

SQL

SQL:-SQL full name is Structure Query Language.

It is a standard language which can be used to communicate with (RDBMS) relational database management system.

Like:-Oracle, MySql, DB2, MySql-Server, Ms-Access.

Basically SQL stand on CRUD operation:-

C:-Create.

R:-Retrieve.

U:-Update.

D:-Delete.

Uses of Sql:-By using SQL we can perform multiple activity on database like:-

1. Create new Database.
2. Uses particular database.
3. Create table in database.
4. Insert new column in table.
5. Insert, delete, update, retrieve record on database table ...etc.

RDMS(Relational Data Base Management System):- It is an application software which provide the facility where we can store, manage, query and retrieve store data in systematic manner.

Like:- Oracle, MySql, DB2, MySql-Server, Ms-Access etc.ds

SQL data type:-In database table each and every columns have a name and data type.

Data Type of column is defined which types of value can hold by that column.

In SQL there are three types of data:-

1. Character datatype.
2. Numeric Datatype.
3. Date and Time data type.

Note:-Data Type may varies from database vendor to vendor.

Like:-In mysql integer data type represent as **int(size)** and In oracle integer datatype represent as **number(size)**.

Character data type:-

MySQL	Oracle
char(size)	char(size)
varchar(size)	varchar(size),varchar2()size

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Numeric data type:-

MySql	Oracle
int(size)	numeric(size)
float(size)	float(size)

Date and Time data type:-

MySql	Oracle
Date:-represent only date not time	Date:-represent only date not time
TimeStamp:-Represent date and time.	TimeStamp:-Represent date and time.

SQL Operator:-In sql with the help of operator we performed various type of operation like numeric, relational, logical etc.

There are three types of operator:-

1. Arithmetic Operator:- +, -, *, /, %.
2. Comparison Operator:- =, !=, >, >=, <, <=.
3. Logical Operator:- AND, OR, BETWEEN, IN, NOT.

In SQL for every specific task we used write a command and all sql commands divided into three parts:-

1. DDL(Data Definition Language).
2. DML(Data Manipulation Language).
3. DCL(Data Control Language).

DDL(Data Definition Language).

Syntax of SQL Commands: -

1. SQL command is not case sensitive, like select-→SELECT.
2. Generally, SQL command start with like create, insert, delete, select etc.
3. All Sql command end with semicolon(;).

Like:- select * from employee;

DDL(Data Definition Language):-Under this command we performed following operation.

1. Create Database.
2. Use Database.
3. Rename Database.
4. Drop Database.
5. Create a table.
6. Rename table.

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7. Add a column to existing table.
8. Add Multiple Column to existing table.
9. Modify an existing table.
10. Rename a column.
11. Drop a column.
12. Truncate a table.
13. Drop a table.

Create a Database :- In Mysql everything we have work with our own data base is known as logical database but in oracle database we do everything directly we have not need to create logical database.

Create logical database in MySQL: -

Syntax:- create database database_name;

Example:- mysql> create database vikasdb;

Use Database:-

Syntax:- use database_name;

Example:- mysql> use vikasdb;

Drop Database:-

Syntax:- drop database database_name;

Example:- drop database test;

Note:- Bellow all operation we performed in Oracle Database.

Create a table in: -

Syntax:- create table table_name(column_name1 datatype(size), column_name2 datatype(size), column_name3 datatype(size));

Example:- create table mytable(name varchar2(10), mobileno number(10), salary float(10));

Rename table:-

Syntax:- alter table current_table_name rename to new_table_name;

Example:- SQL> alter table mytable rename to mytable1;

Add a new column to existing table:-

Syntax:- alter table table_name add column_name datatype(size);

Example:- alter table mytable1 add addresss varchar2(20);

Add Multiple Column to existing table:-

Syntax:- alter table table_name add (column_name1 datatype(size), column_name2 datatype(size), column_name3 datatype(size).....);

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Example:-alter table mytable1 add (voterid number(10), email varchar2(20));

Change column data type an existing table:-

Syntax:-alter table table_name modify column_name datatype(size);

Example:- alter table mytable1 modify voterid varchar2(20);

Rename a column:-

Syntax:-alter table table_name rename column current_column_name to new_column_name;

Example:- alter table mytable1 rename column voterid to buildingname;

Drop(delete) column:-

Syntax:-alter table table_name drop column column_name;

Example:-alter table mytable1 drop column buildingname;

Truncate a table:-By using truncate command we deleted complete data from an existed table.

Syntax:-truncate table table_name;

Example:-truncate table mytable1;

Drop(delete) a table:-

Syntax:- drop table table_name;

Example:- drop table mytable1;

DML(Data Manipulation Language):-Under this command we performed following operation.

1. Insert.
2. Select.
3. Update.
4. Delete.

Insert record:-

Create table:- create table student(id number(5),name varchar2(10),city varchar(10));

Insert record:-

Syntax:- insert into table_name values(col_val1, col_val2, col_val3.....);

Example:- insert into student values(1234,'abc','dli');

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Select statement:- Retrieve data from a table. **Syntax:-** select column1, column2, ... from table_name;

Example:-1 select id, name, city from student;

Example:-2 select * from student;

Update statement:- update existing data into a table.

Syntax:- update table_name set column1=value, column2=value where column3=value;

Example:- update table_name set name='vikas', city='madhubani' where id=1234;

Delete statement:- Delete record from table.

Syntax:- delete from table_name where column=value;

Example:- delete from student where id=1234;

Primary key :- By using primary key defined a record uniquely.

Syntax:- create table table_name(column_name1 datatype(size) primary key, column_name2 datatype(size));

Example:- create table mytable(id number(5) primary key, name varchar2(10));

Command to display all table in Oracle database:-

select table_name from user_tables;

Command for clear Screen in oracle:- cl scr;

Command for clear Screen of cmd:- cls;