

SQL

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SQL

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- Grant()

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- Commit()

- Rollback()

- Savepoint()

- ① **create()**:- create table tbl-name();
- ② **drop()**:- Drop table tbl-name;
- ③ **Truncate**:- Truncate table tbl-name;
- ④ **Alter**:- Alter table tbl-name add (colⁿ name);
Alter table tbl-name modify (colⁿ name);
- ⑤ **Insert()**:- Insert into tbl-name values ();
Insert into tbl-name (colⁿ name) values (colⁿ name);
- ⑥ **update()**:- Update table-name set address = 'B' where sid = 1;
Update tbl-name set colⁿ = value where colⁿ = value;
- ⑦ **Delete()**:- Delete from tbl-name where conditions;
- ⑧ **select()**:- Select "expressions" from tbl-name where conditions;
select * from tbl-name where condition;
- ⑨ **Grant()**:- grant select, update on my-table to some user,
Another user;
- ⑩ **Revoke()**:- Revoke select, update on my-table from user1,
User2;
- ⑪ **Commit()**:- Delete * from tbl-name where condition;
- ⑫ **Rollback()**:- Any query; Rollback;
- ⑬ **savepoint()**:- savepoint savepoint-name;

SQL Clauses :-

- ① where :- Used for limited fields.
- ② AND/OR :- Used to join or perform two conditions.
- ③ AS :- Used to assign new temporary name to col^{mn} or tbl.
- ④ orderby :- Used to sort ascending (Asc) or Descending (Desc) order.
- ⑤ Like :-
- ⑥ Between :-
- ⑦ HAVING
- ⑧ Groupby

Constants :-

- ① Not Null :- Insure that col^{mn} have some value.
- ② UNIQUE :- Insure that all values are different in specific col^{mn}.
- ③ primary key :- A combination of not null or uniquely identify each rows in table.
- ④ Foreign key :- It is a col^{mn} i.e. used to establish link betⁿ 2 tables.
A foreign key in one table used to point primary key in another table.
- ⑤ check :- Insure that the values in col^{mn} satisfy a specific condⁿ.
- ⑥ Default :- Set default value for column if no value is specified.
- ⑦ Auto Increment :- It allows a unique no. to be generated automatically, when new record inserted in table.

Joins :- used to combine two or more tables in database

5 Types of Join :-

- ① Inner join ② outer join :- i) Left join ii) Right join
- ③ self join ④ cross join
- ① Inner join :- Used to written only thows result from tbl that data matches both tables.
- ② Left Join :- Return all rows from left table & matches record on right table or return null if no record found.

③ right Join :- Return all rows on right side table & match with left side.

④ Cross Join :- used to combine two diff^{nt} tables we will get Cartesian product of set of rows from join tables. when each row of 1st table is combine with each row of 2nd table. Also known as Cartesian join or cross join.

⑤ self Join :- Used to join a table with it self we can perform self join using table aliases. That is allow us to use same name of table.

Join Syntax & Queries

① Inner Join :-
$$\text{select } * \text{ from } \overset{\text{tbl1}}{\text{tbl name}} \text{ Inner Join } \overset{\text{tbl2}}{\text{tbl name}} \text{ ON } \text{tbl1.id} = \text{tbl2.id};$$

=> $\text{select } * \text{ from student Inner Join clg ON student.id = clg.id};$

② Left Join :-

$\text{select } * \text{ from tbl1}$
Left Join tbl2 ON
tbl1.id = tbl2.id;

=> $\text{select } * \text{ from stud}$
Left Join clg ON
stud.id = clg.id;

③ Right Join :-

$\text{select } * \text{ from tbl1}$
Right Join tbl2 ON
tbl1.id = tbl2.id;

=> $\text{select } * \text{ from stud}$
Right Join clg ON
stud.id = clg.id;

④ Cross Join :-

$\text{select } * \text{ from tbl1}$
Cross Join
tbl2 ON tbl1.id = tbl2.id;

=> $\text{select } * \text{ from stud}$
Cross Join
clg ON stud.id = clg.id;

⑤ self Join :-

$\text{select } * \text{ from tbl1}$
self Join
tbl2 ON tbl1.id = tbl2.id;

SQL Funⁿ :-

① **MIN Funⁿ :-** MIN() / min() :- Used to find min. value

Syntax :- SELECT MIN(clm-name) from tbl-name;

② **MAX Funⁿ :-** MAX() / max() :- Used to find max. value

Syntax :- SELECT MAX(clm-name) from tbl-name;

③ **Avg funⁿ :-** AVG() / avg() :- Used to find Avg. of ^{num^{ic}} clm.

Syntax :- SELECT AVG(clm-name) from tbl-name;

④ **sum funⁿ :-** SUM() / sum() :- Used to find sum of num^{ic} clm

Syntax :- SELECT SUM(clm-name) from tbl-name;

⑤ **count funⁿ :-** COUNT() / count() :-

Syntax :- SELECT COUNT(clm-name) from tbl-name;

view :- ① View is a virtual table based on result-set of an SQL statement. ② A view contains rows & columns, just like a real table.

Syntax :- CREATE VIEW view-name AS

SELECT clm1, clm2, ---

FROM tbl-name

Where condition;

CREATE VIEW (v1) AS

SELECT * FROM Stud where condition;

Stored procedure :- A stored procedure is prepared SQL code that we can save, so that code can be reused over & over again & again.

Syntax :- CREATE PROCEDURE procedure-name AS

SQL statements GO;

cursor :- A SQL cursor is a database object that is used to retrieve data from result set one row at a time. A SQL cursor is used ~~to~~ when the data needs to be updated row by row.

SQL Cursor Lifecycle :-

- ① Declaring cursor
- ② opening cursor.
- ③ Fetching cursor
- ④ closing cursor.
- ⑤ Deallocating cursor.

Why use cursor :-

The relational databases, operations are made on a set of rows

Syntax :-

```
DECLARE cursor-name CURSOR [Local / Global] for
Select * from tbl-name order by tbl clm-no;
open cursor-name
close cursor-name.
```

Trigger :- Trigger is a set of actions that are run automatically when a specified change operation is performed on a specified table.

Syntax :-

```
CREATE TRIGGER trigger-name
(Before) trigger-time (Insert) trigger-name event ON tbl-name
FOR EACH ROW
trigger-body
trigger-time : { BEFORE / AFTER }
trigger-event : { INSERT / UPDATE / DELETE }
```