Task7

Nawar Saeed

Artificial Intelligence for the Web, VT21
DT506A

16 april 2021

This task is about implementing an algorithm for merge-based queries where the documents are inserted into the result list based on if they occurs at least one of the inverted list, see the merge function on line 97 in Task.7.py.
For this task, the parser function has also been modified, where a score tf = 1 has been added to each term, see parser () line 57 in Task7.py.
Morever, I have also implemented another scoring system based on BM25 scores that replaces tf scores, and this is done for optimization purposes and to get more relevant information, see bm25-score() line 36 in Task7.py.
When it comes to computing the MAP, three functions have been added to Task7.py, namely get-benchmark () line 167, precision-at-k() line 184, average-precision line198 and evaluate-benchmark () line 21. All these functions are already documented so I will do not go through how they work here;)
As a result of this I have got MAP = 0.05 when using the tf scores and also get MAP = 0.449 when using BM25 scores. When it comes to algorithmic improvements hag I tried to take into account the way I write the code, but have not figured out how to compare it with a previous task. Unfortunately, the teacher was not available to ask questions.