

How I Learned SQL

Theory Stuffs

1. DDL – Data Definition Language

Command	Description	Syntax
<u>CREATE</u>	Create database or its objects (table, index, function, views, store procedure, and triggers)	CREATE TABLE table_name (column1 data_type, column2 data_type, ...);
<u>DROP</u>	Delete objects from the database	DROP TABLE table_name;
<u>ALTER</u>	Alter the structure of the database	ALTER TABLE table_name ADD COLUMN column_name data_type;
<u>TRUNCATE</u>	Remove all records from a table, including all spaces allocated for the records are removed	TRUNCATE TABLE table_name;
<u>COMMENT</u>	Add comments to the data dictionary	COMMENT 'comment_text' ON TABLE table_name;
<u>RENAME</u>	Rename an object existing in the database	RENAME TABLE old_table_name TO new_table_name;

2. DQL – Data Query Language

Command	Description	Syntax
<u>SELECT</u>	It is used to retrieve data from the database	<code>SELECT column1, column2, ...FROM table_name WHERE condition;</code>

3. DML – Data Manipulation Language

Command	Description	Syntax
<u>INSERT</u>	Insert data into a table	<code>INSERT INTO table_name (column1, column2, ...) VALUES (value1, value2, ...);</code>
<u>UPDATE</u>	Update existing data within a table	<code>UPDATE table_name SET column1 = value1, column2 = value2 WHERE condition;</code>
<u>DELETE</u>	Delete records from a database table	<code>DELETE FROM table_name WHERE condition;</code>
<u>LOCK</u>	Table control concurrency	<code>LOCK TABLE table_name IN lock_mode;</code>
CALL	Call a PL/SQL or JAVA subprogram	<code>CALL procedure_name(arguments);</code>
EXPLAIN PLAN	Describe the access path to data	<code>EXPLAIN PLAN FOR SELECT * FROM table_name;</code>

4. DCL – Data Control Language

Command	Description	Syntax
<u>GRANT</u>	Assigns new privileges to a user account, allowing access to specific database objects, actions, or functions.	<code>GRANT privilege_type [(column_list)] ON [object_type] object_name TO user [WITH GRANT OPTION];</code>

Command	Description	Syntax
<u>REVOKE</u>	Removes previously granted privileges from a user account, taking away their access to certain database objects or actions.	REVOKE [GRANT OPTION FOR] privilege_type [(column_list)] ON [object_type] object_name FROM user [CASCADE];

5. TCL – Transaction Control Language

Command	Description	Syntax
<u>BEGIN TRANSACTION</u>	Starts a new transaction	BEGIN TRANSACTION [transaction_name];
<u>COMMIT</u>	Saves all changes made during the transaction	COMMIT ;
<u>ROLLBACK</u>	Undoes all changes made during the transaction	ROLLBACK ;
<u>SAVEPOINT</u>	Creates a savepoint within the current transaction	SAVEPOINT savepoint_name;