



Creating a Calendar Table

Advanced SQL Puzzles

Scott Peters

<https://advancedsqlpuzzles.com/>

Last Updated: 10/06/2022

Here is a nifty trick for creating a Calendar table (or in this case, a Calendar view) using a table-valued function.

Link to the GitHub repository below

[AdvancedSQLPuzzles/Database Tips and Tricks/Calendar Table](#)

We typically use table-valued functions as parameterized views. In comparison with stored procedures, the table-valued functions are more flexible as we can use them wherever tables are used.

The concept behind a Calendar table is that each entry is a date and additional columns are provided that represent complex date calculations that you would otherwise need to perform manually in your SQL statement.

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

- 1) **FnReturnCalendarTable.sql**
 - A script that creates the table valued function **FnReturnCalendarTable**
- 2) **FnReturnCalendarTable Example Use.sql**
 - A script that provides an example use of the function **FnReturnCalendarTable**

Notes:

- 1) The example usage script will create a table, **dbo.CalendarDaysTemp** and populate with one year's worth of dates
- 2) It will then join to the function, **dbo.FnReturnCalendarTable** and return the calculated fields
- 3) It then creates the view **dbo.VwCalendarTable** to show how you can use the Calendar table in your schema

The basic usage of the **FnReturnCalendarTable** is the following:

```
SELECT *  
FROM FnReturnCalendarTable(GETDATE());
```

The current function returns 51 different fields, ranging from different styles using the [CONVERT](#) function to government fiscal dates.

The current 51 fields are:

DateKey, CalendarDate, DateStyle1, DateStyle2, DateStyle3, DateStyle4, DateStyle5, DateStyle6, DateStyle7, DateStyle10, DateStyle11, DateStyle12, DateStyle23, DateStyle101, DateStyle102, DateStyle103, DateStyle104, DateStyle105, DateStyle106, DateStyle107, DateStyle110, DateStyle111, DateStyle112, CalendarMonth, CalendarDay, CalendarYear, CalendarWeek, CalendarQuarter, FirstDayOfQuarter, LastDayOfQuarter, MonthLongName, MonthShortName, MonthOfQuarter, FirstDayOfMonth, LastDayOfMonth, WeekOfMonth, WeekOfQuarter, DayOfWeekName, DayOfWeekNameShort, DayOfWeekNumber, IsWeekday, DayOfQuarter, DayOfMonth, GovtFiscalYear, GovtFiscalYearStartDate, GovtFiscalYearEndDate, GovtFiscalQuarter, GovtFiscalMonth, GovtFiscalDay, ISOYear, ISOWeekNumber.

The End