

MS SQL Server Coding Standards

```
-- Revision History
--   John McKay, 2004.09.07: Created
--   Meyer Tanuan, 2022.01.18: Updated for MS SQL Server
```

Identifiers



SQL1 Table Names

Use meaningful singular nouns in Pascal case (i.e., Upper Camel case) for table names.

 DO THIS	
<pre>CREATE TABLE Customer ... CREATE TABLE OrderHeader ...</pre>	
 DON'T DO THIS!	
<pre>CREATE TABLE customer ... CREATE TABLE OrderHeaders ... CREATE TABLE ORDERHEADER ... CREATE TABLE Order_Header ... CREATE TABLE Order-Header ...</pre>	

SQL2 Column Names

When creating a new table, use meaningful singular nouns in Camel case for column names.


	 DO THIS	
<pre>CREATE TABLE Customer (CHAR(30) firstName, ...</pre>		
	 DON'T DO THIS!	
<pre>CREATE TABLE Customer (CHAR(30) FirstName, ... CREATE TABLE Customer (CHAR(30) FIRSTNAME, ... CREATE TABLE Customer (CHAR(30) first_Name, ... CREATE TABLE Customer (CHAR(30) first-Name, ...</pre>		

SQL3 Keywords and Function Names

Use all upper case for SQL keywords and function names. Also, try as much as possible to put SQL keywords into its own line, see the examples below. Indent where you feel it will make the code clearer to read.

When querying a table, use meaningful singular nouns in Camel case for column names. The only exception is when the existing table does not follow the Camel case convention for column names (e.g., existing column is `FirstName` instead of `firstName`).

Add a “;” at the end of each SQL statement.

 DO THIS	
<pre>SELECT * FROM Customer WHERE SUBSTRING(firstName, 1, 1) = 'A';</pre>	
 DON'T DO THIS!	
<pre>select * from customer where substring(firstName, 1, 1) = 'A' SELECT * FROM customer WHERE substring(firstName, 1, 1) = 'A' select * from customer where SUBSTRING(firstName, 1, 1) = 'A' SELECT * FROM customer WHERE substring(firstName, 1, 1) = 'A'</pre>	

Comments

SQL4 Header Comments

Begin all SQL script files with a header comment similar to the one shown below.




```
-- Example.sql
-- Assignment 1
--
-- Revision History
--      John McKay, 1P5, 2004.09.07: Created
--      Meyer Tanuan, S1, 2022.01.18: Updated
```

SQL5 Output Messages

Almost each SQL statement will produce some kind of output, it most likely will be some type of data. In some cases just a few lines of the output is necessary other times you may have to do a screenshot, use your best judgement if I don't tell you exactly what to print.

SQL6 Implementation Comments

Provide a brief comment that explains the purpose of each SQL statement in a script.


 DO THIS	
<pre># Retrieve . . . SELECT . . . # Add . . . INSERT . . . # Change . . . UPDATE . . . # Delete . . . DELETE . . .</pre>	

White Space and Alignment


SQL7 Formatting

Start each clause on a new line.

Break up lines that exceed 80 characters in length. Break up long column lists on comma boundaries. Again, indent (default of 4 white spaces) as you see fit.

 DO THIS	
<pre># Implementation comment ... SELECT id, storeNumber, payTypeCode, payAmount => , title, supervisorId FROM Employee WHERE payTypeCode = 'S' => AND storeNumber = 1;</pre>	

Align the code so that subquery clauses are indented to the right of the enclosing query. Left align the major clauses of each subquery, similar to **SQL3** and **SQL7**.

	 DO THIS	
<pre>SELECT lastName, firstName, state FROM Person WHERE state = (SELECT state FROM Store WHERE storeNumber = 4);</pre>		
<pre>SELECT DISTINCT description FROM Product WHERE productId IN (SELECT productId FROM orderItem WHERE invoiceNumber IN (SELECT invoiceNumber FROM orderHeader WHERE storeNumber = 3)) ORDER BY description;</pre>		
	 DON'T DO THIS!	
<pre>SELECT lastName, firstName, state FROM Person WHERE state = (SELECT state FROM Store WHERE storeNumber = 4)</pre>		

General Coding Practices

SQL8 Subquery **IN** and **=**

If a subquery can only return a single value, use = rather than IN.



DO THIS

```
SELECT lastName, firstName, state
FROM Person
WHERE state =
    (SELECT state
     FROM Store
     WHERE storeNumber = 4);
```



DON'T DO THIS!

```
SELECT lastName, firstName, state
FROM Person
WHERE state IN
    (SELECT state
     FROM Store
     WHERE storeNumber = 4)
```



These standards apply to SQL in programs as well as SQL in script files, except that the second and subsequent lines do not need to be indented in programs.



DO THIS

```
/* C#.NET */  
  
string payTypeCode = "S";  
int storeNumber = 1 ;  
  
StringBuilder builder = new StringBuilder( ) ;  
builder.Append("SELECT id, storeNumber, payTypeCode,payAmount");  
builder.Append(",title, supervisorId ");  
builder.Append("FROM Employee ") ;  
builder.Append("WHERE payTypeCode = '\" + payTypeCode + '\" ");  
builder.Append("AND storeNumber = " + storeNumber) ;  
. . .
```