CME 2201 - Assignment 1

INVERTED INDEX BY USING HASH TABLES

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Load Factor	Hash Function	Collision Handling	Collision Count	Indexing Time	Avg. Search Time	Min. Search Time	Max. Search Time
α=50%	SSF	LP	749.828.869	157,43 s	0,48 ms	0,39 ms	5,61 ms
		DH	32.651.904	47,66 s	0,04 ms	0,0043ms	4,98 ms
	PAF	LP	2.282.097	46,09 s	0,01 ms	0,0002ms	4,84 ms
		DH	1.441.919	53,07 s	0,01 ms	0,0003ms	4,87 ms
α=80%	SSF	LP	750.914.181	159,1 s	0,64 ms	0,41 ms	38,78 ms
		DH	32.689.850	54,39 s	0,04 ms	0,0047ms	4,97 ms
	PAF	LP	2.287.564	41,5 s	0,01 ms	0,0003ms	4,85 ms
		DH	1.443.435	51,49 s	0,01 ms	0,0003ms	4,87 ms

Table 1.*Performance matrix*

The best method is DH/PAF. The worst method is LP/SSF. The PAF faster than SSF, The DH faster than LP and The 0,8 load factor better than 0,5 load factor.

The PAF better than SSF because PAF use prime numbers so, words are have more unique key. If the program have got unique keys, the collision will be less.

The DH better than LP because when there is collision, the controls is done with prime numbers.

The load factor 0.5 better than 0.8 because the collision will be more 0,8 load factor.

As a result, 0,5 load factor DH/PAF is best. The collision must be blocked for the best program.

CLASS'S NAMES:

SingleLinkedList(), Node(), HastEntry(), HashTable(), Management(), Main()

FUNCTIONS'S NAMES:

ConvetNode(), ReadFile(), Run(), Delimiters(), forSSL(), SSF(), PAF(), hashFunction(),

LP(), DH(), Resize(), put(), printhash(), isContainsLP(), isContainsDH(), Search(), Search1000().