

Arpan Mukherjee, MT17007

Assignment - 1

For the following queries I applied Merge postings and Skip Pointers algorithm and I got the following result:

Query 1: “write AND think”

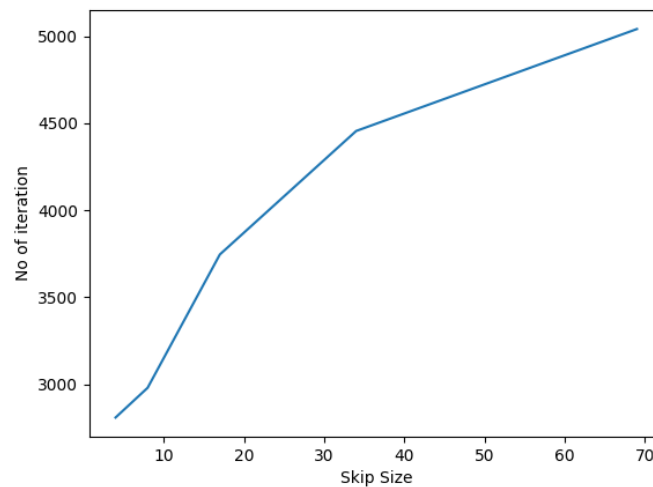
Result and Analysis:

- Merge Postings Algorithm : 5314
- Skip Pointers Algorithm:

For graph plotting purpose I am considering only skip size of the list 2, changing rate for both the skip size is same.

Skip size	No of Iterations
69	5178
34	4951
17	4338
8	3588
4	3142

Following is the graph for the above mentioned example



Query 1: “article AND write”

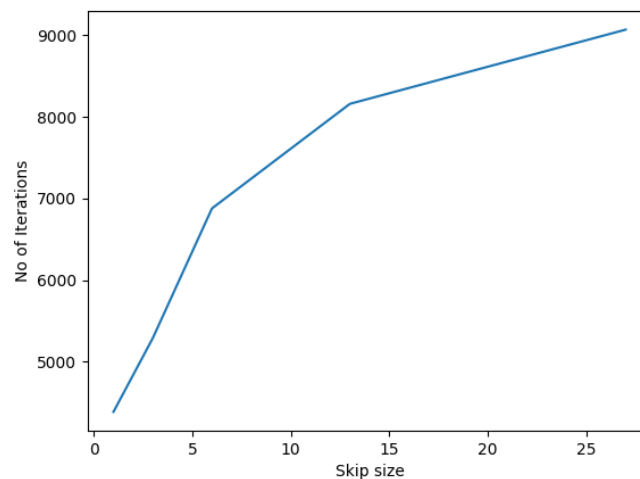
Result and Analysis:

- Merge Postings Algorithm : 9541
- Skip Pointers Algorithm:

For graph plotting purpose I am considering only skip size of the list 2, changing rate for both the skip size is same.

Skip size	No of Iterations
27	9071
13	8161
6	6879
3	5291
1	4385

Following is the graph for the above mentioned example



So as we can see from the resultant graph if we drastically increase the skip size of the list, it won't affect much in terms of improvement – because most of the times skip pointers won't really be used for as we are taking a huge jump. If we start reducing the skip size the no of iterations will be minimized and for merge posting it will be maximum as the skip size for both the lists is 1.

Following is the wordcloud that I generated from the given texts after removing header files, preprocessing(tokenizing and stemming).

