

# Why should I capitalize my SQL keywords? [duplicate]

Asked 10 years, 8 months ago   Active 5 years ago   Viewed 52k times



105



9

## Possible Duplicate:

[Is there a good reason to use upper case for T-SQL keywords?](#)

Simple question. I personally find a string of lowercase characters to be more readable than a string of uppercase characters. Is some old/popular flavor of SQL case-sensitive or something?

For reference:

```
select
  this.Column1,
  case when this.Column2 is null then 0 else this.Column2 end
from dbo.SomeTable this
  inner join dbo.AnotherTable another on this.id = another.id
where
  this.Price > 100
```

VS.

```
SELECT
  this.Column1,
  CASE WHEN this.Column2 IS NULL THEN 0 ELSE this.Column2 END
FROM dbo.SomeTable this
  INNER JOIN dbo.AnotherTable another ON this.id = another.id
WHERE
  this.Price > 100
```

The former just seems so much more readable to me, but I see the latter way more often.

sql

formatting

readability

edited May 23 '17 at 12:18



Community ♦

1 1

asked Mar 3 '09 at 21:09



Samantha Branham

6,017 2 25 43

**marked** as duplicate by [Druid](#), [Alex K](#), [dgw](#), [sdcvvc](#), [Jürgen Thelen](#) Aug 2 '12 at 15:42

This question has been asked before and already has an answer. If those answers do not fully address your question, please [ask a new question](#).

- 
- 2 I would argue making your keywords standout is not important. In SQL they come in a predictable order and tend to separate lists of things. See my answer below. – [WW](#) Mar 4 '09 at 2:58
- 
- 7 I would argue that it is important. It's the same reason you have color coding in your text editor: having a visual distinction increases readability. If I'm not worrying about what types I'm dealing with, I subconsciously ignore blue text, for example. – [Samantha Branham](#) Mar 4 '09 at 5:57
- 
- @Mitch: No, we just don't search before answering a question we're never seen before. Do you? The only solution is for regular visitors to warn everyone with a "possible duplicate" early comment, so people know to move on. – [Stefan Monov](#) Sep 23 '10 at 8:06
- 
- @Stefan Monov: yes I do. Given that its easy to do, there's very little raeson not to. – [Mitch Wheat](#) Sep 23 '10 at 10:48
- 
- 4 As a side note, I find typing uppercase keywords grueling over time. I type hundreds of queries a week and lowercase is much easier on the pinkies. For documentation and SQL that other developers may have to read and modify, capitalizing makes a lot of sense for readability. – [wsams](#) Jun 2 '16 at 15:32
- 

## 16 Answers



107



I think the latter is more readable. You can easily separate the keywords from table and column names, etc.

answered Mar 3 '09 at 21:11



[Trent](#)

10.8k 3 35 35

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7 Perhaps it's just habit, but I find the second version much more understandable. – [Daniel Von Fange](#) Mar 3 '09 at 21:19

157 I'M NOT SURE IF THAT IS MORE READABLE :) – [Learning](#) Mar 4 '09 at 5:48

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3 I think it's interesting that SO doesn't do the same code highlighting when it's in caps. – [William Holroyd](#) Mar 4 '09 at 6:05

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6 @Learning THE fantastic.words WHICH ARE yours STAND OUT as\_compared\_to THE few AND often\_patterned/repeated SQL WORDS In other words, the interest of the UPPERCASE convention is that SQL immutable keywords are easily identified, and look separate/different from your own

identifiers and immediate values. This of course matters a bit less, nowadays with the omnipresent syntax hi-lighting in SQL IDEs / editors. This said, while this convention is a good thing for DML/DDI such as SELECT/INSERT queries and such, it can make for heavy look of Procedural extensions to SQL as in stored procs. – [mjv](#) Dec 9 '09 at 4:34

72 BILLY MAYS here, bringing you STUCTURED QUERY LANGUAGE! – [Shea Daniels](#) Feb 25 '10 at 20:52



I agree with you - to me, uppercase is just SHOUTING.

167

I let my IDE handle making keywords stand out, via syntax highlighting.



I don't know of a historical reason for it, but by now it's just a subjective preference.

### Edit to further make clear my reasoning:

Would you uppercase your keywords in any other modern language? Made up example:

```
USING (EditForm form = NEW EditForm()) {  
    IF (form.ShowDialog() == DialogResult.OK) {  
        IF ( form.EditedThing == null ) {  
            THROW NEW Exception("No thing!");  
        }  
        RETURN form.EditedThing;  
    } ELSE {  
        RETURN null;  
    }  
}
```

Ugh!

Anyway, it's pretty clear from the votes which style is more popular, but I think we all agree that it's just a personal preference.

[edited Mar 4 '09 at 5:14](#)

[answered Mar 3 '09 at 21:15](#)



[Blorgbeard](#)

79.7k 40 205 254

41 Seriously. The example may have been necessary, but it was kind of gross. – [yfeldblum](#) Mar 4 '09 at 6:05

11 it's a COBOL thing i think - people who capitalise generally are over 40 and have only programmed COBOL and SQL. – [Jon Black](#) Dec 3 '10 at 4:34

2 This is a pretty good example of why not to do it. Looking at this does make me cringe although I do typically uppercase my SQL keywords. One thing different between SQL and C# is that C# has a pretty well defined structure to it with the braces and standard indenting while SQL doesn't. It's possible

the uppercasing is lending some form of visual information in the absence of this structure. – [User](#) Jul 29 '11 at 23:53

7 Different languages lend themselves to different styling conventions. – [WCWedin](#) Oct 26 '11 at 19:48

7 This is a good example of why SQL *does* need uppercase keywords: because it uses those keywords for most of the syntactic cues. Try replacing just about all that punctuation with words, make it all lowercase, and then see how difficult the syntax is to parse with the eye. – [bignose](#) Aug 14 '12 at 1:15

One thing I'll add to this which I haven't seen anyone bring up yet:

58

If you're using ad hoc SQL from within a programming language you'll have a lot of SQL inside strings. For example:

```
insertStatement = "INSERT INTO Customers (FirstName, LastName) VALUES ('Jane','Smith')"
```

In this case syntax coloring probably won't work so the uppercasing could be helping readability.

answered Jul 30 '11 at 0:06



[User](#)

**28k**

53

146

226

2 FWIW IntelliJ (probably & friends) has language injection and can syntax color (etc.) SQL strings in code (as well as other embedded languages -- seems they take the concept of html/css/js in one file and generalize it) – [nafg](#) Nov 29 '15 at 5:16

2 This IMHO is the only valid reason (besides personal preference) to use all caps keywords. – [Amani Kilumanga](#) Jan 29 '16 at 1:47

2 Again, you have 2 options here: 1) small ad hoc query without proper indentation (which, IMO, is wrong) and it still doesn't need any capitalization; 2) long multiline query pre-written in your IDE-of-choice with syntax highlighting. – [pkuderov](#) Apr 28 '16 at 11:14

From Joe Celko's "SQL Programming Style" (ISBN 978-0120887972):

42

Rule:

Uppercase the Reserved Words.

Rationale:

Uppercase words are seen as a unit, rather than being read as a series of syllables or letters. The eye is drawn to them, and they act to announce a statement or clause. That is why headlines and warning signs work.

Typographers use the term *bouma* for the shape of a word. The term appears in Paul Saenger's book (1975). Imagine each letter on a rectangular card that just fits it, so that you see the ascenders, descenders, and baseline letters as various "Lego blocks" that are snapped together to make a word.

The *bouma* of an uppercase word is always a simple, dense rectangle, and it is easy to pick out of a field of lowercase words.

What I find compelling is that this is the only book about SQL heuristics, written by a well-known author of SQL works. So is this the absolute truth? Who knows. It sounds reasonable enough and I can at least point out the rule to a team member and tell them to follow it (and if they want to blame anyone I give them Celko's email address :)

edited Sep 23 '10 at 8:03

answered Jul 19 '10 at 9:37



[onedaywhen](#)

45.7k 11 82 126

yeah but you could apply the same thinking to programming languages, imagine a js function like this: `LET echoMessage = FUNCTION(msg){  
ALERT(msg); }` – [santiago arizti](#) Dec 5 '17 at 18:03

@santiagoarizti yeah but is your suggested formatting based on the only js heuristics book on the market and is written by a well known author in the js world? – [onedaywhen](#) Dec 6 '17 at 10:48

2 I am going to write all my JS in uppercase from now on and make a Babel plugin to transform it. Thank you. – [Danyal Aytekin](#) Jul 2 '18 at 16:02

Well, for people who learn English as the second language, all uppercase words are just too different to be recognized. We need to transformed character by character into lowercase before we can recognize the word. – [Louis Yang](#) Jul 6 '18 at 7:02



20



Mostly it's tradition. We like to keep keywords and our namespace names separate for readability, and since in many DBMSes table and column names are case sensitive, we can't upper case them, so we upper case the keywords.

answered Mar 3 '09 at 21:13



[Paul Tomblin](#)

148k 53 288 382

3 MANY DBMS use case-sensitive table & columns names? I've never run into any (however 90% of my experience is MSSQL & Oracle) – [James Curran](#) Mar 3 '09 at 21:31

2 A MSSQL server or database *can* be set to a case-sensitive collation. And yes, its very annoying. But required for some applications. – [BradC](#) Mar 3 '09 at 21:35

1 Sybase servers have case sensitive names by default. – [Learning](#) Mar 4 '09 at 5:33

So does MySQL, and for good and for bad (mostly bad:-), many developers first exposure to SQL is through MySQL. – [Paul Tomblin](#) Mar 4 '09 at 13:41

@JamesCurran Just be glad you don't have to deal with Postgres... If you don't double-quote your identifiers, it lowercases them for you, which sounds semi-sane until you realise you can bypass this using quotes and that most ORMs tend to use this feature, meaning you get left with garbage like this...

```
SELECT * FROM "MyTable" WHERE "MyField" = 'something';
```

 – [Basic](#) Jan 5 '17 at 17:04

17



Code has punctuation which SQL statements lack. There are dots and parentheses and semicolons to help you keep things separate. Code also has lines. Despite the fact that you can write a SQL statement on multiple physical lines, it is a single statement, a single "line of code."

If I were to write English text without any of the normal punctuation it might be easier if I uppercased the start of new clauses THAT way it'd be easier to tell where one ended and the next began OTHERWISE a block of text this long would probably be very difficult to read NOT that I suggest it's easy to read now BUT at least you can follow it I think

answered Mar 4 '09 at 3:33



[Instance Hunter](#)

5,795 5 35 49

2 Sql statement is not a single line of code. It is more like a procedure in a procedural language, not a statement. – [hipe](#) Oct 26 '15 at 10:05

how much punctuation do ruby, Haskell, and python have? – [nafg](#) Nov 29 '15 at 5:17

That English is much harder to read than it would be if it didn't stress those words. I have no problem adding punctuation in my head without thought, so the example might not be a great one. :) – [person27](#) Jan 3 '18 at 19:17



13



I prefer lower case keywords. Management Studio color codes the keywords, so there is no problem distinguishing them from the identifiers.

And upper case keywords feels so... well... BASIC... ;)

-"BASIC, COBOL and FORTRAN called from the eighties, they wanted their UPPERCASE KEYWORDS back." ;)

answered Mar 3 '09 at 21:29



[Guffa](#)

585k 84 606 901

- 2 Why the downvote? If you don't explain what it is that you think is wrong, it can't improve the answer. – [Guffa](#) Jan 9 '14 at 12:23
- 1 Why the downvote? If you don't explain what it is that you think is wrong, it can't improve the answer. – [Guffa](#) Mar 2 '15 at 19:16



5



I like to use upper case on SQL keywords. I think my mind skips over them as they are really blocky and concentrates on what's important. The blocky words split up the important bits when you layout like this:

```
SELECT
  s.name,
  m.eyes,
  m.foo
FROM
  muppets m,
  muppet_shows ms,
  shows s
WHERE
  m.name = 'Gonzo' AND
  m.muppetId = ms.muppetId AND
  ms.showId = s.showId
```

(The lack of ANSI joins is an issue for another question.)

There is a psychology study that shows lowercase was quicker to read than uppercase due to the outlines of the words being more distinctive. However, this effect can disappear about with lots of practice reading uppercase.

answered Mar 4 '09 at 2:57



[WW.](#)

18.8k

12

83

113



3



Back in the 80s, I used to capitalize database names, and leave sql keywords in lower case. Most writers did the opposite, capitalizing the SQL keywords. Eventually, I started going along with the crowd.

Just in passing, I'll mention that, in most published code snippets in C, C++, or Java the language keywords are always in lower case, and upper case keywords may not even be recognized as such by some parsers. I don't see a good reason for using the opposite convention in SQL that you use in the programming language, even when the SQL is embedded in source code.

And I'm not defending the use of all caps for database names. It actually looks a little like "shouting". And there are better conventions, like using a few upper case letters in database names. (By "database names" I mean the names of schemas, schema objects like

tables, and maybe a few other things.) Just because I did it in the 80s doesn't mean I have to defend it today.

Finally, "De gustibus non disputandum est".

answered Mar 4 '09 at 6:29



Walter Mitty

15.1k 2 22 52



What's worse it that as the majority of developers at my office believe in capitals for sql keywords so I have had to change to uppercase. Majority rules.

3

I believe lowercase is easier to read and that given that sql keywords are highlighted in blue anyway.



In the glory days keywords were in captials because we were developing on green screens!

The question is: if we don't write c# keywords in uppercase then why do I have to write sql keywords in uppercase?

Like someone else has said - capitals are SHOUTING!

answered Feb 24 '11 at 10:55



Steve

41 1



Its just a question of readability. Using UPPERCASE for the SQL keywords helps make the script more understandable.

2



answered Mar 4 '09 at 3:22

user59634



It's just a matter of readability. Helps you quickly distinguish SQL keywords.

2

Btw, that question was already answered: [Is SQL syntax case sensitive?](#)



edited May 23 '17 at 11:33

Community ♦

answered Mar 3 '09 at 21:14

rogeriopvl





1 1



31.3k 7 48 58



I prefer using upper case as well for keywords in SQL.

2

Yes lower case is more readable but for me having to take extra second to scan through the query will do you good most of the time. Once it's done and tested you should rarely ever see it again anyway (DAL, stored proc or whatever will hide it from you).



If you are reading it for the first time, capitalized WHERE AND JOIN will jump right at you, as they should.

answered Mar 3 '09 at 21:14



jfrobishow

2,010 2 21 40

Thanks, I find this answer more convincing. – [lambad](#) Jun 27 '18 at 4:39



Some SQL developers here like to lay it out like this:

1

```
SELECT s.name, m.eyes, m.foo
FROM muppets m, muppet_shows ms, shows s
WHERE m.name = 'Gonzo' AND m.muppetId = ms.muppetId AND ms.showId = s.showId
```



They claim this is easier to read unlike your one field per line approach which I use myself.

edited Nov 28 '12 at 21:08



Joulukuusi

2,207 6 28 47

answered Feb 24 '11 at 11:27



Steve

41 1



Apropos of nothing perhaps, but I prefer typesetting SQL keywords in [small caps](#). That way they look capitalized to most readers, but they aren't the same as the ugly ALL CAPS style.

0

A further advantage is that I can leave the code as is and print it in the traditional style. (I use the `listings` package in `LaTeX` for pretty-printing code.)



answered Mar 3 '09 at 21:33

[Jon Ericson](#) ♦**15.8k** 11 87 134

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Interesting. Do you know any monospace fonts with small caps? Not only is all caps ugly, it is nigh unreadable when abused. – [bernie](#) Apr 5 '09 at 3:50

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I capitalize SQL to make it more "contrasty" to the host language (mostly C# these days).

0

It's just a matter of preference and/or tradition really...



answered Jul 30 '11 at 0:25

[Branko Dimitrijevic](#)**42.5k** 6 69 137