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Exam

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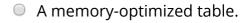
Multiple Choice with Hints and Feedback

1/1 point (graded)
You need to complete the following question to assess your completion of the course.

You want to execute a query that sums all the values of the "Paid" field in a table named "SoldItems".
What should you create to optimize this query?

○ A row-based index.

◉ A columnstore index. ✔

○ A memory-optimized table.

○ A natively compiled stored procedure.

Answer
Correct:
You should create a columnstore index, because they index all values in a table column, such as "Paid".

| Submit | You have used 1 of 1 attempt |

✔ Correct (1/1 point)

Checkboxes

0/1 point (graded)

You need to complete the following question to assess your completion of the course.

You want to store and query customer details in a Customer Relationship Management (CRM) application.

You want to ensure that results are returned as fast as possible. Which of the following objects should you create? You can choose more than one answer.

- ☑ A columnstore index

- ☑ A memory-optimized table. ✔

- ☐ A set of standard stored procedures.

- ☑ A set of natively-compiled stored procedures. ✔

✖

| Submit | You have used 1 of 1 attempt |

ℹ Answers are displayed within the problem

Multiple Choice with Hints and Feedback

1/1 point (graded)

You need to complete the following question to assess your completion of the course.

You are creating a database object that will store data about payments received from credit and debit cards.

It is essential that, in the event of a hardware failure, no payments are lost. What type of object should you create?

- ◉ A standard SQL Server table ✔

A non-durable memory-optimized table

A columnstore index

A natively compiled stored procedure.

Answer
Correct:
You should create a standard table. A non-durable memory-optimized table may lose records in the event of a hardware failure.

Submit   You have used 1 of 1 attempt

✔   Correct (1/1 point)

Multiple Choice with Hints and Feedback

0/1 point (graded)
You need to complete the following question to assess your completion of the course.

A developer is writing an application that queries a memory-optimized table.
What happens if the application tries to update a record simultaneously with another client?

SQL Server overwrites the changed record with the update from the application.

SQL Server applies an exclusive lock to the record to prevent a conflict. ✖

SQL Server applies a shared lock to the record to prevent a conflict.

SQL Server returns a conflict error

Answer
Incorrect:
Memory-optimized tables always use optimistic concurrency, in which records are not locked before updates. Applications must handle conflict errors.

Submit	You have used 1 of 1 attempt

✖ Incorrect (0/1 point)

Multiple Choice with Hints and Feedback

0/1 point (graded)
You need to complete the following question to assess your completion of the course.

A SQL client opens a transaction and begins to execute five update operations on a memory-optimized table.
A power loss occurs just after the second update completes. What portion of data in the table is lost?

○ All data in the table is lost.

○ All of the five update operations are lost.

○ Three of the five update operations are lost.

◉ No data is lost. ✖

Answer
Incorrect:
All of the five update operations are lost. The transaction is rolled back because all five updates and the commit operation had not reached the disk.

Submit	You have used 1 of 1 attempt

✖ Incorrect (0/1 point)

Multiple Choice with Hints and Feedback

0/1 point (graded)
You need to complete the following question to assess your completion of the course.

You have a table named Sales. You have a commonly executed query that calculates a total from the Price and SalesTax columns for a sale.

You want to optimize the performance of the query. What type of index should you create?

⦿ A row-based index

◉ A columnstore index ✖

Answer

Incorrect:

The query sums values from different columns in a single record so you should create a row-based index. If the query summed values from the same column in different records, a columnstore index would be optimal.

| Submit | You have used 1 of 1 attempt |

✖ Incorrect (0/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)

You need to complete the following question to assess your completion of the course.

You have a query that executes against a table named Employees.

The query calculates the total annual wage bill for the Engineering department by summing values in the Salary column. You want to optimize the query. What sort of index should you create?

⦿ A non-clustered row-based index.

⦿ A clustered row-based index.

◉ A non-clustered columnstore index. ✔

⦿ A clustered columnstore index.

Answer

Correct:
You should create a columnstore index because the total aggregates values across multiple records. You should create a non-clustered columnstore index because you can apply a filter to ensure it includes only records for Engineering employees.

Submit   You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)
You need to complete the following question to assess your completion of the course.

You have a table with a clustered columnstore index.
You notice that recently performance has reduced and users at peak times are noticing delays when they execute aggregating queries. Which of the following actions might improve performance?

○ Remove the clustered columnstore index.

○ Remove the clustered columnstore index and replace it with a clustered row-based index.

○ Rebuild the clustered columnstore index at the peak demand time.

◉ Rebuild the clustered columnstore index at an off-peak time. ✔

Answer
Correct:
You should rebuild the index to remove fragmentation. Rebuild the index at an off-peak time to avoid placing extra load on the server.

Submit   You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)
You need to complete the following question to assess your completion of the course.

You have a table with a non-clustered columnstore index. An INSERT statement adds
50,000 new records to the table.
Immediately afterwards, a SELECT statement is executed that returns 100 of the new records. Where are the new
records returned from?

- From the index's delta store.

- From the index's compressed column segments. ✔

- From both the compressed column segments and the delta store.

Answer
Correct:
All the new records are returned from the compressed column segments because a non-
clustered columnstore index does not use a delta store.

| Submit | You have used 1 of 1 attempt |

✔   Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)
You need to complete the following question to assess your completion of the course.

You have a table with a clustered columnstore index. An INSERT statement adds 120,000
records to the table.
Where are the new records added to the index?

- In the index's delta store.

- In the index's compressed column segments.

◉ In both the delta store and the compressed column segments. ✔

Answer

Correct:

The first 102,400 records are added to the compressed columns segments. The rest of the new records are added to the delta store.

| Submit | You have used 1 of 1 attempt |

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

0/1 point (graded)

You need to complete the following question to assess your completion of the course.

You are creating a new table named 2015Attendances.

All entrys from the Attendances table that have a value in the Date column between the first of January and the thirty-first of December will be archived to this new table. What kind of table should you create?

○ A disk-based table.

◉ A memory-optimized table. ✖

Answer

Incorrect:

You should create a disk-based table because this is archived data and likely to be rarely queried.

| Submit | You have used 1 of 1 attempt |

✖ Incorrect (0/1 point)

Checkboxes

1/1 point (graded)
You need to complete the following question to assess your completion of the course.

You want to add a memory-optimized table with a primary key to a database.
Which of the following must you include in the CREATE TABLE statement?

☑ The NONCLUSTERED keyword for the primary key column.

☐ The CLUSTERED keyword for the primary key column.

☑ The DURABILITY = SCHEMA_AND_DATA option for the table.

☐ The DURABILITY = SCHEMA_ONLY option for the table.

✔

Submit	You have used 1 of 1 attempt

✔ Correct (1/1 point)

Multiple Choice with Hints and Feedback

1/1 point (graded)
You need to complete the following question to assess your completion of the course.

You are writing a query that displays data from a memory-optimized table named Sales
and a disk-based table named SalesRegions.
How can you ensure the maximum performance for the query?

○ Write an interpreted Transact-SQL query.

○ Write standard disk-based stored procedure.

○ Write a natively-compiled stored procedure.

⦿   Write one standard disk-based stored procedure and one natively-compiled stored procedure. ✔

Answer
Correct:
You must use a natively compiled stored procedure to optimize the call to the memory-based table, but you cannot query a disk-based table from a natively-compiled stored procedure. Use two stored procedures to optimize performance.

Submit	You have used 1 of 1 attempt

✔   Correct (1/1 point)

Checkboxes

1/1 point (graded)
You need to complete the following question to assess your completion of the course.

Which of the following statements about memory-optimized tables are true?

☑   Memory-optimized tables must contain at least one index.

☐   Memory-optimized tables must contain a primary key.

☑   Memory-optimized tables are defined as C structs.

☑   Memory-optimized tables are compiled into DLLs.

☐   Memory-optimized tables always use pessimistic locking.

✔

Submit	You have used 1 of 1 attempt

✔ Correct (1/1 point)

Checkboxes

1/1 point (graded)
You need to complete the following question to assess your completion of the course.

You want to create a natively-compiled stored procedure.
Which of the following are not optional in your CREATE PROCEDURE statement?

- ☑ The NATIVE_COMPILATION option.

- ☑ The SCHEMABINDING option.

- ☐ The EXECUTE AS option.

- ☑ A BEGIN ATOMIC clause.

✔

| Submit | You have used 1 of 1 attempt |

✔ Correct (1/1 point)

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