

(T13)討論 LocalTempTable 和 GlobalTempTable

0. In Summary

1. ReCreate Table V.S. Global/Local TempTable
 2. Select/Insert Global/Local TempTable
 3. Global/Local TempTable with Stored Procedure
 4. Clean up
-

0. In Summary

In Summary

1.
Local Temp Table V.S. Global Temp Table
Databases --> System Databases --> tempdb -->
Temporary Tables --> #LocalTempTable/##GlobalTempTable
- 1.1.
#LocalTempTable
- 1.1.1.
Prefix with One pound (#) symbol. E.g. #LocalTempTable
- 1.1.2.
SQL server appends a long underscore and some random numbers.
E.g.
#Person_____000000000195
- 1.1.3.
#LocalTempTable is available for current connection/session/query window/query file.
It is automatically dropped after closing the current connection/session/query window/query file.
- 1.1.4.
#LocalTempTable will NOT be automatically dropped
on the completion of stored procedure execution.

- 1.2.
##GlobalTempTable
- 1.2.1.
Prefix with Double pound (##) symbol. E.g. ##GlobalTempTable
- 1.2.2.
SQL server will give a Table Name without appending any random number.
E.g.
dbo.##Person3
- 1.2.3.
##GlobalTempTable is available for any connection/session/query window/query file.
It is automatically dropped after closing the ALL connection/session/query window/query file.
- 1.2.4.
##GlobalTempTable will NOT be automatically dropped
on the completion of stored procedure execution.

=====

更正 1:

該範例 spLocalTempTable 的內容是建立 LocalTempTable #Person4，但在 insert 的語法是 insert 到#Person2，所以在查詢#Person4 時，才沒有資料

以下為更正後的版本

--T013_03_01

--Local TempTable in Stored Procedure

```
IF ( EXISTS ( SELECT  *
              FROM    INFORMATION_SCHEMA.ROUTINES
              WHERE   ROUTINE_TYPE = 'PROCEDURE'
                    AND LEFT(ROUTINE_NAME, 3) NOT IN ( 'sp_', 'xp_', 'ms_' )
                    AND SPECIFIC_NAME = 'spLocalTempTable' ) )
```

BEGIN

DROP PROCEDURE spLocalTempTable;

END;

GO -- Run the previous command and begins new batch

CREATE PROCEDURE spLocalTempTable

AS

BEGIN

IF OBJECT_ID('tempdb..#Person4') IS NOT NULL

BEGIN

TRUNCATE TABLE #Person4;

DROP TABLE #Person4;

END;

CREATE TABLE #Person4

(

Id INT IDENTITY(1, 1)

PRIMARY KEY

NOT NULL ,

Name NVARCHAR(20) NULL

);

INSERT INTO #Person4

VALUES ('spP4Name1');

INSERT INTO #Person4

VALUES ('spP4Name2');

INSERT INTO #Person4

VALUES ('spP4Name3');

SELECT *

FROM #Person4;

END;

GO -- Run the previous command and begins new batch

EXECUTE spLocalTempTable;

GO -- Run the previous command and begins new batch

經過實驗證明，所以結論也改了，請忽略我在影片中的 T013_03_01 的結論。
這邊才是對的。

/*

1.

#LocalTempTable will NOT be automatically dropped
on the completion of stored procedure execution.

2.

--Execute spLocalTempTable

returns something

*/

補充 2:

The important summary:

2.1.

#LocalTempTable is available for current connection/session/query window/query file.

2.2.

##GlobalTempTable is available for any connection/session/query window/query file.

2.3.

#LocalTempTable and ##GlobalTempTable will NOT be automatically dropped
on the completion of stored procedure execution.

2.1.

#LocalTempTable 只能用在 current connection/session/query window/query file

2.2.

##GlobalTempTable 可以用在任一個 connection/session/query window/query file.

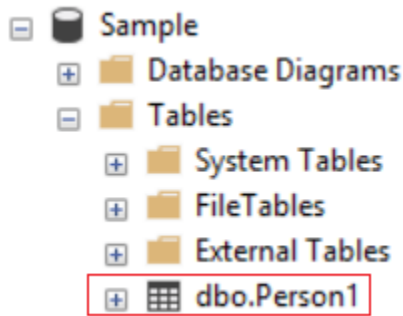
2.3.

#LocalTempTable 和 ##GlobalTempTable 在 stored procedure execution 結束的時候，都還繼續存活。

=====

1. ReCreate Table V.S. Global/Local TempTable

```
--=====
--T013_01_ReCreate Table V.S. Global/Local TempTable
--=====
--T013_01_01
--Create or Recreate table
IF ( EXISTS ( SELECT      *
                FROM        INFORMATION_SCHEMA.TABLES
                WHERE       TABLE_NAME = 'Person1' ) )
    BEGIN
        TRUNCATE TABLE Person1;
        DROP TABLE Person1;
    END;
GO -- Run the previous command and begins new batch
CREATE TABLE Person1
(
    Id INT IDENTITY(1, 1)
        PRIMARY KEY
        NOT NULL ,
    Name NVARCHAR(20) NULL
);
```



=====

--T013_01_02

--Create or Recreate Local TempTable

--From SQL Server 2016 you can just use

DROP TABLE IF EXISTS #Person2

CREATE TABLE #Person2

(

Id INT IDENTITY(1, 1)

PRIMARY KEY

NOT NULL ,

Name NVARCHAR(20) NULL

);

--From Previous version of SQL server

IF OBJECT_ID('tempdb..#Person2') IS NOT NULL

BEGIN

TRUNCATE TABLE #Person2;

DROP TABLE #Person2;

END;

GO -- Run the previous command and begins new batch

CREATE TABLE #Person2

(

Id INT IDENTITY(1, 1)

PRIMARY KEY

NOT NULL ,

Name NVARCHAR(20) NULL

);

--Check temp table information

SELECT *

FROM tempdb..sysobjects

WHERE name LIKE '#Person2%';

GO -- Run the previous command and begins new batch

	name	id	xtype	uid	info	status	base_schema_ver	re
1	#Person2_...	-1430531302	U	1	0	0	0	0

N550JKL\SQL2016 (SQL Server 13.0.4206.0 - N550JKL\lpmp1)

Databases

System Databases

master

model

msdb

tempdb

Tables

Temporary Tables

dbo.#Person2

0000000001C8

Views

Synonyms

Programmability

Service Broker

Storage

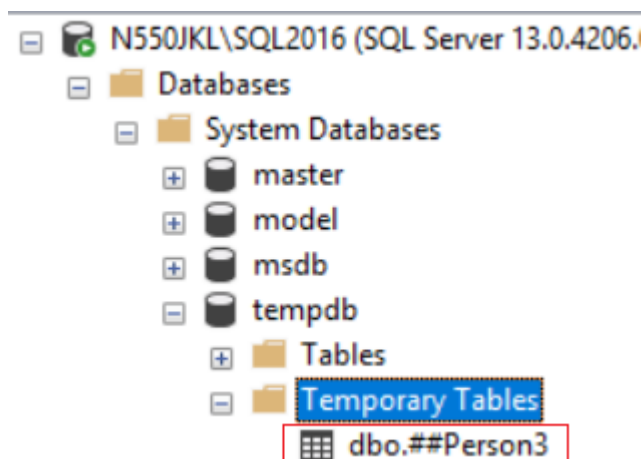
Security

```

=====
--T013_01_03
--Create or Recreate Global TempTable
--From SQL Server 2016 you can just use
DROP TABLE IF EXISTS ##Person3
CREATE TABLE ##Person3
(
    Id INT IDENTITY(1, 1)
        PRIMARY KEY
        NOT NULL ,
    Name NVARCHAR(20) NULL
);
--From Previous version of SQL server
IF OBJECT_ID('tempdb..##Person3') IS NOT NULL
    BEGIN
        TRUNCATE TABLE ##Person3;
        DROP TABLE ##Person3;
    END;
GO -- Run the previous command and begins new batch
CREATE TABLE ##Person3
(
    Id INT IDENTITY(1, 1)
        PRIMARY KEY
        NOT NULL ,
    Name NVARCHAR(20) NULL
);
--Check temp table information
SELECT *
FROM    tempdb..sysobjects
WHERE   name LIKE '##Person3%';
GO -- Run the previous command and begins new batch

```

	name	id	xtype	uid	info	status	base_schema_ver	replinfo	parent_obj	crdate	ftcatid	scl
1	##Person3	885578193	U	1	0	0	0	0	0	2017-11-07 19:08:18.650	0	0



=====

2. Select/Insert Global/Local TempTable

```

=====
--T013_02_Select/Insert Global/Local TempTable
=====

```

```

=====
--T013_02_01
--Local Temp Table
INSERT INTO #Person2
VALUES ( 'P2Name1' );
INSERT INTO #Person2
VALUES ( 'P2Name2' );
INSERT INTO #Person2
VALUES ( 'P2Name3' );
SELECT *
FROM #Person2;
SELECT name
FROM tempdb..sysobjects
WHERE name LIKE '#Person2%';
GO -- Run the previous command and begins new batch

```

	Id	Name
1	1	P2Name1
2	2	P2Name2
3	3	P2Name3

	name
1	#Person2

```

=====
--T013_02_02
--Global Temp Table
INSERT INTO ##Person3
VALUES ( 'P3Name1' );
INSERT INTO ##Person3
VALUES ( 'P3Name2' );
INSERT INTO ##Person3
VALUES ( 'P3Name3' );
SELECT *
FROM ##Person3;
SELECT name
FROM tempdb..sysobjects
WHERE name LIKE '##Person3%';
GO -- Run the previous command and begins new batch

```

	Id	Name
1	1	P3Name1
2	2	P3Name2
3	3	P3Name3

	name
1	##Person3

=====

3. Global/Local TempTable with Stored Procedure

```
--=====
--T013_03_Global/Local TempTable with Stored Procedure
--=====
--T013_03_01
--Local TempTable in Stored Procedure
IF ( EXISTS ( SELECT      *
                FROM        INFORMATION_SCHEMA.ROUTINES
                WHERE        ROUTINE_TYPE = 'PROCEDURE'
                            AND LEFT(ROUTINE_NAME, 3) NOT IN ( 'sp_', 'xp_', 'ms_' )
                            AND SPECIFIC_NAME = 'spLocalTempTable' ) )

BEGIN
    DROP PROCEDURE spLocalTempTable;
END;

GO -- Run the previous command and begins new batch
CREATE PROCEDURE spLocalTempTable
AS
BEGIN
    IF OBJECT_ID('tempdb..#Person4') IS NOT NULL
        BEGIN
            TRUNCATE TABLE #Person4;
            DROP TABLE #Person4;
        END;
    CREATE TABLE #Person4
    (
        Id INT IDENTITY(1, 1)
            PRIMARY KEY
            NOT NULL ,
        Name NVARCHAR(20) NULL
    );
    INSERT INTO #Person4
    VALUES ( 'spP4Name1' );
    INSERT INTO #Person4
    VALUES ( 'spP4Name2' );
    INSERT INTO #Person4
    VALUES ( 'spP4Name3' );
    SELECT *
    FROM    #Person4;
END;

GO -- Run the prvious command and begins new batch
EXECUTE spLocalTempTable;

GO -- Run the prvious command and begins new batch
/*
1.
#LocalTempTable will NOT be automatically dropped
on the completion of stored procedure execution.
2.
--Execute spLocalTempTable
returns something
*/
```

```

=====
--T013_03_02
--Global TempTable in Stored Procedure
IF ( EXISTS ( SELECT      *
                FROM        INFORMATION_SCHEMA.ROUTINES
                WHERE        ROUTINE_TYPE = 'PROCEDURE'
                            AND LEFT(ROUTINE_NAME, 3) NOT IN ( 'sp_', 'xp_', 'ms_' )
                            AND SPECIFIC_NAME = 'spGlobalTempTable' ) )

BEGIN
    DROP PROCEDURE spGlobalTempTable;
END;

GO -- Run the previous command and begins new batch
CREATE PROCEDURE spGlobalTempTable
AS
BEGIN
    IF OBJECT_ID('tempdb..##Person5') IS NOT NULL
        BEGIN
            TRUNCATE TABLE ##Person5;
            DROP TABLE ##Person5;
        END;
    CREATE TABLE ##Person5
    (
        Id INT IDENTITY(1, 1)
            PRIMARY KEY
            NOT NULL ,
        Name NVARCHAR(20) NULL
    );
    INSERT INTO ##Person5
    VALUES ( 'spP3Name1' );
    INSERT INTO ##Person5
    VALUES ( 'spP3Name2' );
    INSERT INTO ##Person5
    VALUES ( 'spP3Name3' );
    SELECT *
    FROM    ##Person5;
END;

GO -- Run the previous command and begins new batch
EXECUTE spGlobalTempTable;

GO -- Run the previous command and begins new batch
/*
1.
##GlobalTempTable will NOT be automatically dropped
on the completion of stored procedure execution.
2.
--Execute spGlobalTempTable
returns something.
*/

```


	Id	Name
1	1	spP3Name1
2	2	spP3Name2
3	3	spP3Name3

=====

4. Clean up

--T013_04_Clean up

```
IF ( EXISTS ( SELECT      *
                FROM        INFORMATION_SCHEMA.TABLES
                WHERE       TABLE_NAME = 'Person1' ) )
```

```
BEGIN
```

```
    TRUNCATE TABLE Person1;
```

```
    DROP TABLE Person1;
```

```
END;
```

```
GO -- Run the previous command and begins new batch
```

--From Previous version of SQL server

```
IF OBJECT_ID('tempdb..#Person2') IS NOT NULL
```

```
BEGIN
```

```
    TRUNCATE TABLE #Person2;
```

```
    DROP TABLE #Person2;
```

```
END;
```

```
GO -- Run the previous command and begins new batch
```

--From Previous version of SQL server

```
IF OBJECT_ID('tempdb..##Person3') IS NOT NULL
```

```
BEGIN
```

```
    TRUNCATE TABLE ##Person3;
```

```
    DROP TABLE ##Person3;
```

```
END;
```

```
GO -- Run the previous command and begins new batch
```

--From Previous version of SQL server

```
IF OBJECT_ID('tempdb..#Person4') IS NOT NULL
```

```
BEGIN
```

```
    TRUNCATE TABLE #Person4;
```

```
    DROP TABLE #Person4;
```

```
END;
```

```
GO -- Run the previous command and begins new batch
```

--From Previous version of SQL server

```
IF OBJECT_ID('tempdb..##Person5') IS NOT NULL
```

```
BEGIN
```

```
    TRUNCATE TABLE ##Person5;
```

```
    DROP TABLE ##Person5;
```

```
END;
```

```
GO -- Run the previous command and begins new batch
```

IF (EXISTS (SELECT *

```

        FROM      INFORMATION_SCHEMA.ROUTINES
        WHERE      ROUTINE_TYPE = 'PROCEDURE'
                   AND LEFT(ROUTINE_NAME, 3) NOT IN ( 'sp_', 'xp_', 'ms_' )
                   AND SPECIFIC_NAME = 'spLocalTempTable' ) )

BEGIN
    DROP PROCEDURE spLocalTempTable;
END;
GO -- Run the previous command and begins new batch
IF ( EXISTS ( SELECT      *
               FROM      INFORMATION_SCHEMA.ROUTINES
               WHERE      ROUTINE_TYPE = 'PROCEDURE'
                           AND LEFT(ROUTINE_NAME, 3) NOT IN ( 'sp_', 'xp_', 'ms_' )
                           AND SPECIFIC_NAME = 'spGlobalTempTable' ) )

BEGIN
    DROP PROCEDURE spGlobalTempTable;
END;
GO -- Run the previous command and begins new batch

```