Feedback — Week 2 Quiz

Help Center

You submitted this quiz on **Sat 18 Apr 2015 12:31 AM PDT**. You got a score of **10.00** out of **10.00**.

Question 1

Suppose a query has a total of 4 relevant documents in the collection. System A and System B have each retrieved 10 documents, and the relevance status of the ranked lists is shown below:

```
System A: [- + - - - - - - - -]
System B: [+ + - - - - - - - -]
```

where the leftmost entry corresponds to the highest ranked document, and the rightmost entry corresponds to the lowest ranked document. A "+" indicates a relevant document and a "-" corresponds to a non-relevant one. For example, the top ranked document retrieved by System A is non-relevant, whereas the top ranked one by B is relevant.

What is the **precision at 10 documents** of both systems?

Your Answer		Score	Explanation
○ P(A) = 1/40 P(B)= 2/40			
○ P(A) = 9/10 P(B)= 8/10			
○ P(A) = 1/4 P(B)= 2/4			
◉ P(A) = 1/10 P(B)= 2/10	✔	1.00	
Total		1.00 / 1.00	

Question 2

Assume the same scenario as in Question 1. What is the **recall** of both systems?

Your Answer	Score	Explanation

○ R(A) = 9/10 R(B)= 8/10			
◉ R(A) = 1/4 R(B)= 2/4	✔	1.00	
○ R(A) = 1/40 R(B)= 2/40			
○ R(A) = 1/10 R(B)= 2/10			
Total		1.00 / 1.00	

Question 3

Assume the same scenario as in Question 1. What is the **average precision** of both systems?

Your Answer		Score	Explanation
○ AP(A) = 7/20 AP(B) = 7/10			
○ AP(A) = 1/20 AP(B) = 1/5			
◉ AP(A) = 1/8 AP(B) = 1/2	✔	1.00	
○ AP(A) = 1/10 AP(B) = 1/5			
Total		1.00 / 1.00	

Question 4

Assume you have two retrieval systems X and Y. For a specific query, system X has a higher precision at 10 documents compared to Y. Can system Y have a higher **average precision** on the same query?

Your Answer		Score	Explanation
◉ Yes	✔	1.00	
○ No			
Total		1.00 / 1.00	

Question 5

Let w_1, w_2, and w_3 represent three words in the dictionary of an inverted index. Suppose we have the following document frequency distribution:

Word	Document Frequency
w_1	1000
w_2	100
w_3	10

Assume that each posting entry of document ID and term frequency takes exactly the same disk space. Which word, if removed from the inverted index, will save the **most** disk space?

Your Answer		Score	Explanation
We cannot tell from the given information.			
w_3			
w_1	✔	1.00	
w_2			
Total		1.00 / 1.00	

Question 6

Assume we have the same scenario as in Question 5. If we enter the query Q= "w_1 w_2" then the **minimum** possible number of accumulators needed to score all the matching documents is:

Your Answer		Score	Explanation
1000	✔	1.00	
10			
100			
1100			

Total	1.00 / 1.00

Question 7

The gamma code for the term frequency of a certain document is **1110010**. What is the term frequency of the document?

Your Answer		Score	Explanation
12			
9			
10	✔	1.00	
11			
Total		1.00 / 1.00	

Question 8

When using an inverted index for scoring documents for queries, a shorter query always uses fewer score accumulators than a longer query.

Your Answer		Score	Explanation
True			
False	✔	1.00	
Total		1.00 / 1.00	

Question 9

Can a retrieval system have an F1 score of 0.75 and a precision of 0.5?

Your Answer		Score	Explanation
No	✔	1.00	

○ Yes			
Total		1.00 / 1.00	

Question 10

For any ranked list of search results, precision at 10 documents is **always** higher than precision at 20 documents.

Your Answer		Score	Explanation
◉ False	✔	1.00	
○ True			
Total		1.00 / 1.00	