Score for this quiz: **68.89** out of 100

Submitted Dec 29, 2023 at 12:31am

This attempt took 89 minutes.

**Question 1**

**6.66 / 6.66 pts**

What is the restrict operation?

An operation that asks a DBMS to copy specific attributes.

An operation that asks a DBMS to ignore null values.

An operation that asks a DBMS to choose rows that meet some logical criteria.

An operation that asks a DBMS to choose columns that meet some logical criteria.

The restrict operation asks a DBMS to choose rows that meet some logical criteria, copying rows from the source relation to the result table with no deference to attributes. Refer to Chapter 6 of Harrington (2016) for more information.

**Question 2**

**6.67 / 6.67 pts**

The \_\_\_\_\_ operation creates a new table by placing all rows from two source tables into a single result table.

The union operation creates a new table by uniting all the rows from two source tables into a single result table, placing the rows on top of one another. Refer to Chapter 6 of Harrington (2016) for more information.

**Question 3**

**6.67 / 6.67 pts**

The \_\_\_\_\_ operation combines two tables into one using relationships between primary and foreign keys.

The join operation combines two tables into one, usually via a relationship between primary key and foreign key. Refer to Chapter 6 of Harrington (2016) for more information.

**IncorrectQuestion 4**

**0 / 6.67 pts**

Which of the following is true regarding joins? Select all that apply.

Most joins between tables that do not have a primary key–foreign key relationship are not valid.

Joins between tables that do not have a primary key–foreign key relationship are valid in most circumstances.

Outer joins are not valid.

Invalid joins can create misinformation.

Most joins between tables that do not have a primary key–foreign key relationship are not valid. This means that the result tables contain information that is not represented in the database, thus conveying misinformation to the user. Refer to Chapter 6 of Harrington (2016) for more information.

**Question 5**

**6.67 / 6.67 pts**

Which of the following regarding unions is false?

For a union operation to be possible, the two source tables must be union compatible.

For a union operation to be possible, columns from both tables must be defined over the same domains.

Tables in a union operation must have the same columns.

Tables in a union operation must have columns of identical order and size.

For a union operation to be possible, the two source tables must be union compatible, meaning that they have identical columns that are defined over the same domains. However, the columns do not necessarily need to be in the same order or be the same size. Refer to Chapter 6 of Harrington (2016) for more information.

**Question 6**

**6.67 / 6.67 pts**

Which of the following regarding joins is true?

A join can be a strain on database resources.

The most common join is an outer join.

A join’s usefulness stems from its ability to merge database files.

Joins are facilitated through relationships between primary keys.

A join can be an enormous strain on database resources but is nevertheless a most useful operation because it combines two tables (via a primary key–foreign key relationship). The most common join is an equi-join, also referred to as an outer join. Refer to Chapter 6 of Harrington (2016) for more information.

**Question 7**

**6.67 / 6.67 pts**

What is a database relation?

The creation of a database file

The definition of a database table with columns and rows

The creation of a database field

The definition of a database form

In mathematical set theory a relationship is the definition of a table with columns (attributes) and rows (tuples). Refer to Chapter 5 of Harrington (2016) for more information.

**PartialQuestion 8**

**2.22 / 6.67 pts**

Which of the following characterizes a column in a relation?

A name that is unique within the table

Values drawn from one and only one domain

A name that is unique within the database

Domain constraints

**PartialQuestion 9**

**3.33 / 6.67 pts**

Which of the following characterizes a row in a relation?

Uniqueness

A primary key

Multivalued attributes

Domain constraints

**Question 10**

**6.67 / 6.67 pts**

Which of the following regarding the way columns and rows can be viewed is true?

Column and rows are positional and must be viewed in the defined order.

Columns are positional and must be viewed in the defined order; rows can be viewed in any order.

Rows are positional and must be viewed in the defined order; columns can be viewed in any order.

Columns and rows can be viewed in any order.

In relational databases, there are no positional concepts and therefore columns and rows can be viewed in any order without affecting the meaning of the data. Refer to Chapter 5 of Harrington (2016) for more information.

**IncorrectQuestion 11**

**0 / 6.67 pts**

Which of the following regarding the representation of data relationships in a relational database is true?

Data should never be used to represent relationships.

Relations are documented by using examples containing appropriate data.

Only numeric data can be used to represent relationships.

Relations are documented by using examples containing primary key and/or foreign key data.

When documenting relations, only the structure of the relation is noted. The notation should not contain any data. Refer to Chapter 5 of Harrington (2016) for more information.

**PartialQuestion 12**

**3.33 / 6.67 pts**

Which of the following is true regarding primary keys in a relational database?

Unique primary keys make it possible to identify every row in a table.

Any bit of data can be located by referencing the name of the table and the primary key of the row.

In certain circumstances, a primary key may contain a null vale.

A relation can only have one primary key.

**IncorrectQuestion 13**

**0 / 6.67 pts**

Which of the following would make the most effective primary key in a patient contact information table?

Patient-selected values they will easily remember.

Concatenated codes based on patient initials and dates of birth.

Arbitrary numbers.

Patient email addresses.

A primary key should avoid using meaningful data, as meaningful data are subject to change over time and therefore introduce data inconsistencies. Instead, arbitrary unique identifiers should be used. Refer to Chapter 5 of Harrington (2016) for more information.

**Question 14**

**6.67 / 6.67 pts**

Which of the following is true regarding the representation of data relationships?

A foreign key should not be used to represent a data relationship.

Relationships can be represented between tables and/or files.

Relationships can be represented between tables only.

A concatenated key should not be used to represent a data relationship.

In a relational database, relationships exist between logical constructs (tables) only, and representations of data make no assumptions about files or physical storage. Refer to Chapter 5 of Harrington (2016) for more information.

**Question 15**

**6.67 / 6.67 pts**

What is referential integrity?

A constraint stating that every nonnull foreign key value must match an existing key value.

A constraint stating that a primary key must not contain a null value.

A feature of relational databases that ensures the existence of a primary key.

A feature of relational databases that enforces usage of appropriate data types.

Referential integrity is an important constraint stating that every nonnull foreign key value must match an existing key value. It ensures the consistency of the cross-references among tables. Refer to Chapter 5 of Harrington (2016) for more information.

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