



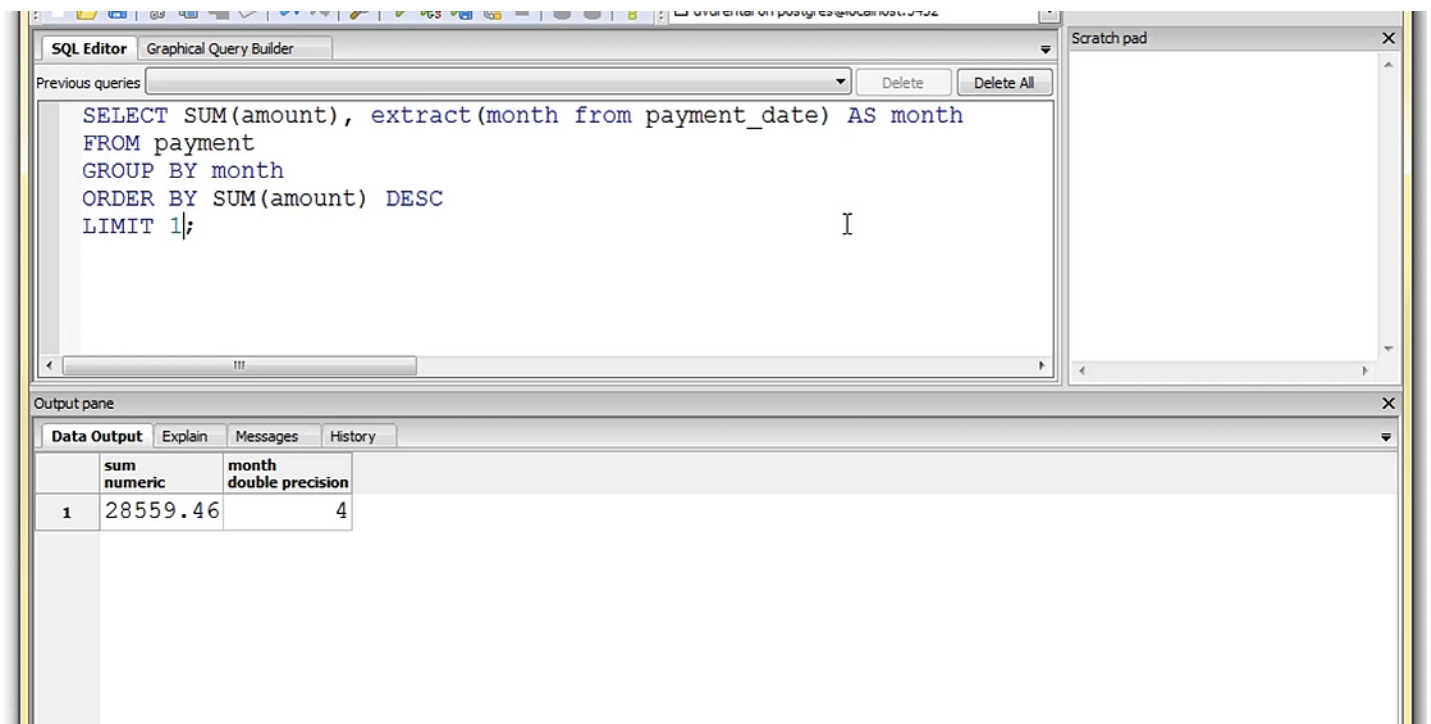
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# A Better Way to Write SQL queries for Developers

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(image\_credit - SQL Bootcamp )

There is no doubt that writing code is more art than science, every coder cannot write beautiful code which is both readable and maintainable, even with experience.

In general, coding improves with experience when you learn the art of coding e.g. favoring **composition over inheritance** or coding for **interface than implementation**, but only a few developers able to master these techniques.



Same applies to SQL queries. The way you structure your query, the way you write it goes a long way to communicate your intent to the fellow developer.

Whenever I see SQL queries on emails from multiple developers, I can see the stark difference in their writing style. Some developers write it so neatly and indent their query properly, which makes it easy to spot the key details e.g. which columns you are extracting from which table and what are conditions.

Since in real life projects, SQL queries are hardly one-liner, learning the right way to write SQL query makes a lot of difference when you read it yourself later or you share that query to someone for review or execution.

In this article, I am going to show you a couple of styles which I have tried in past, their pros and cons and what I think is the **best way to write SQL query**.

Unless you have a good reason not to use my style e.g. you have a better style or you want to stick with the style used in your project (consistency overrules everything) there is no reason not to use it.

Btw, I expect that you are familiar with SQL and know different clauses and their meaning in a SQL query. If you are not, it's better you gain some experience with SQL by joining a good course like:

1. From 0 To 1:SQL And Databases — Heavy Lifting by Loony Corn
2. Introduction to SQL by Jon Flanders

Two courses I highly recommend !! to SQL beginners.

## 1st way to write SQL query

```
SELECT  e.emp_id, e.emp_name, d.dept_name, p.project_name  from  Employee e
INNER JOIN  Department d  ON  e.dept_id = d.dept_id  INNER JOIN  Projects p
ON  e.project_id = p.project_id  where  d.dept_name = "finance"  and  e.emp_name
like  '%A%'  and  e.salary > 5000;
```

### Pros:

1) The mixed case was introduced to separate keyword from column and table names e.g. writing SELECT in a capital case and writing Employee in as it is, but given you are **not consistent** e.g. SELECT is in caps but from is in small, there is no benefit of using that style.

### Cons:

1) Mixed case

2) The whole query is written on one line which gets unreadable as soon the number of

tables and columns increases

3) No flexibility in adding a new condition or running without an existing condition

## 2nd way to write SQL query

```
SELECT e.emp_id, e.emp_name, d.dept_name, p.project_name
from Employee e
INNER JOIN Department d ON e.dept_id = d.dept_id
INNER JOIN Projects p ON e.project_id = p.project_id
Where d.dept_name = "finance"
and e.emp_name like '%A%'
and e.salary > 500;
```

### Improvement:

1) SQL query is divided into multiple lines which make it more readable

### Problems

1) Mixed case

2) All conditions on where clause is on the same line, which means excluding them by commenting is not that easy.

## 3rd way to write SQL query (Best)

```
select e.emp_id, e.emp_name, d.dept_name
from Employee e
```

```
inner join Department d on e.dept_id = d.dept_id
```

```
inner join department d on e.dept_id = d.dept_id

where d.dept_name = 'finance'

and e.emp_name like '%A%'

and e.salary > 500;
```

- 1) Dividing SQL queries into multiple lines makes it more readable
- 2) Using proper indentation makes it easy to spot the source of data i.e. tables and joins
- 3) Having conditions on separate lines allow you to run the query by commenting one of the conditions e.g.

```
select e.emp_id, e.emp_name, d.dept_name
from Employee e
inner join Department d on e.dept_id = d.dept_id
where d.dept_name = 'finance'
-- and e.emp_name like '%A%';
add e.salary > 5000
```

Btw, if you are a fan of Capital case for keywords, you can also write the same SQL query as shown below, the rules are same but just capital letters for keywords.

```
SELECT e.emp_id,
       e.emp_name,
       d.dept_name
FROM Employee e
INNER JOIN Department d ON e.dept_id = d.dept_id
WHERE d.dept_name = 'finance'
      AND e.emp_name LIKE '%A%'
      AND e.salary > 500;
```

That's all about **how to write SQL query** which is readable and more maintainable. Feel free to give your opinion on what do you think of this indentation or styling of SQL queries.

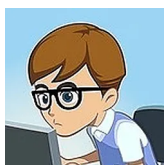
It's a simpler technique but very powerful and goes a long way on improving the readability of your complex **SQL queries involving multiple joins** as shown in my earlier example.

If you like you can also use various SQL formatters online but I suggest you learn a style and stick with it, rather relying on formatters.

Thanks for reading this article and let us know how do you write SQL queries? which style you use, or you have your own style? If you are a beginner and learning SQL, you may also find my list of free SQL courses and books helpful.

*So, what's your thoughts? Does these points make sense? Which SQL style are you using?*

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