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# SQL Cheat sheet

## Categories

## **DDL** : Data Definition Language

## **DQL** : Data Query Language

## **DML**: Data Manipulation Language

## **DCL** : Data Contra Language

## **TCL** : Transaction Control Language

# Commands

# DDL

* CREATE
* DROP
* ALTER
* TRUNCATE
* RENAME
* COMMENT

# DQL

* SELECT

# DML

* INSERT
* UPDATE
* DELETE
* LOCK CALL
* EXPLAIN PLAN

DCL**:**

* GRANT
* REVOKE

TCL**:**

* COMMIT
* ROLLBACK
* SAVEPOINT
* SET TRANSACTION

Operators:

Arithmetic:

+ - \* / %

Bitwise:

& | ~

Comparison:

= < > <= >= !< !> ^=

Compound:

+= -= /= %= &= |= ^=

Logical:

* AND
* OR
* NOT
* ANY
* SOME
* ALL
* BETWEEN
* IN
* EXISTS
* LIKE
* IS NULL
* UNIQUE

# Important keywords

* WHERE
* DISTINCT
* LIMIT
* ORDER BY | DESC | ASC
* AS
* FROM
* SET
* VALUES
* CASE
* DEFAULT

# Database objects:

* TABLE
* VIEW
* SYNONYM
* SEQUENCE
* INDEX
* TRIGGER

# CONSTRAINTS

* NOT NULL
* UNIQUE
* PRIMARY KEY
* FOREIGN KEY
* CHECK
* DEFAULT

# Aggregate functions:

* AVG
* COUNT
* MAX
* MIN
* SUM

# Aggregate keywords

* GROUP BY
* HAVING

# DDL Examples:

## CREATE A TABLE.

CREATE TABLE Students(

rollno int PRIMARY KEY.

Fname varchar(255) NOTNULL,

Lname varchar(255)

);

## Adding a new column to the Table

**ALTER TABLE** students

**ADD** email varchar (255)

## Modifying the data type of existing column

**ALTER TABLE** students

**ALTER COLUMN** lname varchar(512);

## Removing an existing column from the table:

**ALTER TABLE** students

**DROP COLUMN** email;

## Truncate a table (remove all the data from the table)

**TRUNCATE TABLE** students;

## Drop a table

**DROP TABLE** students;

# DQL Examples:

## Fetch all data from a table:

**SELECT \* FROM** students

## Filter data from a table

**SELECT \* FROM** students

**WHERE** rollno > 1234

**AND** age < 15

## Fetch selected columns

**SELECT** fname, lname

**FROM** students

**WHERE** rollno > 12345

**AND** age < 15

## Fetch maximum 10 rows

**SELECT** fname, lname

**FROM** students

**WHERE** rollno>12345

**AND** age<15

**LIMIT** 10;

## Fetch count of records

**SELECT** count(\*)

**FROM** students

## Fetch maximum age from students

**SELECT** max(age)

**FROM** students

## Fetch minimum age from students

**SELECT** min(age)

**FROM** students

## Fetch sum of age from students

**SELECT** sum(age)

**FROM** students

## Fetch average age from students

**SELECT** avg(age)

**FROM** students

## Fetch average age from students

**SELECT** avg(age)

**FROM** students

**GROUP BY** gender;

## Sort (order) fetched records

**SELECT** fname, lname

**FROM** students

**WHERE rollno** > 12345

**AND** age <15

**ORDER BY** gender**;**

## Sort in descending Order

**SELECT** fname, lname

**FROM** students

**WHERE** rollno>12345

**AND** age <15

**ORDER BY** gender **DESC;**

## Fetch from 2 tables

**SELECT** fname, classteacher

**FROM** students

**INNER JOIN** Section

**ON** students.section = section.id

# DML examples:

## Insert data into a table

**INSERT INTO** students(rollno, fname, lname)

**VALUES ( 12345, ‘CHRISTIANO’, ‘RONALDO’)**

## Update data (value of a column) of a table.

**UPDATE** students **SET** lname = “messi”

**WHERE** rollno = 1234;

## Delete data (rows) from a table

DELETE FROM students WHERE rollno = 1234;

# Aggregate and Filter:

SELECT section, count(\*) AS studentcount

FROM students

GROUP BY section

HAVING count(\*) > 20

# FULL Outer join

SELECT fname, clsteacher

FROM Students

FULL JOIN Section

ON Students.section = Students.id;