



# TIPS, TRICKS, HACKS & BACKDOORS

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# ABOUT ME

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Member of PASS since 1999

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5 X 140.6 Ironman Finisher | 21 X 70.3

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# PUZZLES FOR TODAY



## TIPS

Dynamic SQL  
Number Tables

## TRICKS

Randomization  
Delimiter Splits

## HACKS

Delete Dups  
Sp\_executeSQL

## BACKDOORS

Read/Write to the Registry





# TIP #1 : DYNAMIC SQL

Problem: Create a Column List quickly from a Table with several columns.

Solution: Concatenate a string from the source meta data.

The background of the slide is a classic Star Wars movie poster illustration. It features a large, translucent blue helmet of Darth Vader on the left. In the center, Luke Skywalker in his white Jedi robes is leaping forward, holding a glowing yellow lightsaber aloft. To his right, Princess Leia in a white gown is running. In the lower left, R2-D2 and C-3PO are visible. The background is a deep space scene with a starry sky, a Death Star in the upper right, and a fleet of TIE fighters. The ground below is a dark, rocky planet surface with some structures in the distance.

STAR  
WARS



```

DECLARE @v_SQL [NVARCHAR] (MAX) = ''
        ,@v_TBL [SYSNAME] = 'Dim_Server'
        ,@v_Max [INT];

SELECT @v_Max = MAX(ORDINAL_POSITION)
FROM INFORMATION_SCHEMA.COLUMNS
WHERE TABLE_NAME = @v_TBL;

SELECT @v_SQL = @v_SQL + '[' + COLUMN_NAME + ']' +
CASE WHEN ORDINAL_POSITION = @v_Max
THEN ''
ELSE ', '
END
FROM INFORMATION_SCHEMA.COLUMNS
WHERE TABLE_NAME = @v_TBL;

```



A full-page background image of Darth Vader from Star Wars. He is wearing his iconic black hooded robe and helmet. He is holding two lightsabers, one in each hand. The lightsaber in his right hand (viewer's left) has a purple blade, and the one in his left hand (viewer's right) has a red blade. The word "DEMO" is overlaid in large, bold, orange capital letters across the center of his chest.

**DEMO**



# TRICK #1 : RANDOMIZATION

Problem: Create a Random Data Set.

Solution: Manipulate the ORDER BY  
Clause.

A classic Star Wars movie poster illustration. In the foreground, Luke Skywalker in his white Jedi robes holds a glowing lightsaber aloft. Beside him, Princess Leia in a white gown holds a blaster. To the left, R2-D2 and C-3PO stand on the rocky ground of Tatooine. In the background, the Death Star looms in the dark, star-filled sky. A fleet of Rebel X-wing fighters is engaged in battle with Imperial TIE fighters. The Star Wars logo is in the bottom right corner.

STAR  
WARS



```
SELECT TOP 5 [Card]  
  FROM [CardDeck]  
 ORDER BY NEWID();
```

A vertical strip of Star Wars movie poster artwork on the right side of the slide. It features Luke Skywalker in his white Jedi robes, holding a glowing lightsaber high above his head. Beside him is Princess Leia, also in her iconic white dress, holding a blaster. They are standing on a rocky, desert-like planet surface. In the background, the large, blue, metallic head of Darth Vader looms against a starry night sky.

STAR  
WARS



**DEMO**



A vibrant Star Wars-themed illustration serves as the background. It features a large, translucent blue helmet of Darth Vader on the left. In the center, Luke Skywalker in his white Jedi robes holds a glowing yellow lightsaber aloft. Beside him, Princess Leia in a white dress holds a blaster. To the left, R2-D2 and C-3PO are visible. The background is a deep blue space filled with stars, a Death Star in the upper left, and a fleet of TIE fighters in the distance. The ground is a dark, rocky landscape.

# HACK #1 :

## DELETE DUPLICATES

Problem: We have a table with no Unique Key and currently 4 identical duplicate records and we need to remove 3.

Solution: Delete through a CTE.

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```
WITH CTE_delete AS
(
    SELECT RN = ROW_NUMBER() OVER(PARTITION BY [Dim_Server_ID]
                                     ORDER BY (SELECT NULL))
    FROM [dbo].[DemoServer]
)
DELETE FROM CTE_delete
WHERE RN > 1;
```



**DEMO**



A vibrant Star Wars-themed illustration serves as the background. On the left, a large, translucent blue helmet of Darth Vader looms over a scene where Luke Skywalker, in his white Jedi robes, holds a glowing yellow lightsaber aloft. Beside him, Princess Leia, also in white, holds a blaster. In the lower-left corner, the droids R2-D2 and C-3PO are visible. The background is a deep space scene with a starry blue sky, a large blue planet, and a fleet of Rebel starfighters in a dogfight with Imperial TIE fighters. The Star Wars logo is in the bottom right corner.

# BACK DOOR #1:

## READ FROM THE WINDOWS REGISTRY

Problem: We need to programmatically get the "True" Domain of the SQL Server Instance we are currently logged into.

Extended Problem: We think the company is using aliases.

Solution: Grab the "True" Domain name from the Windows Registry (Since we cannot use xp\_cmdshell).

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WARS



```
DECLARE @v_Domain [NVARCHAR](100);
```

```
EXEC [master].[dbo].[xp_regread]  
    @rootkey          = 'HKEY_LOCAL_MACHINE'  
    ,@key              = 'SYSTEM\ControlSet001\Services\Tcpip\Parameters\  
    ,@value_name       = 'Domain'  
    ,@value            = @v_Domain OUTPUT;
```

```
SELECT @v_Domain      AS [@Domain];
```







DEMO



A vibrant Star Wars-themed illustration serves as the background. On the left, a large, translucent blue helmet of Darth Vader looms over a scene on a rocky planet surface. Luke Skywalker, in his white Jedi robes, stands with his arms raised, holding a glowing yellow lightsaber. Beside him, Princess Leia, in her iconic white dress, holds a blaster. To the left, a small droid, likely R2-D2, is visible. In the background, the Death Star orbits in the starry sky, and a fleet of TIE fighters is engaged in battle, leaving streaks of light and smoke. The overall color palette is dominated by blues, yellows, and oranges.

# TIP #2 :

## USE A NUMBERS TABLE TO PARSE A STRING

Problem: We have a comma delimited list of numbers that need to be separated into separate rows in a result set.

Solution: Use a numbers table to return a result set of parsed strings

# STAR WARS



```
DECLARE @v_a [NVARCHAR](255);

SELECT @v_a = '1,3,5,7,9,14,36,395';

SELECT [Number]
FROM [dbo].[Numbers]
WHERE CHARINDEX(',', CONVERT([NVARCHAR](12), [Number]) + ',',
    ',' + @v_a + ',') > 0
ORDER BY [Number];
```





DEMO



A vibrant Star Wars-themed illustration serves as the background. On the left, a large, translucent blue helmet of Darth Vader looms over a scene on a rocky planet. Luke Skywalker, in his white Jedi robes, stands with his arms raised, holding a glowing yellow lightsaber. Beside him, Princess Leia, in her iconic white dress, holds a blaster. In the lower-left corner, the droids R2-D2 and C-3PO are visible. The sky is filled with a chaotic battle: several TIE fighters are firing at a larger Rebel ship, with bright orange explosions and smoke trails. In the upper right, the Death Star is visible against a starry space background.

# **TRICK #2 :**

## **FOR XML CROSS APPLY TO RETURN A DELIMITED RESULT SET**

**Problem:** We have strings in our data that need to be rolled out so that we can have non-overloaded data in our result sets.

**Solution:** Use for XML with a cross apply to return a non overloaded data result set.

# **STAR WARS**



```
/* Select the data out using XML CROSS APPLY */
```

```
SELECT a.[xmldemo_id]  
      ,a.[Value]  
      ,b.[SplitData]  
FROM (SELECT *  
      ,CAST('<X>' + REPLACE([Value],  
      ',','</X><X>') + '</X>' AS XML)  
FROM #xmldemo)  
CROSS APPLY (SELECT aValue.X.value('.', 'VARCHAR(50)')  
      FROM a.[xmlfilter].nodes('X'))
```

```
AS xmlfilter
```

```
AS [SplitData]
```

```
AS aValue(X)) b;
```

The right side of the slide features a vertical strip of a Star Wars scene. At the top, Rey is shown in her white Jedi robes, holding the hilt of the Skywalker lightsaber. Below her, Leia Organa is depicted in her white diplomatic dress, holding a blaster. The background shows the dark, metallic structure of the Millennium Falcon's cockpit. At the bottom of this strip, the iconic 'STAR WARS' logo is displayed in its characteristic yellow, blocky font.

STAR  
WARS





DEMO



A detailed Star Wars illustration serves as the background. On the left, a large, translucent blue helmet of Darth Vader looms over the scene. In the center, Luke Skywalker in his white Jedi robes holds a glowing yellow lightsaber high above his head. Beside him, Princess Leia in her white dress holds a blaster. To the left, R2-D2 and C-3PO are visible. The background is a deep space scene with a starry sky, a large blue planet, and a fleet of TIE fighters flying towards the viewer. The Death Star is visible in the upper right.

# HACK #2 : SP\_EXECUTESQL USING OUTPUT PARAMETERS

Problem: Need to return the total of different orders.

Solution: Use dynamic SQL passing in input and output parameters.

# STAR WARS



```
SELECT @v_SQL = N'  
    SELECT @d_TotalPrice = SUM([Cost]) OVER(PARTITION BY [Order])  
    FROM [OrderItems]  
    WHERE [Order] = @d_Order  
    ORDER BY [Order]  
    OFFSET 0 ROWS FETCH FIRST 1 ROW ONLY;';  
  
EXEC sp_executesql  
    @stmt = @v_SQL  
    ,@params = N'@d_Order AS SYSNAME, @d_TotalPrice AS FLOAT OUT'  
    ,@d_Order = @v_Order -- Input param  
    ,@d_TotalPrice = @v_Total OUTPUT; -- output param
```





DEMO



# BACK DOOR #2: XP\_REGWRITE

Problem: We want to cause Chaos and get fired from our current position.

Solution: xp\_regwrite will make that happen post haste.

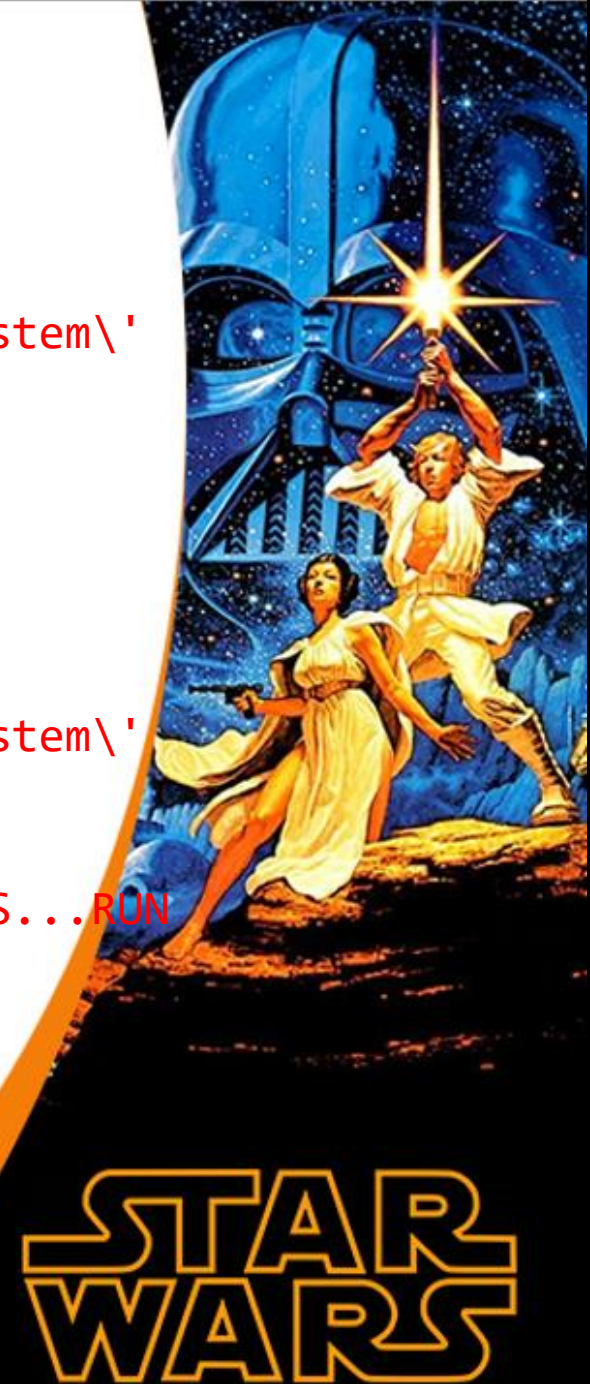
The background of the slide is a Star Wars movie poster. It features a large, translucent blue helmet of Darth Vader on the left. In the center, Luke Skywalker in his white Jedi robes is leaping forward, holding a glowing yellow lightsaber. To his right, Princess Leia in a white dress is running. In the bottom left, R2-D2 and C-3PO are visible. The background shows a space battle with TIE fighters and the Death Star in the sky, and a desert planet landscape with a city in the distance.

STAR  
WARS



```
EXEC [master].[dbo].[xp_regWrite]
    @rootkey      = 'HKEY_LOCAL_MACHINE'
    ,@key          = 'SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System\'
    ,@value_name   = 'legalnoticecaption'
    ,@type         = 'REG_SZ'
    ,@value        = 'WARNING!!!';

EXEC [master].[dbo].[xp_regWrite]
    @rootkey      = 'HKEY_LOCAL_MACHINE'
    ,@key          = 'SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System\'
    ,@value_name   = 'legalnoticetext'
    ,@type         = 'REG_SZ'
    ,@value        = 'You are about to release the CLEAR LETHAL ODORLESS GAS...RUN
AWAY!!!!!!!!';
```







DEMO

**WARNING!!!**

**You are about to release the CLEAR LETHAL ODORLESS  
GAS...RUN AWAY!!!!!!**

OK





*We swim with sharks*



OB Catch

