name: _____

MGT858 in-class quiz
SQL Joins

April 4, 2024

Instructions

- Do not flip over this page or read the questions on the other side of this page until 1pm.
- Your quiz will be collected at 1:10pm.
- Write your name *clearly* at the top right.
- Unless otherwise stated, each question has one correct answer. Select the one *best* answer.
- Fill in the appropriate bubble below. I will grade nothing but these bubbles. If you need to change an answer please indicate your final answer clearly.
- If a question stinks, Kyle will fix it later. I will not answer questions during the quiz.
- This quiz is closed book, closed device.
- When you're done, *raise your hand* and an instructor will collect it.

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9. Ⓐ Ⓑ Ⓒ Ⓓ
10. Ⓐ Ⓑ Ⓒ Ⓓ

1. What is the primary function of a primary key in a relational database table?
   A. To create a relationship between two tables.
   B. To uniquely identify each row in a table.
   C. To ensure that all values in a column are different.
   D. To speed up the retrieval of data based on non-unique attributes.

2. Which statement best describes the role of a foreign key in a relational database?
   A. A foreign key is a special key used only in rare circumstances when data is duplicated.
   B. A foreign key is a column (or columns) in one table that refers to the primary key columns in another table.
   C. A foreign key ensures that data in the corresponding column is unique across both tables.
   D. A foreign key is used to uniquely identify each row in its own table.

3. You want to retrieve a list of all employees and their respective department names, including employees who might not be assigned to any department. Which `JOIN` operation should you use?
   A. `SELECT * FROM employees INNER JOIN departments ON employees.department_id = departments.department_id;`
   B. `SELECT * FROM employees RIGHT JOIN departments ON employees.department_id = departments.department_id;`
   C. `SELECT * FROM employees CROSS JOIN departments;`
   D. `SELECT * FROM employees LEFT JOIN departments ON employees.department_id = departments.department_id;`

4. You want to join your `products` table to `shelves` to see what needs to be restocked. Which `JOIN` operation should you use?
   A. `RIGHT JOIN`
   B. `INNER JOIN`
   C. `LEFT JOIN`
   D. `CROSS JOIN`

5. You want to self-join your `teams` table for a tournament. Which `JOIN` operation should you use?
   A. `INNER JOIN`
   B. `LEFT JOIN`
   C. `RIGHT JOIN`
   D. `CROSS JOIN`

6. Your `animals` table has 5 rows and your `zookeepers` table has 3 rows. How many rows are produced by `SELECT * FROM animals JOIN zookeepers WHERE true;`?
   A. 15
   B. 3
   C. 0
   D. 5

7. A 1 gig file `foo1.csv` is appended to itself to make a 2 gig file `foo2.csv`. What is true of the `SHA1` hash of `foo1.csv` and `foo2.csv`?
   A. The hash of `foo2.csv` is twice as long as the hash of `foo1.csv`.
   B. They are different but of the same length.
   C. The hash of `foo2.csv` is the hash of `foo1.csv` appended to itself.
   D. They are the same.

8. What is common about git and blockchains?
   A. They both use a linked list.
   B. They both use SQL under the hood.
   C. They both use a Merkle tree.
   D. They both are implemented in Python.

9. Which of the following `JOIN` statements looks correct?
   A. `SELECT * JOIN employees FROM departments ON employees.department_id = departments.department_id;`
   B. `FROM employees JOIN departments ON employees.department_id = departments.department_id SELECT *`
   C. `SELECT * FROM employees JOIN departments ON employees.department_id = departments.department_id;`
   D. `JOIN employees ON departments.department_id = employees.department_id SELECT *`

10. Which of the following is most typically associated with joins?
    A. Foreign keys
    B. Hashes
    C. Primary keys
    D. Indexes

Answers

Question	Key
1	B
2	B
3	D
4	C
5	D
6	A
7	B
8	C
9	C
10	A