

### 1. What does DDL stand for? List the SQL DDL statements.

DDL stands for Data Definition Language. In the context of SQL, DDL is used for creating, altering, and deleting database structures like tables, views, and indexes. Based on the contents of the file you provided, the key SQL DDL statements are:

1. **CREATE:** This statement is used to create new database objects, such as tables, views, indexes, and stored procedures.
  2. **ALTER:** This statement allows for the modification of existing database objects. It's commonly used to add, delete, or modify columns in an existing table or to change other aspects of the table structure.
  3. **DROP:** This statement is used to delete objects from the database, like tables, views, and indexes.
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### 2. What does DML stand for? List the SQL DML statements.

DML stands for Data Manipulation Language. It is a part of SQL used for managing data within database objects like tables. The SQL DML statements mentioned in the file are:

1. **SELECT:** Used for querying data from a database. It retrieves data from one or more tables.
  2. **INSERT:** Used for inserting data into a table.
  3. **UPDATE:** Used for modifying existing data within a table.
  4. **DELETE:** Used for removing data from a table.
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### 3. What is SQL VIEW? Explain how views can be used to improve data security.

An SQL view is a virtual table constructed from other tables or views. It doesn't have data of its own but obtains data from the underlying tables or other views. Views are defined using SELECT statements, and a key characteristic is that a view definition may not include an ORDER BY clause.

Views can be used to improve data security in several ways:

1. **Hiding Columns or Rows:** Views can be designed to show only specific columns or rows from the underlying tables, thereby restricting access to sensitive data.

2. **Isolation Between Table Data and User's View of Data:** By providing a level of abstraction, views separate users from the direct access to table data, reducing the risk of unauthorized or accidental modifications.
  3. **Assigning Different Processing Permissions:** Different views of the same table can have different processing permissions, allowing for more granular control over who can see or manipulate the data.
  4. **Layering Built-In Functions and Hiding Complicated SQL Syntax:** Views can simplify user interaction with the data by encapsulating complex queries and computations.
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#### 4. What is trigger? Describe four uses for triggers.

Trigger is a stored program that is executed by the Database Management System (DBMS) whenever a specified event occurs. There are three types of triggers: BEFORE, INSTEAD OF, and AFTER, each of which can be declared for Insert, Update, and Delete operations, resulting in a total of nine possible trigger types.

Four uses for SQL triggers are:

1. **Providing Default Values:** Triggers can be used to automatically set default values in certain fields when a new record is created or updated.
2. **Enforcing Data Constraints:** They can enforce certain constraints on the data beyond what is defined in the schema. For instance, a trigger can be used to prevent invalid data from being entered into the database.
3. **Updating Views:** Triggers can automatically update views when the underlying data changes. This ensures that views always present the most current data.
4. **Performing Referential Integrity Actions:** Triggers can be used to maintain referential integrity by automatically updating related tables when a table is modified, ensuring consistent and accurate data across the database.