

SQL Analyst Cheat Sheet - Core Reference

SELECT Basics

```
SELECT column1, column2
FROM table
WHERE condition;
```

JOINS

```
INNER JOIN: match in both tables
LEFT JOIN: all from left, match from right
RIGHT JOIN: all from right, match from left
FULL OUTER JOIN: all from both tables
```

Example:

```
SELECT a.id, b.name
FROM orders a
INNER JOIN customers b ON a.customer_id = b.customer_id;
```

Filtering

```
WHERE column = 'value'
AND / OR
IN ('A', 'B')
BETWEEN x AND y
IS NULL / IS NOT NULL
LIKE '%pattern%'
CASE WHEN ... THEN ... ELSE ... END
```

Aggregations

```
SUM(), AVG(), MAX(), MIN(), COUNT()
GROUP BY column
HAVING aggregate_condition
```

Example:

```
SELECT region, SUM(revenue)
FROM sales
GROUP BY region
HAVING SUM(revenue) > 1000;
```

Sorting & Limiting

ORDER BY column DESC

LIMIT n

Subqueries

SELECT name

FROM employees

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

IN, EXISTS, FROM (SELECT...) subqueries

Data Cleaning

TRIM(), UPPER(), LOWER(), REPLACE(), CAST()

CASE WHEN Logic

SELECT customer_id,

CASE

WHEN spend > 700 THEN 'High'

WHEN spend > 300 THEN 'Medium'

ELSE 'Low'

END AS segment

FROM orders;

Best Practices

- Use aliases for clarity
- Avoid SELECT * in production
- Use HAVING for filters on aggregates
- GROUP BY all non-aggregated fields
- Always check JOIN keys