Database Optimization

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Graded Assignment • 30 min

Due Nov 24, 11:59 PM PST

Your grade: 100%

Your latest: **100%** • Your highest: **100%** • To pass you need at least 80%. We keep your highest score.

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1. In a SELECT statement, the use of functions and wildcards in predicates could hinder the performance of column indexes. 1 point

   - ○ False
   - ◉ True

2. Which of the following statements apply to MySQL indexes? Select all that apply. 1 point

   - ☑ Data stored in the index is always sorted.
   - ☐ An index can be created on only one column of a table.
   - ☑ An index is a data structure that helps maintain pointers to data in a table.
   - ☐ Primary indexes are created programmatically while secondary indexes are created automatically.

3. You should always use the FULL OUTER JOIN to optimize the SQL query when you extract data from multiple tables. 1 point

   - ○ True
   - ◉ False

4. Write the missing keyword to create an Index on the FullName column in the following SQL statement: 1 point

```
1  CREATE _________ IndexFullName ON Clients (FullName);
```

INDEX

5. Which of the following keywords are used to manage database transactions? Select all that apply. 1 point

   - ☑ START TRANSACTION
   - ☑ COMMIT
   - ☑ ROLLBACK
   - ☐ END

6. A Common Table Expression (CTE) is used to deconstruct complex queries into simple blocks of code to simplify the query and make it easier to read and maintain. 1 point

   - ○ False
   - ◉ True

7. Write the missing keyword required to create the following Common Table Expression: 1 point

```
1   ________ CTE_Name AS (query code) SELECT * FROM CTE_Name;
```

WITH

8. A prepared statement in MySQL includes certain unspecified values used as parameters. Which symbol is used to represent the parameters in the prepared statements? 1 point

- >=
- ->
- ? (selected)
- :=

9. When working with a prepared statement, MySQL only parses a query once no matter how many times its executed. 1 point

- False
- True (selected)

10. Write the operator that you need to use to access the values in the Properties JSON column. 1 point

You need to access the JSON values from the Properties column in the **`Activity`** table using the following SQL query. What operator is missing from your query?

```
1   SELECT Properties _____"$.ClientID" FROM Activity;
```

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