

# Using Accumulating Window Aggregates



Kathi Kellenberger

@aunkathi | aunkathisql.com

# 2005 Window Aggregates

Add your favorite aggregate function to a non-aggregate query

Subtotals!

Grand totals!

Overall averages!

No ORDER BY

# 2012 Accumulating Aggregates

Running totals!

Moving averages!

**Now, with an  
ORDER BY!**

# Framing



# Syntax

```
AggregateFunction(<expression>)  
OVER([PARTITION BY <expression>] ORDER BY<expression>  
[ROWS|RANGE <expression>])
```

DEFAULT FRAME: RANGE BETWEEN UNBOUNDED PRECEDING AND  
CURRENT ROW

## ROWS BETWEEN UNBOUNDED PRECEDING AND CURRENT ROW

	CustomerID	OrderID	Amount
1	1100	103	26
2	1100	104	33
3	1100	105	17
4	1100	108	12
5	1100	112	40
6	1100	130	35
7	1100	133	18
8	1100	140	60

## ROWS UNBOUNDED PRECEDING

	CustomerID	OrderID	Amount
1	1100	103	26
2	1100	104	33
3	1100	105	17
4	1100	108	12
5	1100	112	40
6	1100	130	35
7	1100	133	18
8	1100	140	60

# ROWS BETWEEN CURRENT ROW AND UNBOUNDED FOLLOWING

	CustomerID	OrderID	Amount
1	1100	103	26
2	1100	104	33
3	1100	105	17
4	1100	108	12
5	1100	112	40
6	1100	130	35
7	1100	133	18
8	1100	140	60



## ROWS BETWEEN 2 PRECEDING AND CURRENT ROW

	CustomerID	OrderID	Amount
1	1100	103	26
2	1100	104	33
3	1100	105	17
4	1100	108	12
5	1100	112	40
6	1100	130	35
7	1100	133	18
8	1100	140	60

# Real World Example

The Subscription  
Puzzle

# The Subscription Puzzle



From SimpleTalk.com

Speed Phreakery

<http://alturl.com/ircmm>

# Performance



Window Spool  
Cost: 1 %

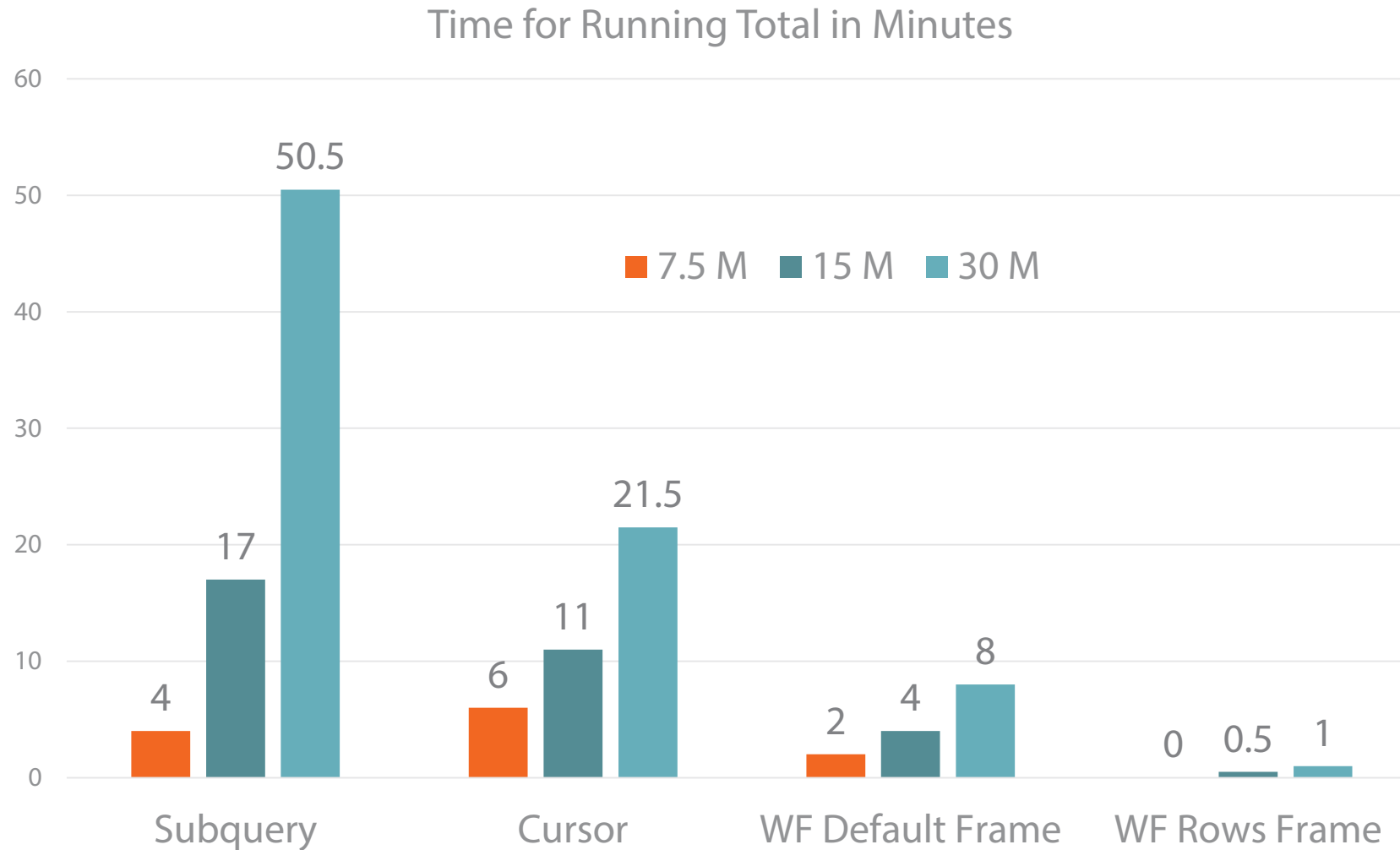
A worktable created in  
memory...

Or in tempdb

# Performance



# Performance Comparison



# Course Overview



Functions added in 2005 and 2012

Real world examples

Performance tuning

Coming up next: Offset functions