DATETIME ISSUES

---1---

|  |  |  |  |
| --- | --- | --- | --- |
| DateType | From date | To Date | Storage |
| datetime | 1753-01-01 | 9999-12-31 | 8 Bytes |
| Datetime2(3) | 0001-01-01 | 9999-12-31 | 7 Bytes |
| date | 0001-01-01 | 9999-12-31 | 3 Bytes |
| Smalldatetime | 1900-01-01 | 2079-06-06 | 4 Bytes |
| Datetimeoffset(3) | 0001-01-01 | 9999-12-31 | 9 Bytes |

---2---

36 characters data type that can be used as unique value (key ID of the table). Because the filed is used as table ID in the table can be only one filed of that type. If converting character data type to uniqueidentifier data type all the values that bigger than 36 characters will be truncated.

---3---

declare @date datetime

set @date = getdate() -- for current date

--set @date = DATEADD(day, (ABS(CHECKSUM(NEWID())) % (datediff(dd, 0,getdate()))), '1900-01-01') -- for random date

---- A ----

select case when Year(@date)%100 = 0 then 'Leap year'

else case when Year(@date)%4 = 0 then 'Leap year'

else 'Regular year'

End

End AS 'IsLeap'

,@date AS 'Date'

---- B ----

declare @quater int = DATEDIFF(qq, 0, @date)

SELECT DATEADD(qq, @quater, 0) AS 'FirstDayofQ'

,datename(DW, DATEADD(qq, @quater, 0)) AS 'DayOfWeek'

,@date AS 'Date'

---- C ----

declare @quater2 datetime = DATEADD(qq, DATEDIFF(qq, 0, @date) +1, 0)

SELECT DATEADD(dd, -1, @quater2 ) AS 'LastDayofQ'

,datename(DW, DATEADD(dd, -1, @quater2 )) AS 'DayOfWeek'

,@date AS 'Date'

---- D ----

declare @Week int = DATEDIFF(ww, 0, @date)

SELECT datename(dw,@@DATEFIRST) as FirstDOW

,@@LANGUAGE as Language

,DATEADD(WW, @Week, 0) AS 'FirstDayofW'

,DATEADD(dd, -1, DATEADD(WW, @Week +1, 0) ) AS 'LastDayofW'

,@date AS 'Date'

---- E ----

select DATEDIFF(ww, dateadd(dd,1,EOMONTH ( @date, -1 )), @date)+1 AS 'NumberofWeek\_Month'

,DATEDIFF(ww, DATEADD(qq, DATEDIFF(qq, 0, @date), 0), @date)+1 AS 'NumberofWeek\_Quarter'

,DATEPART( wk, @date ) AS 'NumberofWeek\_Year'

,@date AS 'Date'

---- F ----

SELECT DATEDIFF(dd, DATEADD(dd, -1, DATEADD(qq, DATEDIFF(qq, 0, @date), 0) ), DATEADD(dd, -1, DATEADD(qq, DATEDIFF(qq, 0, @date)+1, 0) ) ) AS 'NumOfDays\_Quarter'

,DATEDIFF(dd, EOMONTH ( @date, - 1), EOMONTH ( @date)) AS 'NumOfDays\_Month'

,@date AS 'Date'

---- G ----

select EOMONTH ( @date) AS 'EndOfM'

,DATENAME(DW, EOMONTH ( @date)) AS 'DayOfWeek'

,@date AS 'Date'

---- H ----

select DATEDIFF(dd, @date, DATEADD(dd, -1, DATEADD(qq, DATEDIFF(qq, 0, @date)+1, 0) )) AS 'DaysUntilEnd\_Quoter'

,DATEDIFF(dd, @date, EOMONTH(@date)) AS 'DaysUntilEnd\_Month'

,DATEDIFF(dd, @date, DATEADD(dd, -1, DATEADD(WW, DATEDIFF(ww, 0, @date) +1, 0) )) AS 'DaysUntilEnd\_Week'

---4---

declare @language varchar(50)

,@NumOfMonth int

set @language = 'Thai'

set @NumOfMonth = 4

set LANGUAGE @language

SELECT DATENAME(MM, DATETIMEFROMPARTS ( YEAR(GETDATE()), @NumOfMonth, DAY(GETDATE()), 0, 0, 0, 0) )

SET LANGUAGE English

SELECT @@LANGUAGE