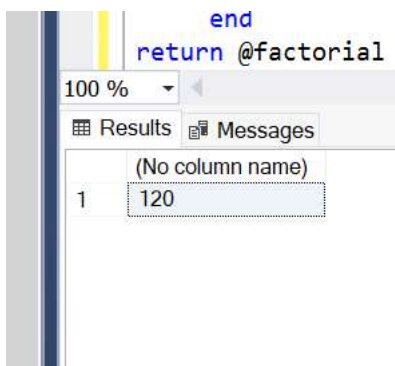


--1. Write a T-SQL Program to find the factorial of a given number.

```
create or alter function fact(@n int)
returns int
as
begin
    declare @factorial int
        set @factorial=1
        while @n>=1
            begin
                set @factorial=@factorial *@n
                set @n=@n-1
            end
    return @factorial
end
```

--execute

```
select dbo.fact(5)
```



	(No column name)
1	120

--2. Create a stored procedure to generate multiplication tables up to a given

number.

```
create or alter procedure multiplication(@number int)

as

begin

declare @n int,@table int

set @n=1

while(@n<=10)

begin

set @table =@number*@n

print cast(@number as varchar(10)) + '*' + cast( @n as varchar(10)) + '='
+ cast(@table as varchar(20))

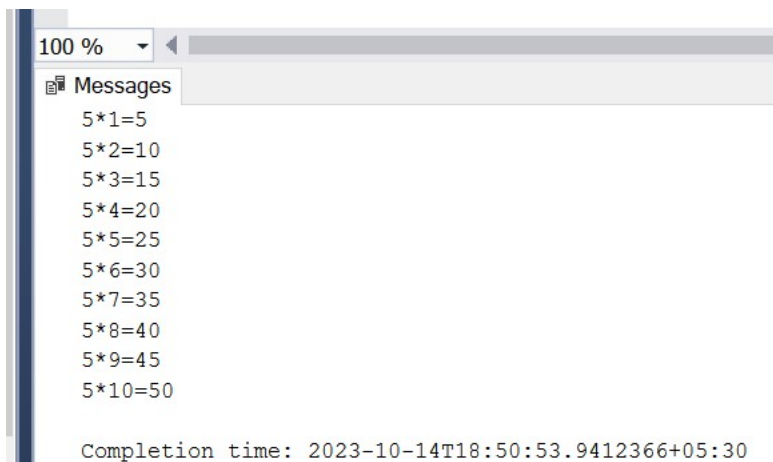
set @n=@n+1

end

end

--execute

multiplication 5
```



The screenshot shows a SQL Server Messages window with a zoom level of 100%. The window title is "Messages". The output displays the results of the multiplication procedure for the input 5, showing multiplication facts from 5*1 to 5*10. At the bottom, the completion time is listed as 2023-10-14T18:50:53.9412366+05:30.

```
100 %
Messages
5*1=5
5*2=10
5*3=15
5*4=20
5*5=25
5*6=30
5*7=35
5*8=40
5*9=45
5*10=50

Completion time: 2023-10-14T18:50:53.9412366+05:30
```

--3. Create a trigger to restrict data manipulation on EMP table during General holidays.

--Display the error message like "Due to Independence day you cannot manipulate data" or "Due To Diwali",

--you cannot manipulate"

create table Holiday

(holiday_date Date Primary Key, holiday varchar(30));

INSERT INTO holiday values

('2023-01-01', 'NewYear'),

('2023-08-15', 'Independence Day'),

('2023-10-27', 'Diwali'),

('2023-12-25', 'Christmas'),

('2023-10-14', 'Homieday');

CREATE or alter TRIGGER RestrictDataholiday

ON Emp

FOR INSERT, UPDATE, DELETE

AS

BEGIN

DECLARE @Holiday_name VARCHAR(50), @holiday_date DATE

SET @holiday_date = CONVERT(DATE, GETDATE())

SELECT @Holiday_name = Holiday

```
FROM Holiday

WHERE holiday_date = @holiday_date

IF @holiday_name IS NOT NULL

BEGIN

ROLLBACK TRANSACTION

RAISERROR('Due to %s, you cannot manipulate data', 16, 1, @holiday_name)

END

END

delete from emp

where EMPNO=1
```

Messages

Msg 50000, Level 16, State 1, Procedure RestrictDataHoliday, Line 14 [Batch Start Line 33]
Due to Homieday, you cannot manipulate data
Msg 3609, Level 16, State 1, Line 34
The transaction ended in the trigger. The batch has been aborted.

Completion time: 2023-10-14T20:22:49.4869712+05:30