

## BI / read / 4

BI 1	query	BI / read / 4			
BI 2	title	Top message creators by country			
BI 3	pattern	<p>The diagram illustrates the query pattern for finding top message creators by country. It consists of two main parts:</p> <ul style="list-style-type: none"> <li><b>Part 1: Select top 100 forums based on memberCount in country</b> <ul style="list-style-type: none"> <li><b>Country</b> (yellow box) has a <b>name</b> attribute.</li> <li><b>City</b> (teal box) is <b>isPartOf</b> a <b>Country</b>.</li> <li><b>Forum</b> (green box) is <b>locatedIn</b> a <b>City</b>.</li> <li><b>Forum</b> has a <b>memberCount</b> attribute, which is calculated as <b>count(member)</b>.</li> <li><b>Person</b> (orange box) is a <b>member</b> of a <b>Forum</b>.</li> <li><b>Forum</b> has a <b>creationDate</b> attribute, which is filtered by <b>creationDate &gt; \$date</b>.</li> </ul> </li> <li><b>Part 2: For each country, for each of the top 100 forums (topForum), find the top posters</b> <ul style="list-style-type: none"> <li><b>topForum: Forum</b> (green box) is <b>containerOf</b> a <b>Post</b> (red box).</li> <li><b>Post</b> has a <b>replyOf*0..</b> relationship with a <b>Message</b> (purple box).</li> <li><b>Message</b> has a <b>messageCount</b> attribute, which is calculated as <b>count(message)</b>.</li> <li><b>Message</b> has a <b>creationDate</b> attribute, which is filtered by <b>creationDate &gt; \$date</b>.</li> <li><b>Message</b> has a <b>hasCreator</b> relationship with a <b>person: Person</b> (orange box).</li> <li><b>Forum</b> has a <b>hasMember</b> relationship with a <b>person: Person</b>.</li> <li><b>Person</b> has attributes <b>id</b>, <b>firstName</b>, <b>lastName</b>, and <b>creationDate</b>.</li> </ul> </li> </ul>			
BI 4	desc.	<p>Find the most popular Forums by Country, where the popularity of a Forum is measured by the number of members that Forum has from a given Country.</p> <p>Calculate the top 100 most popular Forums. If a Forum is popular in multiple countries, it should only be calculated once with its largest membership. In case of a tie, the Forum(s) with the smaller id value(s) should be selected.</p> <p>For each member Person of the 100 most popular Forums, count the number of Messages (messageCount) they made in any of those (most popular) Forums. Also include those member Persons who have not posted any Messages (have a messageCount of 0).</p>			
BI 5	params	1	date	Date	Selected from the first 30 days of the network
BI 6	result	1	person.id	ID	R
BI 7		2	person.firstName	String	R
BI 8		3	person.lastName	String	R
BI 9		4	person.creationDate	DateTime	R
BI 10		5	messageCount	32-bit Integer	A
BI 11	sort	1	messageCount	↓	
BI 12		2	person.id	↑	
BI 13	limit	100			
BI 14	CPs	1.2, 1.3, 2.1, 2.2, 2.3, 2.4, 3.3, 5.3, 6.1, 8.2, 8.4			