

Capitalization

Always use uppercase for the reserved keywords like `SELECT` and `WHERE`.

Keep all non-reserved words in lowercase.

RESERVED WORD REFERENCE - <http://www.sqlstyle.guide/#reserved-keyword-reference>

Commas

If you are selecting multiple columns start each one on a new line with a comma in front. With the exception of the first line, adding the comma in front allows you to easily comment out lines without breaking the query.

```
SELECT    customer_id
,         timestamp
,         price
```

Spaces

Although not exhaustive always include spaces:

- before and after equals (=) — `WHERE customer_id = 1022456376`
- after commas (,) — `('Dining In', To Go')`
- adding spaces inside and outside parentheses — `SELECT (price * 3) FROM`

Joins

Always fully specify the join type. “`JOIN`” should be written as “`INNER JOIN`”

Always use a join keyword instead of an “`IN`” clause or an equality join (using equal signs)

Semicolon

Put on its own line, not on the very end

```
WHERE price > 5.50
;
```

Aliasing and & Naming

- The correlation name should be the first letter of each word in the object’s name.
 - If there is already a correlation with the same name then append a number.

```
INNER JOIN purchases p
ON p.fk_customer_id = c.pk_customer_id
INNER JOIN customer_contactinfo cci
```

- Always include the `AS` keyword—makes it easier to read as it is explicit.

```
SELECT customer_id as renamed_customer_id
```
- Only use letters, numbers and underscores in names.
- All text should be lowercase except for reserved keywords

Newlines

Keep the length to a maximum of 80 characters—anything longer gets harder to read
Always include newlines/vertical space for the following things:

- Adding another AND or OR

```
WHERE amount >= 9.99
AND dining_option = 'Dining In'
AND new_customer_yn = 'Y'
```
- Starting a reserved keyword statement (`SELECT`, `FROM`, `WHERE`)
- Writing another entirely new query

```
WHERE price > 5.50
;

SELECT ...
```
- Wanting to isolate a separate code chunk to help readability as an isolated piece of logic

```
FROM purchases p
(newline here)
INNER JOIN customers c
    ON p.fk_customer_id = c.pk_customer_id
(newline here)
INNER JOIN customer_contactinfo cci
    ON c.pk_customer_id = cci.fk_customer_id
```
- Adding the semicolon to close the query (see below)

Dates & Timestamps

- Always compare dates columns with other date columns or a value as a date
 - Never compare a string with a date! It might result in weird behavior!
- Format hard coded dates as “YYYY-MM-DD”

Other

Do not use database server specific keywords where an ANSI SQL keyword already exists performing the same function. This helps to make code more portable.

References - This style guide is an adaptation of:

1. <http://www.sqlstyle.guide/>
2. <http://solutioncenter.apexsql.com/rules-of-sql-formatting-commas-and-spacing-in-t-sql/>
3. <http://solutioncenter.apexsql.com/sql-formatting-standards-capitalization-indentation-comments-parenthesis/>

Resources:

Hacker Rank is an excellent resource to learn SQL for all skill levels:

<https://www.hackerrank.com/domains/sql/select>