SQL

SQL is a database language is mainly designed for maintaining the data in relational database management system. It is special tool used by data professional for handling structured data. It is developed by IBM.

Operations on Databases:

Create:

CREATE DATABASE < Database_name >;

Drop:

DROP DATABASE < [Database_Name1,Database_Name2……Database_NameN] >;

Rename:

ALTER DATABASE < old_database_name > MODIFY NAME = < new_database_name >;

Select:

USE < database_name >;

Operations on Tables:

Tables is a collections of data, organized in terms of rows and columns.

Create:

Create table < table_name > (col_name1 “data type”,col_name2 “data type”…… col_nameN”data type”);

Drop:

DROP TABLE < table_name>;

Delete:

DELETE FROM < table_name >;

DELETE FROM < table_name > WHERE <condition> // for specific row

Truncate:

TRUNCATE TABLE <table_name>;

Rename:

RENAME < old_table_name> TO <new_table_name >; **or** ALTER TABLE <old_table_name> RENAME TO <new_table_name>;

View all data in the Table:

SELECT * FROM <table_name>;

View Table Structure:

Desc <table_name>;

COPY Table:

SELECT * INTO <new_table_name> FROM <old_table_name>;

Alter Table:

ALTER TABLE <table_name> add (col_name1 “datatype” ,col_name2”datatype”,……col_nameN”datatype”);

Or

ALTER TABLE <table_name> modify (col_name1 “datatype,col_name2”datatype”,……col_nameN”datatype”);

SQL Insert

Insert Statement

INSERT INTO <table_name> VALUES (value1,value2,value3……..valueN);

Or

INSERT INTO <table_name> (col1,col2,col3…….colN) VALUES (value1,value2,value3,……valueN);

SQL SELECT

SELECT UNIQUE

SELECT UNIQUE <column_name> FROM <table_name>;

Select Distinct

SELECT DISTINCT <col_name,col_name> FROM <table_name>;

Select Count

SELECT COUNT (column_name) FROM <table_name>;

Select TOP

SELECT TOP (number or percent) <col_name1,col_name2,…….col_nameN> FROM <table_name> WHERE <condition>;

Select First:

SELECT FIRST (column_name) FROM <table_name>;

Select Last:

SELECT LAST (field_name) FROM <table_name>;

Select Random:

SELECT <col_name> FROM <table_name> ORDER BY RAND() LIMIT 1;

UPDATE TABLE

UPDATE <table_name> SET (col_name1=value1……col_nameN=valueN) WHERE <condition>;

DELETE TABLE

DELETE FROM <table_name> WHERE <condition>;

Delete Duplicate

SELECT DISTINCT <col1,col2……..colN> FROM <table_name> WHERE <condition>;

SQL ORDER BY

ASCENDING ORDER

SELECT <col_name1,col_name2…….col_nameN> FROM <table_name> ORDER BY <col_name> ASC;

DECENDING ORDER

SELECT <col_name1,col_name2…….col_nameN> FROM <table_name> ORDER BY <col_name> DESC;

SQL CLAUSE

WHERE

A WHERE clause in SQL is a data manipulation language (DML) statement.
WHERE clause is used in SELECT ,UPDATE,DELETE statements.

AND

The SQL AND condition is used in SQL query to create two or more conditions to be met.
It is used in SELECT,INSERT,UPDATE and DELETE statements.

OR

The SQL OR condition is used in SQL query to create a SQL statements where records are returned when any one condition met.It can be used in SELECT,INSERT,UPDATE,DELETE statements.

SELECT <col> FROM <table> WHERE <condition1>OR<condition2>;

WITH

The SQL WITH clause is used to provide a sub-query block which can be referenced in several places within the main SQL query

AS

SQL AS is used to assign a new name temporarily to a table column or even a table

GROUP BY

The GROUP BY statement groups records into summery rows and returns one record for each group.

SELECT <col_name> FROM <tab_name> WHERE <condition> GROUP BY <col_name> ORDER BY <col_name>;

HAVING

The HAVING clause in SQL operates on grouped records and returns rows where aggregate function results matched with given condition only.

SELECT <col_name> FROM <tab_name> WHERE <condition> GROUP BY <col_name> HAVING <condition> ORDER BY <col_name>;

KEYS

Primary Key

A column and columns is called primary key (PK) that uniquely identifies each row in the table.

Create table < table_name > (col_name1 "data type" PRIMARY KEY ,col_name2 "data type"…… col_nameN"data type");

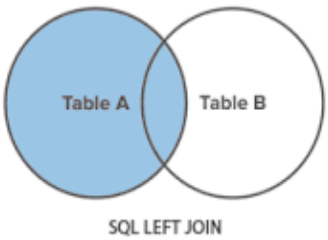
FOREIGN KEY

In the relational databases, a foreign key is a field or a column that is used to established a link between two tables.

Create table < table_name > (col_name1 "data type" PRIMARY KEY ,col_name2 "data type",col_name"data type" FOREIGN KEY REFERENCES <another_tablename><common col_name between two table>);

SQL JOIN

LEFT JOIN

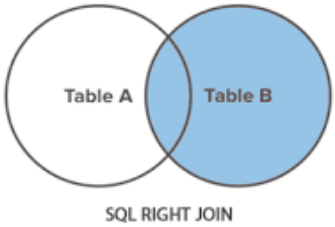


SQL LEFT JOIN

SELECT * FROM <Table A> LEFT JOIN <Table B>

<Table A>.KEY=<TABLE B>.KEY;

RIGHT JOIN

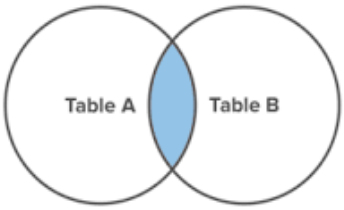


SQL RIGHT JOIN

SELECT * FROM <Table A> RIGHT JOIN <Table B>

<Table A>.KEY=<TABLE B>.KEY;

INNER JOIN

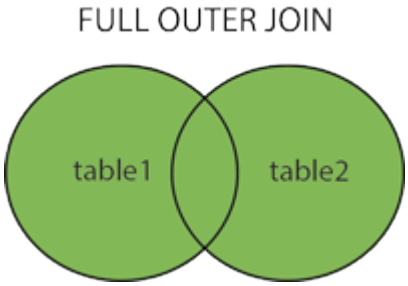


SQL INNER JOIN

SELECT * FROM <Table A> INNER JOIN <Table B>

ON <Table A>.KEY=<TABLE B>.KEY;

FULL OUTER JOIN



SELECT * FROM <Table A> FULL OUTER JOIN <Table B>

ON <Table A>.KEY=<TABLE B>.KEY;

SELF JOIN

SELECT * FROM <col1,col2….colN> FROM table T1,table T2 WHERE <condition>

T1 and T2 are the different aliases name of table