🗄️ SQL CHEATSHEET

1. Basic Commands

- `SHOW DATABASES;` — list all databases
- `USE database_name;` — switch to a database
- `SHOW TABLES;` — list tables
- `DESCRIBE table_name;` — show table structure

2. Creating & Deleting

Create a database

CREATE DATABASE mydb;

Create a table

```
CREATE TABLE users (
  id INT PRIMARY KEY,
  name VARCHAR(50),
  email VARCHAR(100)
);
```

Delete a table or database

```
DROP TABLE users;
DROP DATABASE mydb;
```

3. Insert, Update, Delete

Insert data

```
INSERT INTO users (id, name, email)
VALUES (1, 'Alex', 'alex@example.com');
```

Update data

```
UPDATE users
SET name = 'Alex K'
WHERE id = 1;
```

Delete data

```
DELETE FROM users
WHERE id = 1;
```

4. Selecting Data

Basic select

```
SELECT * FROM users;
```

Select specific columns

```
SELECT name, email FROM users;
```

Filtering (WHERE)

```
SELECT * FROM users
WHERE id = 1;
```

Sorting (ORDER BY)

```
SELECT * FROM users
ORDER BY name ASC;
```

Limiting

```
SELECT * FROM users
LIMIT 10;
```

5. Operators

```
=     -- equal
!=    -- not equal
>     -- greater than
<     -- less than
LIKE  -- pattern match
IN    -- match any in list
BETWEEN x AND y
```

6. Joins

Inner Join

```
SELECT users.name, orders.amount
FROM users
INNER JOIN orders
ON users.id = orders.user_id;
```

Left Join

```
SELECT users.name, orders.amount
FROM users
LEFT JOIN orders
ON users.id = orders.user_id;
```

7. Grouping & Aggregation

Count, Sum, Avg

```
SELECT COUNT(*), SUM(amount), AVG(amount)
FROM orders;
```

Group By

```
SELECT user_id, COUNT(*) AS total_orders
FROM orders
GROUP BY user_id;
```

Having (filter after grouping)

SELECT user_id, COUNT(*) AS total_orders
FROM orders
GROUP BY user_id
HAVING total_orders > 5;

8. Constraints

- PRIMARY KEY
- FOREIGN KEY
- UNIQUE
- NOT NULL
- DEFAULT