

## BI / read / 12

BI 1  
BI 2  
BI 3  
BI 4  
BI 5  
BI 6  
BI 7  
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BI 12  
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BI 18  
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BI 20

query	BI / read / 12														
title	How many persons have a given number of messages														
pattern	<pre> classDiagram     class Person {         messageCount = count     }     class Message {         content not empty and length &lt; LengthThreshold and \$startDate &lt; creationDate     }     class Post {         language in \$languages     }     Person "1" -- "0..1" Message : hasCreator     Message "1" -- "0..1" Post : replyOf     </pre>														
description	<p>For each Person, count the number of Messages they made (messageCount). Only count Messages with the following attributes:</p> <ul style="list-style-type: none"> <li>• Its content is not empty (and consequently, the imageFile attribute is empty for Posts).</li> <li>• Its creationDate is after \$startDate (exclusive, equality is not allowed).</li> <li>• Its length is below the \$lengthThreshold (exclusive, equality is not allowed).</li> <li>• It is written in any of the given \$languages.</li> </ul> <ul style="list-style-type: none"> <li>– The language of a Post is defined by its language attribute.</li> <li>– The language of a Comment is that of the Post that initiates the thread where the Comment replies to.</li> </ul> <p>The Post and Comments in the reply tree's path (from the Message to the Post) do not have to satisfy the constraints for content, length, and creationDate.</p> <p>For each messageCount value, count the number of Persons with exactly messageCount Messages (with the required attributes).</p>														
params	<table border="1"> <tr> <td>1</td> <td>\$startDate</td> <td>Date</td> <td>Selected randomly from a 60-day interval.</td> </tr> <tr> <td>2</td> <td>\$lengthThreshold</td> <td>32-bit Integer</td> <td>Balanced against startDate to filter around 30% of the Messages within a language and keep the variance low. The selection of this parameter uses a factor table of bucketed Message lengths and creation dates.</td> </tr> <tr> <td>3</td> <td>\$languages</td> <td>{String}</td> <td>Only the most frequently used languages</td> </tr> </table>	1	\$startDate	Date	Selected randomly from a 60-day interval.	2	\$lengthThreshold	32-bit Integer	Balanced against startDate to filter around 30% of the Messages within a language and keep the variance low. The selection of this parameter uses a factor table of bucketed Message lengths and creation dates.	3	\$languages	{String}	Only the most frequently used languages		
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result	<table border="1"> <tr> <td>1</td> <td>messageCount</td> <td>32-bit Integer</td> <td>A</td> <td>Number of Messages created</td> </tr> <tr> <td>2</td> <td>personCount</td> <td>32-bit Integer</td> <td>A</td> <td>Number of Persons with messageCount Messages</td> </tr> </table>	1	messageCount	32-bit Integer	A	Number of Messages created	2	personCount	32-bit Integer	A	Number of Persons with messageCount Messages				
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sort	<table border="1"> <tr> <td>1</td> <td>personCount</td> <td>↓</td> <td></td> </tr> <tr> <td>2</td> <td>messageCount</td> <td>↓</td> <td></td> </tr> </table>	1	personCount	↓		2	messageCount	↓							
1	personCount	↓													
2	messageCount	↓													
limit	n/a														
CPs	1.1, 1.2, 1.4, 2.6, 3.2, 4.2, 4.3, 8.1, 8.2, 8.3, 8.4, 8.5														