

# ORGANIZING AND RANKING RESULT SETS

TOP(), RANK, ROW\_NUMBER, OFFSET and FETCH

Presented by Aaron Buma



# About Aaron Buma

- ▣ Development DBA, Emergency Reporting (Bellingham, WA)
  - SAAS Platform for Fire Service for 4500+ FD's worldwide
  - Training our Software Engineers SQL Practices
- ▣ Bellingham Pass Chapter
- ▣ Avid multirotor aka “drone” builder and pilot



# Session Overview

---

- TOP (n)
  - ▣ WITH TIES
  - ▣ PERCENT
- RANK and DENSE\_RANK
- ROW\_NUMBER
- Data Paging with OFFSET and FETCH

# SELECT TOP (N)

- TOP (N)

- ▣ N as variable

- ▣ Requires parenthesis

- ▣ WITH TIES

- ▣ Can return more than N rows, if duplicates are found

- ▣ PERCENT

- ▣  $0 \leq @percent \leq 100$

# Rank, Dense\_Rank, Row\_Number

## □ RANK and DENSE\_RANK

- ▣ Requires OVER(ORDER BY columnName ASC/DESC) to declare what column to rank by and the ordering
- ▣ Will have identical results UNTIL duplicates are encountered
- ▣ DENSE\_RANK introduced in SQL 2012

## □ ROW\_NUMBER

- ▣ Disregards duplicates

# Data Paging: OFFSET and FETCH

- What is Data Paging?
  - ▣ Returning rows 23-60 of 100 rows
- Example methods of Data Paging prior to 2012
  - ▣ Using TOP(N) and subtracting TOP(N-1)
  - ▣ Using CTE's and Row\_Number
- OFFEST and FETCH

# Quiz 1:

- Which of the following is incorrect:
  - ▣ In regards to: TOP (n) PERCENT
    - A) n can be any value
    - B) n can be any value from 0 – 100
    - C) n can be a variable, valued 0 - 100

## Quiz 2:

- If a table with four values of '1' and a single value of '2' in ColumnA, what will the result set be with the following statement:

```
SELECT DENSE_RANK() OVER (ORDER BY ColumnA ASC) AS ColumnA FROM dbo.TestTable;
```

A)

	ColumnA
1	1
2	1
3	1
4	1
5	5

B)

	ColumnA
1	1
2	2
3	3
4	4
5	5

C)

	ColumnA
1	1
2	1
3	1
4	1
5	2



# Quiz 3

- If a duplicate value is encountered, ROW\_NUMBER does which of the following:
  - ▣ A) Repeat the counter/row number until the first non-duplicate is found, then continue with next number
  - ▣ B) Continue to increase the counter/row number when a duplicate is found
  - ▣ C) Repeat the counter/row number until the first non-duplicate is found, then skip to the number which would match the row number as if no duplicates were encountered.

# Any Questions?

---

- TOP (n)
  - ▣ WITH TIES
  - ▣ PERCENT
- RANK and DENSE\_RANK
- ROW\_NUMBER

# Additional Information

- Website: [www.AaronBuma.com](http://www.AaronBuma.com)
- Twitter: @AaronDBuma
- Email: Aaron@AaronBuma.com

