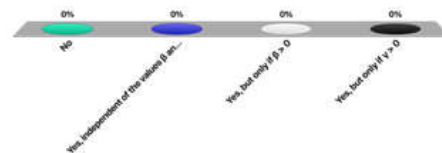


Can documents which do not contain any keywords of the original query receive a positive similarity coefficient after relevance feedback?

1. No
2. Yes, independent of the values  $\beta$  and  $\gamma$
3. Yes, but only if  $\beta > 0$
4. Yes, but only if  $\gamma > 0$



Consider the document:

“Information retrieval is the task of finding the documents satisfying the information needs of the user”

Using MLE to estimate the unigram probability model, what is  $P(\text{the} | M_d)$  and  $P(\text{information} | M_d)$ ?

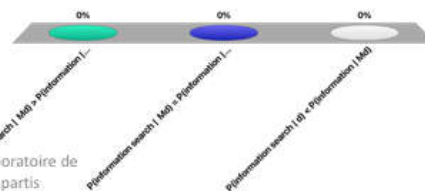
1.  $1/16$  and  $1/16$
2.  $1/12$  and  $1/12$
3.  $1/4$  and  $1/8$
4.  $1/3$  and  $1/6$



Consider the following document

$d = \text{"information retrieval and search"}$

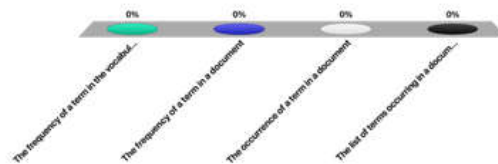
1.  $P(\text{information search} \mid M_d) > P(\text{information} \mid M_d)$
2.  $P(\text{information search} \mid M_d) = P(\text{information} \mid M_d)$
3.  $P(\text{information search} \mid d) < P(\text{information} \mid M_d)$



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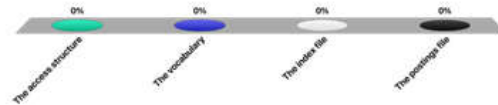
## A posting indicates...

1. The frequency of a term in the vocabulary
2. The frequency of a term in a document
3. The occurrence of a term in a document
4. The list of terms occurring in a document



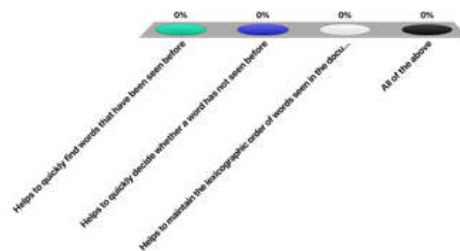
When indexing a document collection using an inverted file, the main space requirement is implied by ...

1. The access structure
2. The vocabulary
3. The index file
4. The postings file



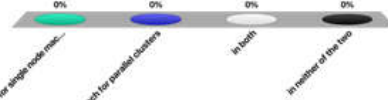
## Using a trie in index construction ...

1. Helps to quickly find words that have been seen before
2. Helps to quickly decide whether a word has not been seen before
3. Helps to maintain the lexicographic order of words seen in the documents
4. All of the above



## Maintaining the order of document identifiers for vocabulary construction when partitioning the document collection is important ...

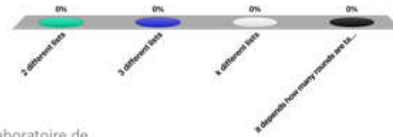
1. in the index merging approach for single node machines
2. in the map-reduce approach for parallel clusters
3. in both
4. in neither of the two



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When applying Fagin's algorithm for a query with three different terms for finding the k top documents, the algorithm will scan ...

1. 2 different lists
2. 3 different lists
3. k different lists
4. it depends how many rounds are taken

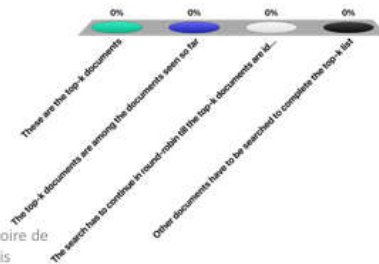


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## Once $k$ documents have been identified that occur in all of the lists ...

1. These are the top- $k$  documents
2. The top- $k$  documents are among the documents seen so far
3. The search has to continue in round-robin till the top- $k$  documents are identified
4. Other documents have to be searched to complete the top- $k$  list



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