



# SQL

## CHEAT SHEET

# USING SQL OPERATORS

```
SELECT c1, c2 FROM t1
```

```
UNION [ALL]
```

```
SELECT c1, c2 FROM t2;
```

Combine Rows From Two Queries

```
SELECT c1, c2 FROM t1
```

```
INTERSECT
```

```
SELECT C1, C2 FROM T2;
```

Return The Intersection Of Two Queries

```
SELECT c1, c2 FROM t1
```

```
MINUS
```

```
SELECT c1, c2 FROM t2;
```

Subtract A Result Set From Another Result Set

```
SELECT c1, c2 FROM t1
```

```
WHERE c1 [NOT] LIKE pattern;
```

Query Rows Using Pattern Matching %, \_

```
SELECT c1, c2 FROM t
```

```
WHERE c1 [NOT] IN value_list;
```

Query Rows In A List

```
SELECT c1, c2 FROM t
```

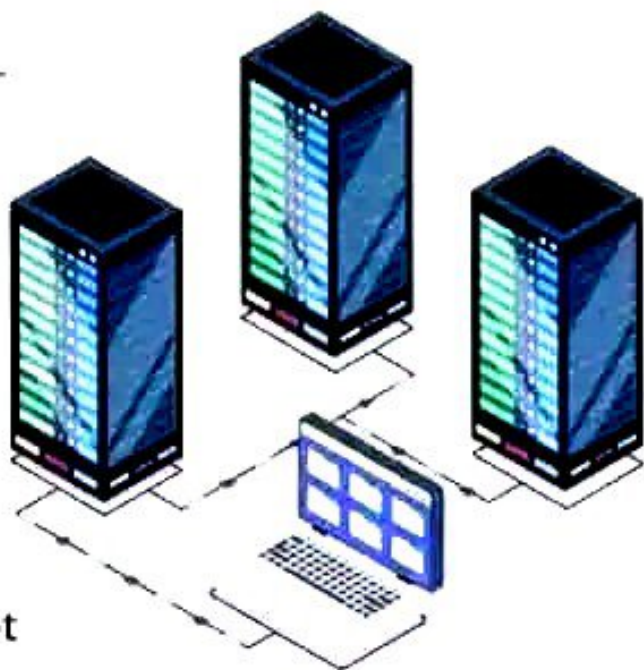
```
WHERE c1 BETWEEN low AND high;
```

Query Rows Between Two Values

```
SELECT c1, c2 FROM t
```

```
WHERE c1 IS [NOT] NULL;
```

Check If Values In A Table Is NULL Or Not



# MODIFYING DATA

```
INSERT INTO t(column_list)
VALUES(value_list);
```

Insert one row into a table

```
INSERT INTO t(column_list)
VALUES (value_list),
      (value_list), ....;
```

Insert multiple rows into a table

```
INSERT INTO t1(column_list)
SELECT column_list
FROM t2;
```

Insert rows from t2 into t1

```
UPDATE t
SET c1 = new_value;
```

Update new value in the column c1 for all rows

```
UPDATE t
SET c1 = new_value,
    c2 = new_value
```

```
WHERE condition;
```

Update values in the column c1, c2 that match the condition

```
DELETE FROM t;
```

Delete all data in a table

```
DELETE FROM t
WHERE condition;
```

Delete subset of rows in a table





# USING SQL CONSTRAINTS

```
CREATE TABLE t(  
    c1 INT, c2 INT, c3 VARCHAR,  
    PRIMARY KEY (c1,c2)  
);
```

Set c1 and c2 as a primary key

```
CREATE TABLE t1(  
    c1 INT PRIMARY KEY,  
    c2 INT,  
    FOREIGN KEY (c2) REFERENCES t2(c2)  
);
```

Set c2 column as a foreign key

```
CREATE TABLE t(  
    c1 INT, c1 INT,  
    UNIQUE(c2,c3)  
);
```

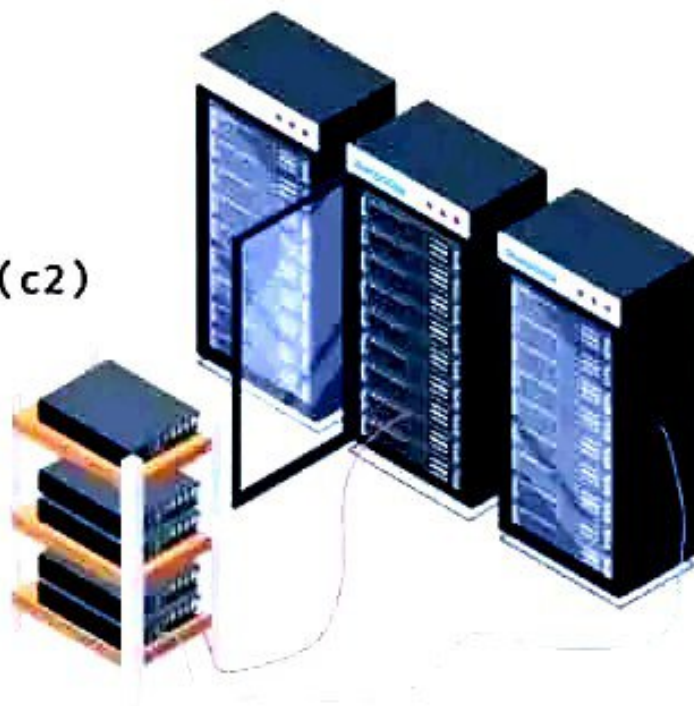
Make the values in c1 and c2 unique

```
CREATE TABLE t(  
    c1 INT, c2 INT,  
    CHECK(c1 > 0 AND c1 ≥ c2)  
);
```

Ensure  $c1 > 0$  and values in  $c1 \geq c2$

```
CREATE TABLE t(  
    c1 INT PRIMARY KEY,  
    c2 VARCHAR NOT NULL  
);
```

Set values in c2 column not NULL



# MANAGING TABLES

```
CREATE TABLE t (  
    id INT PRIMARY KEY,  
    name VARCHAR NOT NULL,  
    price INT DEFAULT 0  
);
```

Create a new table with three columns

```
DROP TABLE t ;
```

Delete the table from the database

```
ALTER TABLE t ADD column;
```

Add a new column to the table

```
ALTER TABLE t DROP COLUMN c ;
```

Drop column c from the table

```
ALTER TABLE t ADD constraint;
```

Add a constraint

```
ALTER TABLE t DROP constraint;
```

Drop a constraint

```
ALTER TABLE t1 RENAME TO t2;
```

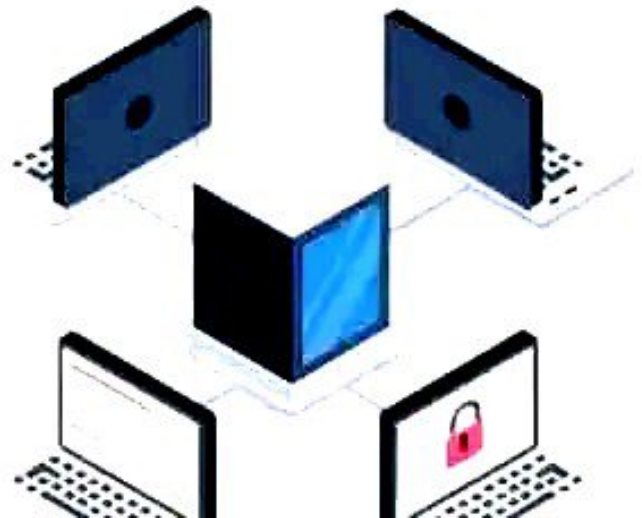
Rename a table from t1 to t2

```
ALTER TABLE t1 RENAME c1 TO c2 ;
```

Rename column c1 to c2

```
TRUNCATE TABLE t;
```

Remove all data in a table



# QUERYING DATA FROM A TABLE

```
SELECT c1, c2 FROM t;
```

Query Data In Columns C1, C2 From A Table

```
SELECT * FROM t;
```

Query All Rows And Columns From A Table

```
SELECT c1, c2 FROM t
```

```
WHERE condition;
```

Query Data And Filter Rows With A Condition

```
SELECT DISTINCT c1 FROM t
```

```
WHERE condition;
```

Query Distinct Rows From A Table

```
SELECT c1, c2 FROM t
```

```
ORDER BY c1 ASC [DESC];
```

Sort The Result Set In Ascending Or Descending Order

```
SELECT c1, c2 FROM t
```

```
ORDER BY c1
```

```
LIMIT n OFFSET offset;
```

Skip Offset Of Rows And Return The Next N Rows

```
SELECT c1, aggregate(c2)
```

```
FROM t
```

```
GROUP BY c1;
```

Group Rows Using An Aggregate Function

```
SELECT c1, aggregate(c2)
```

```
FROM t
```

```
GROUP BY c1
```





# QUERYING FROM MULTIPLE TABLES

```
SELECT c1, c2  
FROM t1  
INNER JOIN t2 ON condition;  
Inner Join T1 And T2
```

```
SELECT c1, c2  
FROM t1  
LEFT JOIN t2 ON condition;  
Left Join T1 And T1
```

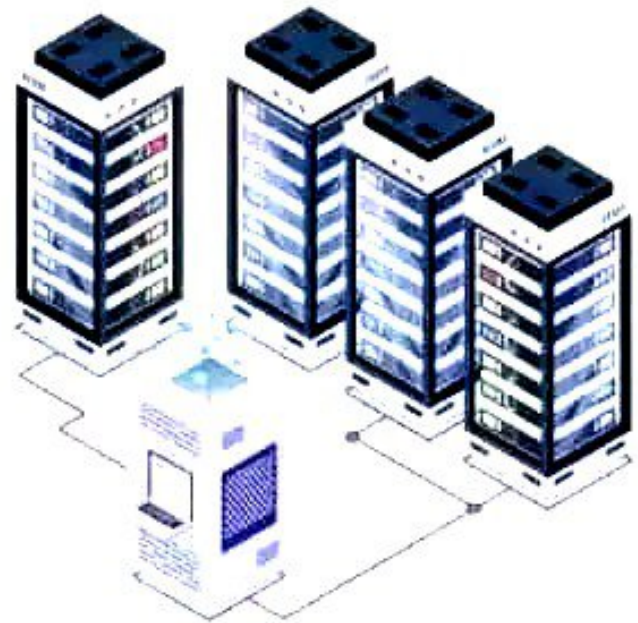
```
SELECT c1, c2  
FROM t1  
RIGHT JOIN t2 ON condition;  
Right Join T1 And T2
```

```
SELECT c1, c2  
FROM t1  
FULL OUTER JOIN t2 ON condition;  
Perform Full Outer Join
```

```
SELECT c1, c2  
FROM t1  
CROSS JOIN t2;  
Produce A Cartesian Product Of Rows In Tables
```

```
SELECT c1, c2  
FROM t1, t2;  
Another Way To Perform Cross Join
```

```
SELECT c1, c2  
FROM t1 A
```



# MANAGING VIEWS

```
CREATE VIEW v(c1,c2)
```

```
AS
```

```
SELECT c1, c2
```

```
FROM t;
```

Create a new view that consists of c1 and c2

```
CREATE VIEW v(c1,c2)
```

```
AS
```

```
SELECT c1, c2
```

```
FROM t;
```

```
WITH [CASCADED | LOCAL] CHECK OPTION;
```

Create a new view with check option

```
CREATE RECURSIVE VIEW v
```

```
AS
```

```
select-statement -- anchor part
```

```
UNION [ALL]
```

```
select-statement; -- recursive part
```

Create a recursive view

```
CREATE TEMPORARY VIEW v
```

```
AS
```

```
SELECT c1, c2
```

```
FROM t;
```

Create a temporary view

```
DROP VIEW view_name
```

Delete a view





# MANAGING TRIGGERS

**CREATE OR MODIFY TRIGGER** trigger\_name

**WHEN** EVENT

**ON** table\_name **TRIGGER\_TYPE**

**EXECUTE** stored\_procedure;

Create or modify a trigger

## WHEN

- **BEFORE** - invoke before the event occurs
- **AFTER** - invoke after the event occurs

## EVENT

- **INSERT** - invoke for INSERT
- **UPDATE** - invoke for UPDATE
- **DELETE** - invoke for DELETE

## TRIGGER\_TYPE

- **FOR EACH ROW**
- **FOR EACH STATEMENT**

**CREATE TRIGGER** before\_insert\_person

**BEFORE** INSERT

**ON** person **FOR EACH ROW**

**EXECUTE** stored\_procedure;

Create a trigger invoked before a new row is inserted into the person table

**DROP TRIGGER** trigger\_name

Delete a specific trigger

