DBMS/SQL

Lesson 02 Basics of SQL

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Lesson Objectives

To understand the following topics:
- SQL Language
- Rules for SQL Statements
- Standard SQL Statement groups

What is SQL?

SQL:

- SQL stands for Structured Query Language.

- SQL is used to communicate with a database.

- Statements are used to perform tasks such as update data on a database, or retrieve data from a database.

- Benefits of SQL are:

  - It is a Non-Procedural Language.

  - It is a language for all users.

  - It is a unified language.

What can SQL do?

SQL
- allows you to access a database.
- can execute queries against a database.
- can retrieve data from a database.
- can insert new records into a database.
- can delete records from a database.
- can update records in a database.

Rules for SQL statements

Rules for SQL statements:

- SQL keywords are not case sensitive. However, normally all commands (SELECT, UPDATE, etc) are upper-cased.
- "Variable" and "parameter" names are displayed as lower-case.
- New-line characters are ignored in SQL.
- Many DBMS systems terminate SQL statements with a semi-colon character.
- "Character strings" and "date values" are enclosed in single quotation marks while using them in WHERE clause or otherwise.

Standard SQL statement groups

Given below are the standard SQL statement groups:

Groups	Statements	Description
DQL	SELECT	DATA QUERY LANGUAGE – It is used to get data from the database and impose ordering upon it.
DML	DELETE INSERT UPDATE MERGE	DATA MANIPULATION LANGUAGE – It is used to change database data.
DDL	DROP TRUNCATE CREATE ALTER	DATA DEFINITION LANGUAGE – It is used to manipulate database structures and definitions.
TCL	COMMIT ROLLBACK SAVEPOINT	TCL statements are used to manage the transactions.
DCL (Rights)	REVOKE GRANT	They are used to remove and provide access rights to database objects.

Summary

In this lesson, you have learnt:
- What is SQL?
  - Rules for SQL statements
  - Standard SQL statement groups

Summary

Question 1: SQL ____.
- Option 1: cannot execute queries against a database.
- Option 2: can manipulate data from a database.
- Option 3: cannot retrieve data from a database.
- Option 4: can insert new records in a database.
- Option 5: can delete records from a database.

Summary

Question 2: SQL categories are ____.
- Option 1: DDL
- Option 2: DML
- Option 3: DSL
- Option 4: DQL
- Option 5: TCL
- Option 6: TDL