○ Incremental growth

○ Reduced communication overhead

◉ All of the above

39. Storing a separate copy of the database at multiple locations is which of the following:
(2 Points)

◉ Data Replication

○ Horizontal Partitioning

○ Vertical Partitioning

○ None of the above

40. Which of the following is a distributed database?
(2 Points)

◉ A single logical database that is spread to multiple locations and is interconnected by a network

○ A loose collection of a file that is spread to multiple locations and is interconnected by a network

○ A single logical database that is limited to one location.

○ None

41. The descriptive property possessed by each entity set is ....
(2 Points)

○ Entity

⦿ Attribute

○ Relation

○ Model

42. Which of the following is not one of the stages in the evolution of distributed DBMS?
(2 Points)

⦿ Unit of work

○ Remote unit of work

○ Distributed unit of Work

○ Distributed request

43. Commit and rollback are related to ....
(2 Points)

○ Data consistency

⦿ Data replication

○ Data Security

○ Data Recovery

44. Global-as-view is more flexible in adding new local conceptual schemas:
    (2 Points)

    ◉ True

    ○ False

45. Which of the following is used to denote the selection operation in relational algebra?
    (2 Points)

    ○ Pi (Greek)

    ◉ Sigma (Greek)

    ○ Lambda (Greek)

    ○ Omega (Greek)

46. The extract process is which of the following?
    (2 Points)

    ○ A process to upgrade the quality of data after it is moved into a data warehouse

    ○ Capturing a subset of the data contained in various operational systems

    ○ Capturing all of the data contained in various decision support systems

    ◉ Capturing a subset of the data contained in various decision support systems

47. Record type in network data model represents:
    (2 Points)

    ◉ group of records of the same type

    ○ Set of attributes in one table

    ○ Set of attributes in different tables

○ many-to-one relationship in the direction of the arrow

48. When two schemas use different names to describe identical entities
    (2 Points)

   ○ antonym

   ⦿ synonym

   ○ homonym

   ○ none of the above

49. Which of the following is true concerning a global transaction?
    (2 Points)

   ○ The required data are at one local site and the distributed DBMS routes requests as
      necessary.

   ⦿ The required data are located in at least one nonlocal site and the distributed DBMS routes
      requests as necessary.

   ○ The required data are at one local site and the distributed DBMS passes the request to
      only the local DBMS

   ○ The required data are located in at least one nonlocal site and the distributed DBMS
      passes the request to only the local DBMS

50. Which of the following use shared memory?
    (2 Points)

   ○ Loosely coupled

   ⦿ Tightly coupled

   ○ Both

   ○ None

51. A transaction manager is which of the following?
    (2 Points)

   ○ A manager that maintains a log of transactions

   ○ That maintains before and after database images

   ○ That maintains appropriate concurrency control

   ● All of the above

52. The function that an entity plays in a relationship is called that entity's ....
    (2 Points)

   ○ Participation

   ○ Position

   ● Role

   ○ Instance

53. The four steps of the bottom-up design model are:
    (2 Points)

   ● Translation – Resolve naming- Mapping-Matching

   ○ Matching-Mapping- Integration

   ○ Translation – Integration - Merging & Restructuring

   ○ Network model-Mapping-integration-translation

54. Which of the following strategies is used by a distributed database?
    (2 Points)

   ○ Can accessed by many sites

   ○ Totally or partially at one location and distributed at many sites

○ Partitioned into segments at different sites.

⦿ All of the above

55. If T1 and T2 are two relations, then which of the following is not a valid relational algebra expression?
(2 Points)

○ Data Definition Language

⦿ Meta Language

○ Procedural query language

○ Non procedural language

56. The problem of concurrency control is more complex in a distributed database.
(2 Points)

⦿ True

○ False

57. Which of the following is true for a heterogeneous database system?
(2 Points)

○ Query processing is complex due to dissimilar schemas

○ Transaction processing is complex due to dissimilar software

○ Different sites use dissimilar schemas and software

⦿ All of the above

This content is created by the owner of the form. The data you submit will be sent to the form owner. Microsoft is not responsible for the privacy or security practices of its customers, including those of this form owner. Never give out your password.