

# SQL Cheat Sheet

## 1. Basic SQL Structure

```
SELECT column1, column2
FROM table_name
WHERE condition
GROUP BY column
HAVING condition
ORDER BY column [ASC|DESC]
LIMIT number;
```

## 2. Data Definition Language (DDL)

```
CREATE TABLE table_name (col1 TYPE, col2 TYPE);
DROP TABLE table_name;
ALTER TABLE table_name ADD column_name TYPE;
ALTER TABLE old_name RENAME TO new_name;
```

## 3. Data Manipulation Language (DML)

```
INSERT INTO table (col1, col2) VALUES (val1, val2);
UPDATE table SET col1 = val1 WHERE condition;
DELETE FROM table WHERE condition;
```

## 4. Data Query Language (DQL)

```
SELECT * FROM users;
SELECT name, age FROM users;
SELECT * FROM users WHERE age > 18;
```

## 5. Joins

```
-- INNER JOIN
SELECT * FROM A INNER JOIN B ON A.id = B.a_id;
```

```
-- LEFT JOIN
SELECT * FROM A LEFT JOIN B ON A.id = B.a_id;
```

```
-- RIGHT JOIN
SELECT * FROM A RIGHT JOIN B ON A.id = B.a_id;
```

```
-- FULL JOIN (PostgreSQL)
SELECT * FROM A FULL JOIN B ON A.id = B.a_id;
```

# SQL Cheat Sheet

## 6. Aggregate Functions

SELECT department, COUNT(\*) FROM employees GROUP BY department;

## 7. Filtering

WHERE age > 25 AND city = 'Dhaka'

WHERE name LIKE 'A%'

WHERE id BETWEEN 1 AND 100

WHERE status IN ('pending', 'done')

WHERE email IS NULL

## 8. Set Operations

SELECT name FROM students

UNION

SELECT name FROM teachers;

SELECT name FROM students

UNION ALL

SELECT name FROM teachers;

## 9. Subqueries

SELECT name FROM employees

WHERE salary > (SELECT AVG(salary) FROM employees);

## 10. Other Useful Clauses

ORDER BY: Sort rows (ASC / DESC)

LIMIT: Restrict rows (MySQL/PostgreSQL)

DISTINCT: Remove duplicates

AS: Alias a column/table

TOP N: SQL Server: SELECT TOP 5 \* FROM table

## 11. User & Permissions (DCL)

GRANT SELECT ON db.table TO 'user';

REVOKE SELECT ON db.table FROM 'user';

## 12. Transaction Control (TCL)

BEGIN; -- or START TRANSACTION

UPDATE ...

## SQL Cheat Sheet

COMMIT; -- save

ROLLBACK; -- undo

SAVEPOINT my\_save;

ROLLBACK TO my\_save;