

Considering the following Oracle "Sailors" table:

<i>sid</i>	<i>sname</i>	<i>rating</i>	<i>age</i>
22	Dustin	7	45.0
29	Brutus	1	33.0
31	Lubber	8	55.5
32	Andy	8	25.5
58	Rusty	10	35.0
64	Horatio	7	35.0
71	Zorba	10	16.0
74	Horatio	9	35.0
85	Art	3	25.5
95	Bob	3	63.5

How many rows will result by running the query:
SELECT * FROM Sailors WHERE rating > ALL(7, 3, 10)?

- ☐ a. 10
- ☐ b. 9
- ☐ c. 7
- ☒ d. 0

The representation of an relationship set in ER diagrams is a:

- ☐ a. Pentagon.
- ☐ b. Ellipse.
- ☒ c. Diamond.
- ☐ d. Rectangle.

When we translate a ER model into a relational model, the constraint that should be added to the foreign key which link a weak entity to the owner entity should be:

- ☒ a. ON DELETE CASCADE
- ☐ b. ON DELETE SET NULL
- ☐ c. CHECK N>0
- ☐ d. ON DELETE NO ACTION

Which of the following models are used to analyze and understand the application data?

- ☐ a. Data model.
- ☐ b. None of the above.
- ☐ c. Physical model.
- ☒ d. Conceptual model.

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How many rows will result by running the query:
SELECT * FROM Sailors WHERE rating > ANY(7, 3, 10)?

- ☐ a. 10
- ☐ b. 0
- ☒ c. 7
- ☐ d. 9

Screenshot saved

The screenshot was added to

Which of the following statements is true regarding the relation between the degree/cardinality of the resulting relation and inputs of a cartesian product?

- ☒ a. The resulting relation degree will be greater and the cardinality will be equal compared with each input table.
- ☐ b. The resulting relation degree will be greater and the cardinality will be lower compared with each input table.
- ☒ c. The resulting relation degree will be greater and the cardinality will be greater compared with each input table.
- ☐ d. The resulting relation degree will be equal and the cardinality will be greater compared with each input table.

A relational database is in a consistent state if:

- ☐ a. It does not contain empty tables.
- ☐ b. It does not contain any field set to NULL.
- ☐ c. All indexes where created.
- ☒ d. All defined integrity constraints are satisfied.

Which of the following statements about a Relationship Set in ER model is not true?

- ☐ a. Same entity set can participate in different relationship sets.
- ☐ b. Same entity set can participate with different roles in different relationship sets.
- ☒ c. It can contains relationships or entities.
- ☐ d. It represents a collection of similar relationships.

The representation of an entity set in ER diagrams is a:

- ☒ a. Rectangle.
- ☐ b. Hexagon.
- ☐ c. Ellipse.
- ☐ d. Diamond.

Which of the following is not an Armstrong Axiom?

- ☐ a. Reflexivity.
- ☐ b. Transitivity.
- ☐ c. Augmentation.
- ☒ d. Associativity.

The representation of an relationship set in ER diagrams is a:

- ☐ a. Pentagon.
- ☐ b. Rectangle.
- ☒ c. Diamond.
- ☐ d. Ellipse.

Which of the following statements is true regarding the relation between the degree/cardinality of the resulting relation and input of a projection relational operator?

- ☐ a. The resulting relation degree will be lower or equal and the cardinality will be greater compared with the input table.
- ☒ b. The resulting relation degree will be lower or equal and the cardinality will be lower or equal compared with the input table.
- ☐ c. The resulting relation degree will be greater and the cardinality will be lower compared with each input table.
- ☐ d. The resulting relation degree will be equal and the cardinality will be greater compared with the input table.

The type of participation of the weak entity set in relationship with the owner in ER model is:

- ☐ a. Partial participation.
- ☐ b. Weak participation.
- ☐ c. Can be any type.
- ☒ d. Total participation.

A thin line used to link an entity to a relationship denotes:

- ☐ a. A weak participation constraint.
- ☐ b. A strong participation constraint.
- ☒ c. A partial participation constraint.
- ☐ d. A total participation constraint.

The manner the data is stored by a RDBMS on an external support is expressed by:

- ☐ a. The external model.
- ☐ b. The virtual model.
- ☒ c. The physical model.
- ☐ d. The conceptual model.

Which of the following property does not represents a disadvantage of a file managed by the OS file system (to be used as a database repository)?

- ☐ a. Poor data protection.
- ☐ b. Lack of support for data searching.
- ☐ c. General OS level protection.
- ☒ d. Linear access to a text file.

Considering the following schema:

Persons (pid: number, name: varchar, age: number)

where pid is the primary key, what query must be used to make room for a new entry having pid = 1?

- ☐ a. UPDATE Persons SET pid = pid + 1 WHERE pid > 1 ORDER BY pid;
- ☐ b. UPDATE Persons SET pid = pid + 1;
- ☒ c. UPDATE Persons SET pid = pid + 1 ORDER BY pid DESC ;
- ☐ d. UPDATE Persons SET pid = pid + 1 WHERE pid > 1;

When it is not necessary to check the referential integrity in a relational database?

- ☐ a. When changing the value of a primary key or of a foreign key in the related tables.
- ☐ b. When deleting a record from the referenced (primary) table.
- ☒ c. When deleting a record in the secondary table.
- ☐ d. When adding a record in the secondary table.

The JOIN operator from relational algebra can be defined using:

- ☐ a. Selection and Renaming.
- ☒ b. Selection and Cartesian product.
- ☐ c. Projection and Union.
- ☐ d. Selection and Projection.

Which of the following services is not provided by a DBMS?

- ☐ a. Data protection and recovery mechanism.
- ☐ b. Advanced searching and retrieval algorithms.
- ☐ c. Efficient physical data organization on external storage.
- ☒ d. Advanced code versioning mechanism.

Considering the following schema:

Sailors(sid: number, name: varchar, rank: number, salary: number, age: number).

which of the following Update expressions is reversible:

- ☐ a. UPDATE Sailors SET rank = rank + 1 WHERE rank < 9;
- ☐ b. UPDATE Sailors SET name = "Retired" WHERE age > 65;
- ☐ c. UPDATE Sailors SET rank = 1;
- ☒ d. UPDATE Sailors SET salary = salary + 10/100 * salary;