# 2022 KULENDAYZ SLOWDOWN. IT INNOVATION CONFERENCE in Osijek, Croatia



# MS SQL New Functions, Syntaxes, Tips & Tricks

#### This conference would not be possible without these outstanding supporters!!!































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AD 2018 - Leading Data Events in Croatia

AD 2019 - Introduced SQL Saturday in Croatia

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# Materijali

https://1drv.ms/u/s!Aoo7-aU7TEJblIUpZSZJIC-s77fqOQ?e=utdWnz

ili

https://aka.3nf.hr/KulenDayz





# STRING\_SPLIT – SQL 2016

STRING\_SPLIT ( string , separator )

- table-valued function
- splitting string values by a separator



# STRING\_SPLIT

STRING\_SPLIT ( string , separator [ , enable\_ordinal ] )



# STRING\_AGG - SQL 2017

#### STRING\_AGG

• string aggregation using a separator



#### DATE\_BUCKET

DATE\_BUCKET(<datepart>, <bucket\_width>, <input date/time> [, <origin>])

datePart Abbreviations

day dd, d

week wk, ww

month mm, m

quarter qq, q

year yy, yyyy

hour

minute mi, n

second ss, s

millisecond



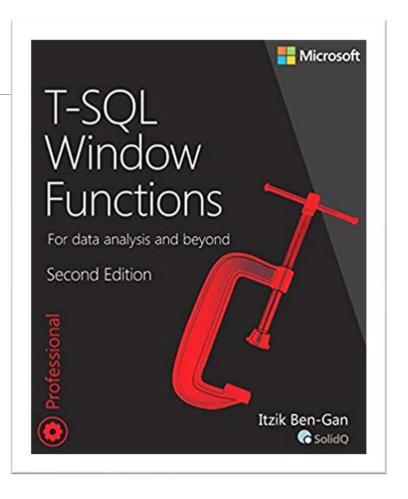
### GENERATE\_SERIES

GENERATE\_SERIES(<start>, <stop> [, STEP = <step>])



#### WINDOW

Itzik Ben-Gan





#### The WINDOW Clause

```
WINDOW window_name AS (

[ reference_window_name ] FROM

[ <PARTITION BY clause> ] WHERE

GROUP BY

[ <ORDER BY clause> ] HAVING

[ <ROW or RANGE clause> ] WINDOW

ORDER BY
```



#### FIRST\_VALUE, LAST\_VALUE

```
FIRST/LAST_VALUE ( [ scalar_expression ] )
OVER ( [ partition_by_clause ] order_by_clause [ rows_range_clause ] )
```



### TRIM, LTRIM, RTRIM

```
TRIM ( [ LEADING | TRAILING | BOTH ] [characters FROM ] string )
LTRIM ( character_expression , [ characters ] )
RTRIM ( character_expression , [ characters ] )
```



# IS NOT DISTINCT (The Distinct Predicate)

IS [NOT] DISTINCT FROM

DECLARE @dt AS DATE = '20220212';

SELECT orderid, shippeddate

FROM Sales.Orders

WHERE shippeddate = @dt;

DECLARE @dt AS DATE = NULL; ??

#### GREATEST() & LEAST()

GREATEST/LEAST (expression1 [ ,...expressionN ])

same data type or implicitly convert

**NULL** 

Types not supported for comparison: varchar(max), varbinary(max) or nvarchar(max) exceeding 8,000 bytes, cursor, geometry, geography, image, non-byte-ordered user-defined types, ntext, table, text, and xml.



#### Approximate Percentile Functions

PERCENTILE\_CONT i PERCENTILE\_DISC - SQL Server 2005 and later

APPROX\_PERCENTILE\_CONT i APPROX\_PERCENTILE\_DISC



#### JSON enhancements

**SQL 2016** 

Funkcije - ISJSON, JSON\_VALUE, JSON\_QUERY, JSON\_MODIFY

Operatori - FOR JSON i OPENJSON



#### JSON enhancements

```
SQL 2016
Funkcije - ISJSON, JSON_VALUE, JSON_QUERY, JSON_MODIFY
Operatori - FOR JSON i OPENJSON
SQL 2022
ISJSON
JSON_PATH_EXISTS
JSON_OBJECT
JSON_ARRAY
```



#### DATETRUNC

DATETRUNC ( datepart, date )





