Week 8

Domain: SQL

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Problem Statement:

Write a Stored Procedure that populates a table with certain date attributes. The data would be populated for 1 year. For example the date 14-07-2020 is passed as an input parameter, then the stored procedure will populate those attributes for all the dates present within the year 2020. The primary key for this table would be date column. In order to find sample data and list of attributes please click on the link. Constraint: More than one insert statement cannot be used

Steps For Solving the assignment:

STEP 1: Creating the date dimension table

Query:

```
create table datedimension (
   skdate int primary key,
   keydate varchar(10),
   date date,
   calendarday int,
   calendarmonth int,
   calendarquarter int,
   calendaryear int,
   dayname varchar(10),
   daynameshort varchar(3),
   daynumber int,
   daynumberofyear int,
```

daysuffix varchar(4),

fiscalweek int,

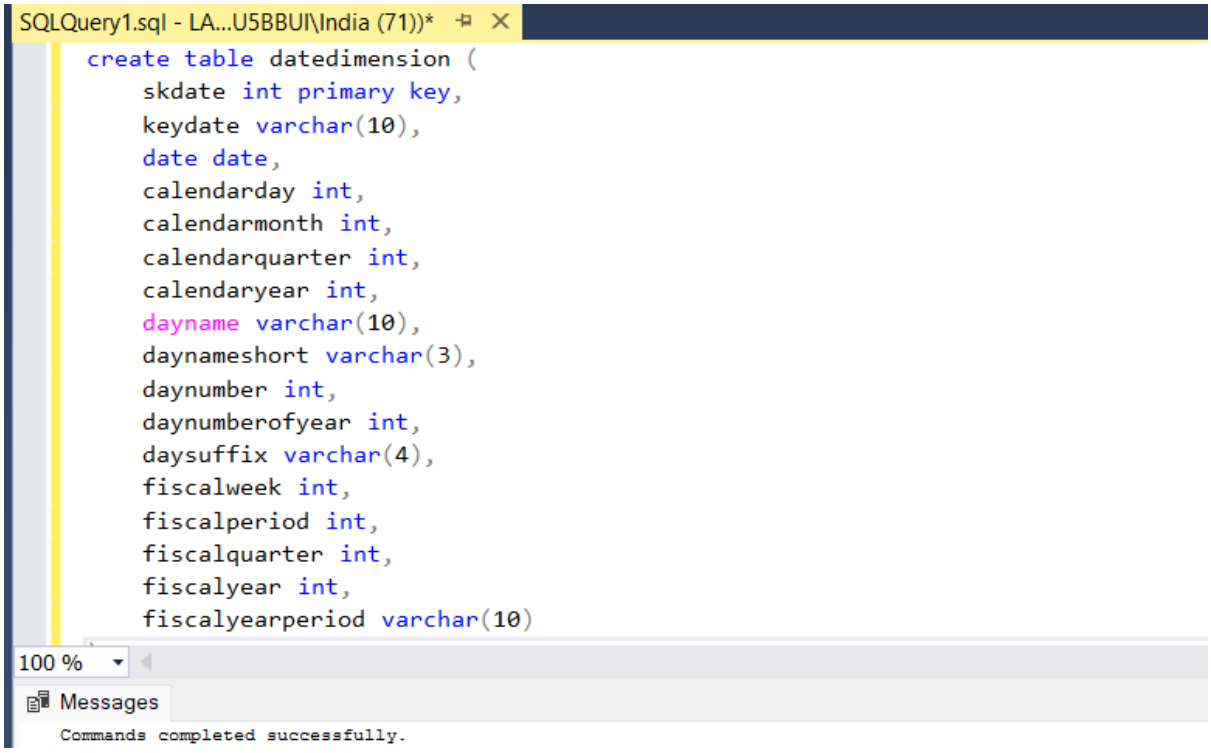
fiscalperiod int,

fiscalquarter int,

fiscalyear int,

fiscalyearperiod varchar(10)

);



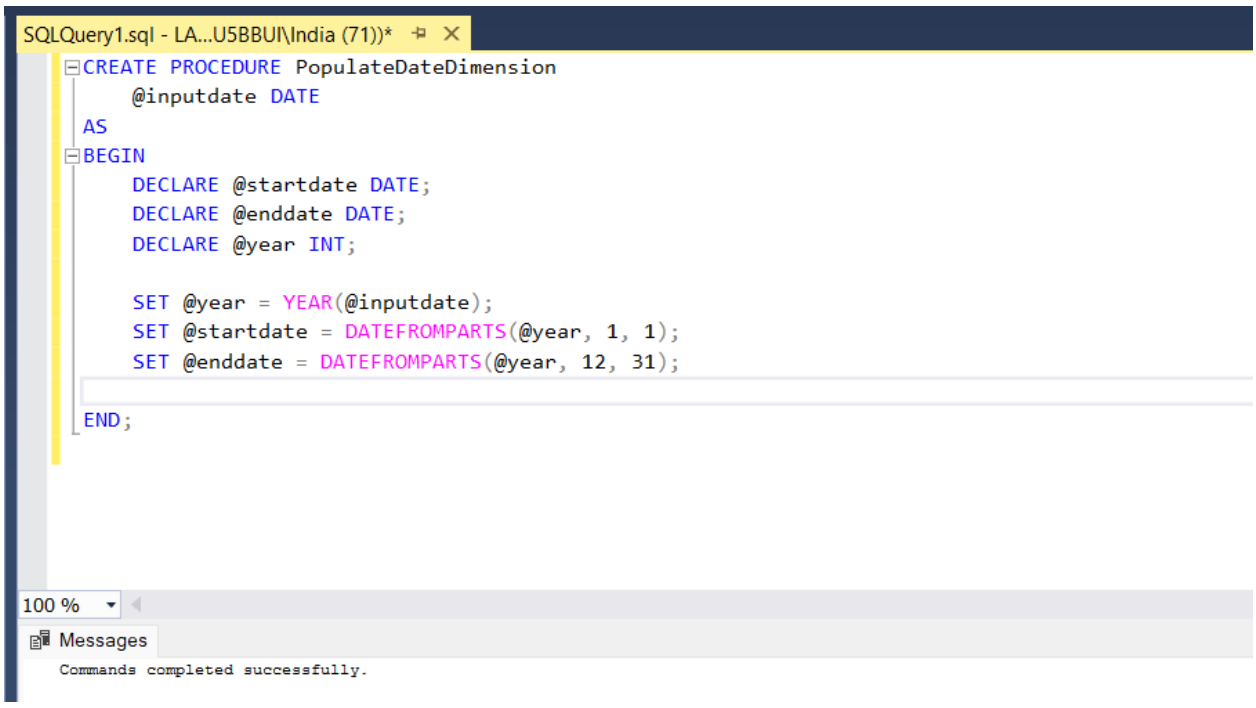
Step 2: creating stored procedure with input parameter

Query:

```
CREATE PROCEDURE PopulateDateDimension
    @inputdate DATE
AS
BEGIN
    DECLARE @startdate DATE;
    DECLARE @enddate DATE;
    DECLARE @year INT;

    SET @year = YEAR(@inputdate);
    SET @startdate = DATEFROMPARTS(@year, 1, 1);
    SET @enddate = DATEFROMPARTS(@year, 12, 31);

END;
```



Step 3: Creating the procedure

Query:

```
create procedure populatedatedimension
    @inputdate date
as
begin
    declare @startdate date
    declare @enddate date
    declare @year int

    set @year = year(@inputdate)
    set @startdate = datefromparts(@year, 1, 1)
    set @enddate = datefromparts(@year, 12, 31)

    delete from datedimension where calendaryear = @year

    ;with dateseries as (
        select @startdate as currentdate
        union all
        select dateadd(day, 1, currentdate)
        from dateseries
        where currentdate < @enddate
    )
    insert into datedimension (
```

```
    skdate, keydate, date, calendarday, calendarmonth,
    calendarquarter, calendaryear, dayname, daynameshort,
    daynumber, daynumberofyear, daysuffix, fiscalweek,
    fiscalperiod, fiscalquarter, fiscalyear, fiscalyearperiod
  )
  select
    year(currentdate) * 10000 + month(currentdate) * 100 + day(currentdate)
as skdate,
    cast(month(currentdate) as varchar) + '/' +
    cast(day(currentdate) as varchar) + '/' +
    cast(year(currentdate) as varchar) as keydate,
    currentdate as date,
    day(currentdate) as calendarday,
    month(currentdate) as calendarmonth,
    case
      when month(currentdate) in (1,2,3) then 1
      when month(currentdate) in (4,5,6) then 2
      when month(currentdate) in (7,8,9) then 3
      else 4
    end as calendarquarter,
    year(currentdate) as calendaryear,
    datename(weekday, currentdate) as dayname,
    left(datename(weekday, currentdate), 3) as daynameshort,
    datepart(weekday, currentdate) as daynumber,
    datepart(dayofyear, currentdate) as daynumberofyear,
    case
```

```
        when day(currentdate) in (1,21,31) then cast(day(currentdate) as
varchar) + 'st'
        when day(currentdate) in (2,22) then cast(day(currentdate) as varchar) +
'nd'
        when day(currentdate) in (3,23) then cast(day(currentdate) as varchar) +
'rd'
        else cast(day(currentdate) as varchar) + 'th'
    end as daysuffix,
    datepart(week, currentdate) as fiscalweek,
    month(currentdate) as fiscalperiod,
    case
        when month(currentdate) in (1,2,3) then 1
        when month(currentdate) in (4,5,6) then 2
        when month(currentdate) in (7,8,9) then 3
        else 4
    end as fiscalquarter,
    year(currentdate) as fiscalyear,
    cast(year(currentdate) as varchar) +
    right('0' + cast(month(currentdate) as varchar), 2) as fiscalyearperiod
  from dateseries
  option (maxrecursion 366)
end
```

SQLQuery1.sql - LA...U5BBUI\India (71))*

```
create procedure populatedatedimension
    @inputdate date
as
begin
    declare @startdate date
    declare @enddate date
    declare @year int

    set @year = year(@inputdate)
    set @startdate = datefromparts(@year, 1, 1)
    set @enddate = datefromparts(@year, 12, 31)

    delete from datedimension where calendaryear = @year

    ;with dateseries as (
        select @startdate as currentdate
        union all
        select dateadd(day, 1, currentdate)
```

100 %

Messages

```
Commands completed successfully.
```

Step 3: Executing the stored procedure sir

Query:

exec populatedatedimension '2020-07-14'

SQLQuery1.sql - LA...U5BBUI\India (71))*

```
exec populatedatedimension '2020-07-14'
```

100 %

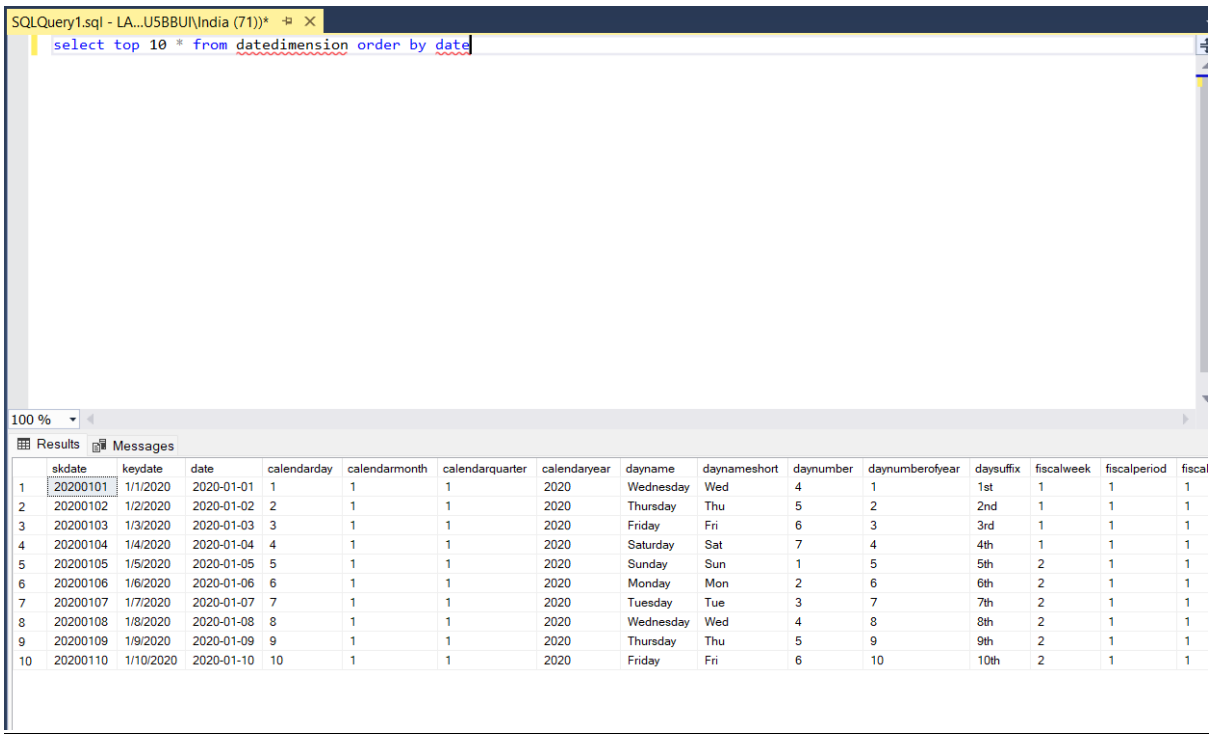
Messages

```
(0 rows affected)
```

Step 4: Checking the populated data

Query:

select top 10 * from datedimension order by date



	skdate	keydate	date	calendarday	calendarmonth	calendarquarter	calendaryear	dayname	daynameshort	daynumber	daynumberofyear	daysuffix	fiscalweek	fiscalperiod	fiscal
1	20200101	1/1/2020	2020-01-01	1	1	1	2020	Wednesday	Wed	4	1	1st	1	1	1
2	20200102	1/2/2020	2020-01-02	2	1	1	2020	Thursday	Thu	5	2	2nd	1	1	1
3	20200103	1/3/2020	2020-01-03	3	1	1	2020	Friday	Fri	6	3	3rd	1	1	1
4	20200104	1/4/2020	2020-01-04	4	1	1	2020	Saturday	Sat	7	4	4th	1	1	1
5	20200105	1/5/2020	2020-01-05	5	1	1	2020	Sunday	Sun	1	5	5th	2	1	1
6	20200106	1/6/2020	2020-01-06	6	1	1	2020	Monday	Mon	2	6	6th	2	1	1
7	20200107	1/7/2020	2020-01-07	7	1	1	2020	Tuesday	Tue	3	7	7th	2	1	1
8	20200108	1/8/2020	2020-01-08	8	1	1	2020	Wednesday	Wed	4	8	8th	2	1	1
9	20200109	1/9/2020	2020-01-09	9	1	1	2020	Thursday	Thu	5	9	9th	2	1	1
10	20200110	1/10/2020	2020-01-10	10	1	1	2020	Friday	Fri	6	10	10th	2	1	1