

## BI / read / 1

BI 1	query	BI / read / 1				
BI 2	title	Posting summary				
BI 3	pattern	<div><div>message: Message</div><div>creationDate &lt; \$dateTime</div><div>length year(creationDate)</div></div>				
BI 4						
BI 5						
BI 6						
BI 7						
BI 8	desc.	Given a datetime, find all Messages created before that moment. Group them by a 3-level grouping:				
BI 9						
BI 10		1. by year of creation				
BI 11		2. for each year, group into Message types: is Comment or not				
BI 12		3. for each year-type group, split into four groups based on length of their content				
BI 13		• 0: $0 \leq \text{length} < 40$ (short)				
BI 14		• 1: $40 \leq \text{length} < 80$ (one liner)				
BI 15		• 2: $80 \leq \text{length} < 160$ (tweet)				
BI 16		• 3: $160 \leq \text{length}$ (long)				
BI 17						
BI 18						
BI 19	params	1	datetime	DateTime	For later microbatches, later datetime parameters are selected keep the variance low (<0.5%)	
BI 20						
	result	1	year	32-bit Integer	R	year(message.creationDate)
		2	isComment	Boolean	M	True for Comments, False for Posts
		3	lengthCategory	32-bit Integer	C	0 for short, 1 for one-liner, 2 for tweet, 3 for long
		4	messageCount	32-bit Integer	A	Total number of Messages in that group
		5	averageMessageLength	32-bit Float	A	Average length of the Message content in that group
		6	sumMessageLength	32-bit Integer	A	Sum of all Message content lengths
		7	percentageOfMessages	32-bit Float	A	Number of Messages in group as a percentage of all messages created before the given date
	sort	1	year	↓		
		2	isComment	↑	False < True, i.e. Posts come first and Comments second	
		3	lengthCategory	↑	order based on the lengthCategory value	
CPs		1.2, 3.2, 4.1, 4.2, 8.5				