



Subtracting Two Dates

Advanced SQL Puzzles

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In this GitHub repository I have two stored procedures (one that returns a table, and one that returns a VARCHAR) that can accurately return the difference between two dates.

Link to the GitHub repository below

[AdvancedSQLPuzzles/Database Tips and Tricks/Subtracting Two Dates](https://github.com/ScottPeters/AdvancedSQLPuzzles/tree/master/Database%20Tips%20and%20Tricks/Subtracting%20Two%20Dates)

Anyone who has used the [DATEDIFF](#) has probably been frustrated by its limitations. To solve this problem, I have created two functions to subtract dates.

Same logic, one returns a table and the other returns a VARCHAR. Passing two dates to either of the functions return the 1) years, 2) days, 3) months, 4) minutes, 5) seconds, and 6) nano seconds between the two dates.

Inside this GitHub repository you will find the following SQL scripts:

- 1) **FnDateDiffPartsChar.sql**
 - A script that creates the stored procedure **FnDateDiffPartsChar**
- 2) **FnDateDiffPartsTable.sql**
 - A script that creates the stored procedure **FnDateDiffPartsTable**

Here are some quick examples of their usage. Note the scalar valued function is used in the SELECT statement, and the table valued function is used in the FROM statement.

```
SELECT fnDateDiffPartsChar('20170518 00:00:00.0000001','20110619 00:00:00.1110000');
```

Returns the following:

Results Messages	
	DateDifference
1	5y 10m 28d 23h 59m 59s 889000100n

Note, you may wish to remove nanoseconds from the output. You can also modify the function to mimic the [CONVERT](#) function and pass a parameter to return a certain output style.

Running the same input on the table valued function:

```
SELECT fnDateDiffPartsTable('20170518 00:00:00.0000001', '20110619 00:00:00.1110000');
```

Returns the following:

Results Messages							
	YearDifference	MonthDifference	DayDifference	HourDifference	MinuteDifference	SecondDifference	NanoDifference
1	5	10	28	23	59	59	889000100

The End