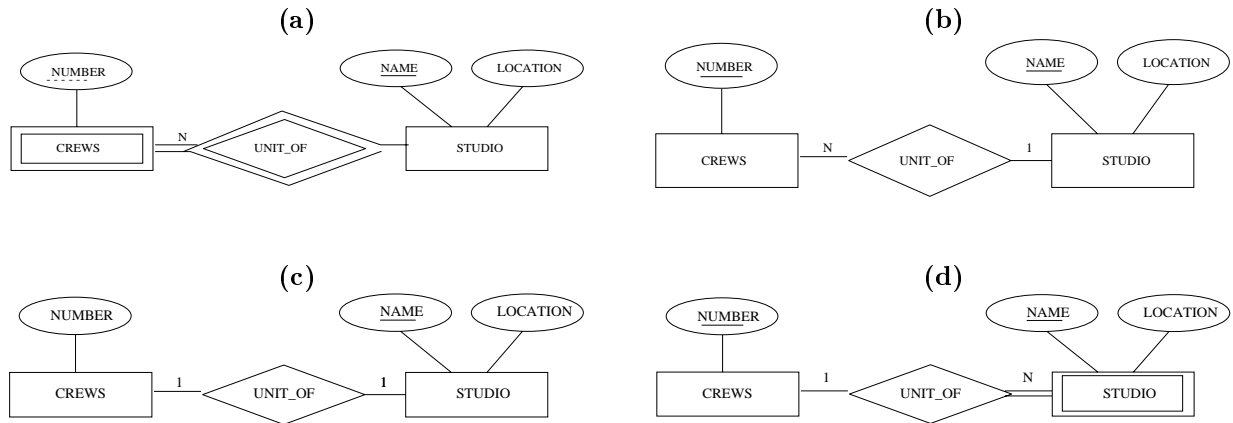


CS 4400 SAMPLE QUIZ I

Fall 2002

1. Which of the following are characteristics of a database management system?
 - (a) allows the sharing of data between multiple users
 - (b) stores the description of the data as well as the data
 - (c) provides mechanism for querying the database
 - (d) all of the above
2. A database in general, is a collection of related data but more specifically it
 - (a) represents some aspect of the real world
 - (b) is designed, built and populated with data for a specific purpose
 - (c) is a logically coherent collection of data with some inherent meaning
 - (d) all of the above
3. Making a change to the conceptual schema of a database but not affecting the existing external schemas is an example of
 - (a) physical data independence
 - (b) concurrency control
 - (c) logical data independence
 - (d) a functional dependency
4. Which schema level describes the part of the database that a particular user group is interested in and hides the rest of the database from that user group?
 - (a) conceptual level
 - (b) internal level
 - (c) external level
 - (d) data level
5. A specific example where physical data independence would hold is
 - (a) when the data in a relation is sorted
 - (b) when an additional access structure, e.g., an index, is created
 - (c) both (a) and (b)
 - (d) none of the above

6. Naive users of a database management system would access the data through a
- (a) high level query language
 - (b) user-friendly interface
 - (c) low level data manipulation language
 - (d) a host programming language with embedded query language statements
7. The system catalog component of a DBMS is accessed when
- (a) a data definition language statement is compiled
 - (b) a query is compiled
 - (c) all of the above
 - (d) none of the above
8. The basic entity-relationship model describes data as
- (a) relations, tuples and components
 - (b) objects and methods
 - (c) entities, relationships and attributes
 - (d) none of the above
9. If an entity type has a key which consists of multiple attributes, then this can be represented in an ER diagram with
- (a) a multivalued attribute
 - (b) a composite attribute
 - (c) a derived attribute
 - (d) none of the above
10. Specifying a min/max constraint of (1,N) for entity E in relationship R is the same as
- (a) specifying total participation for entity E in relationship R
 - (b) specifying partial participation for entity E in relationship R
 - (c) specifying a min/max constraint of (1,1) for entity E in relationship R
 - (d) none of the above
11. Characteristics of a conceptual data model include
- (a) expressiveness
 - (b) minimality
 - (c) formality
 - (d) all of the above



12. Suppose a movie studio has several film crews. The crews might be designated by a given studio as crew 1, crew 2, and so on. However, other studios might use the same designations for crews, so the attribute number is not a key for crews. Which of the above ER diagrams represents this situation?

13. The job of managing the database and the database management system is the responsibility of the

- (a) database designer
- (b) naive user
- (c) database administrator
- (d) parametric user

14. In a database management system where there is a clear separation between the conceptual and internal levels, which DBMS language would be needed to specify the internal schema?

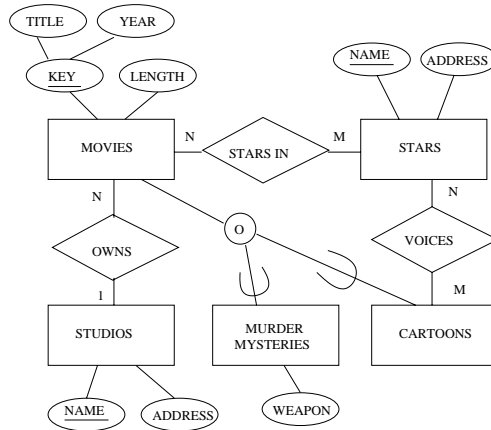
- (a) view definition language
- (b) storage definition language
- (c) data definition language
- (d) data manipulation language

15. Which is not a responsibility of the database administrator?

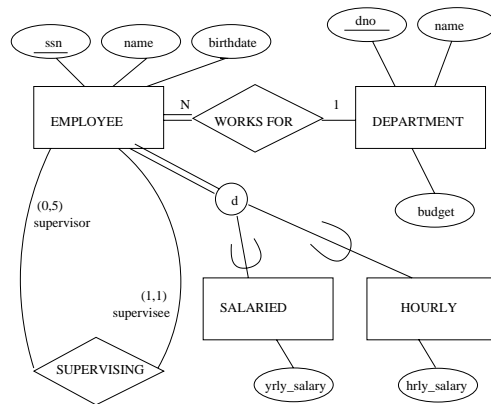
- (a) authorizing access to the database
- (b) deciding on the storage structures and access strategies
- (c) monitoring the performance of the database system
- (d) none of the above

16. Considering the following ER diagram, which statement(s) describe its content.

- (a) A studio may own movies which are not considered mysteries or cartoons
- (b) A cartoon is identifiable by its title and year
- (c) A star may act in 0 or more movies and do voices in 0 or more cartoons
- (d) All of the above



Consider the following ER diagram, for the next four questions.



17. Which of the following statements is false?

- (a) An employee must have a supervisor
- (b) An employee must work for a department
- (c) A department must have at least one employee
- (d) An employee may have no supervisor

18. Which of the following statements is false?

- (a) A salaried employee must have a supervisor
- (b) An hourly employee cannot be a supervisor
- (c) Hourly and salaried employees must work for a department
- (d) All of the above

19. Which of the following statements is false?

- (a) A department is identified by its dno
- (b) Hourly and salaried employees cannot work for the same department
- (c) An hourly or salaried employee is identified by their ssn
- (d) none of the above

20. Which of the following statements is false?

- (a) A supervisor may work for a different department than his/her supervisees
- (b) A supervisee must work for the same department as their supervisor
- (c) Every employee must be designated as being either hourly or salaried and not both
- (d) All of the above

ANSWERS

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|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| d | d | c | c | c | b | c | c | b | a | d | a | c | b | d | d | d | b | b | b |