DDL Commands in SQL

- **DDL** stands for **Data Definition Language**, which is a set of SQL commands used to create, modify, and delete database structures such as tables, views, indexes, and constraints.

- Some basic DDL commands covered in SQL are –

1. **CREATE TABLE**

    The CREATE TABLE command is used to create a new table in a database. The syntax is as follows:

    CREATE TABLE table_name (

      column1 datatype,

      column2 datatype,

      column3 datatype,

      .....

    );

    For example, to create a table named "employees" with columns for "employee_id", "first_name", "last_name", "email", and "hire_date", you would use the following command:

    CREATE TABLE employees (

      employee_id int,

      first_name varchar(50),

      last_name varchar(50),

      email varchar(100),

      hire_date date

    );

2. **ALTER TABLE**

    The ALTER TABLE command is used to modify an existing table in a database. The syntax is as follows:

    ALTER TABLE table_name

    ADD column_name datatype;

For example, to add a column called "salary" to the "employees" table, you would use the following command:

ALTER TABLE employees

ADD salary int;

3. **DROP TABLE**

The DROP TABLE command is used to delete an existing table in a database. The syntax is as follows:

DROP TABLE table_name;

For example, to delete the "employees" table, you would use the following command:

DROP TABLE employees;

4. **CREATE INDEX**

The CREATE INDEX command is used to create an index on a table in a database. An index is used to speed up searches on a table by creating a separate data structure that allows the database to quickly locate the rows that match a search condition. The syntax is as follows:

CREATE INDEX index_name

ON table_name (column1, column2, ...);

For example, to create an index called "employee_id_index" on the "employees" table that speeds up searches on the "employee_id" column, you would use the following command:

CREATE INDEX employee_id_index

ON employees (employee_id);

5. **DROP INDEX**

The DROP INDEX command is used to delete an index on a table in a database. The syntax is as follows:

DROP INDEX index_name;

For example, to delete the "employee_id_index" index on the "employees" table, you would use the following command:

DROP INDEX employee_id_index;

6. **CREATE VIEW**

The CREATE VIEW command is used to create a view in a database. A view is a virtual table that is based on the result of a SELECT statement. The syntax is as follows:

CREATE VIEW view_name AS

SELECT column1, column2, ...

FROM table_name

WHERE condition;

For example, to create a view called "employee_names" that shows the first and last names of employees from the "employees" table, you would use the following command:

CREATE VIEW employee_names AS

SELECT first_name, last_name

FROM employees;

7. **DROP VIEW**

The DROP VIEW command is used to delete a view in a database. The syntax is as follows:

DROP VIEW view_name;

For example, to delete the "employee_names" view, you would use the following command:

DROP VIEW employee_names;

- These are some of the basic DDL commands used in SQL. There are many more DDL commands and options available depending on the specific database management system you are using.