SQL cheat sheet

REBELLABS by ZEROTURNAROUND

Basic Queries

-- filter your columns
SELECT col1, col2, col3, ... **FROM** table1
-- filter the rows
WHERE col4 = 1 **AND** col5 = 2
-- aggregate the data
GROUP by ...
-- limit aggregated data
HAVING count(*) > 1
-- order of the results
ORDER BY col2

Useful keywords for **SELECTS**:

DISTINCT - return unique results
BETWEEN a **AND** b - limit the range, the values can be numbers, text, or dates
LIKE - pattern search within the column text
IN (a, b, c) - check if the value is contained among given.

Data Modification

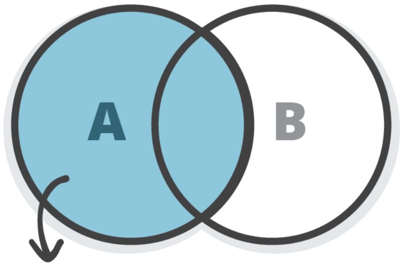
-- update specific data with the **WHERE** clause
UPDATE table1 **SET** col1 = 1 **WHERE** col2 = 2
-- insert values manually
INSERT INTO table1 **(ID, FIRST_NAME, LAST_NAME)**
VALUES (1, 'Rebel', 'Labs');
-- or by using the results of a query
INSERT INTO table1 **(ID, FIRST_NAME, LAST_NAME)**
SELECT id, last_name, first_name **FROM** table2

Views

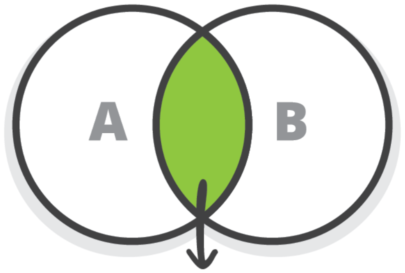
A **VIEW** is a virtual table, which is a result of a query.
They can be used to create virtual tables of complex queries.

CREATE VIEW view1 **AS**
SELECT col1, col2
FROM table1
WHERE ...

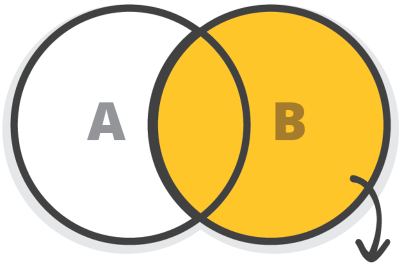
The Joy of JOINs



LEFT OUTER JOIN - *all rows from table A, even if they do not exist in table B*



INNER JOIN - *fetch the results that exist in both tables*



RIGHT OUTER JOIN - *all rows from table B, even if they do not exist in table A*

Updates on JOINed Queries

You can use **JOIN**s in your **UPDATE**s
UPDATE t1 **SET** a = 1
FROM table1 t1 **JOIN** table2 t2 **ON** t1.id = t2.t1_id
WHERE t1.col1 = 0 **AND** t2.col2 **IS NULL**;

NB! Use database specific syntax, it might be faster!

Semi JOINs

You can use subqueries instead of **JOIN**s:

SELECT col1, col2 **FROM** table1 **WHERE** id **IN**
(**SELECT** t1_id **FROM** table2 **WHERE** date >
CURRENT_TIMESTAMP)

Indexes

If you query by a column, index it!
CREATE INDEX index1 **ON** table1 (col1)

Don't forget:
Avoid overlapping indexes
Avoid indexing on too many columns
Indexes can speed up **DELETE** and **UPDATE** operations

Useful Utility Functions

-- convert strings to dates:
TO_DATE (Oracle, PostgreSQL), **STR_TO_DATE** (MySQL)
-- return the first non-NULL argument:
COALESCE (col1, col2, "default value")
-- return current time:
CURRENT_TIMESTAMP
-- compute set operations on two result sets
SELECT col1, col2 **FROM** table1
UNION / EXCEPT / INTERSECT
SELECT col3, col4 FROM table2;

Union - returns data from both queries
Except - rows from the first query that are not present in the second query
Intersect - rows that are returned from both queries

Reporting

Use aggregation functions

COUNT - return the number of rows
SUM - cumulate the values
AVG - return the average for the group
MIN / MAX - smallest / largest value

BROUGHT TO YOU BY
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