

### 1.3 Processing Bool query

e1. Brutus And Calpurnia

· posting intersection; posting merge

ex 1.4 (  $A \wedge \neg B ; A \vee \neg B$  ) complexity

1.5 (  $A \vee B$  )  $\wedge \neg (C \vee D)$ .

1.6 a.  $\hookrightarrow$  DNF (  $\neg A \wedge \neg B$  )  $\vee (C \vee D)$

b. which is more efficient?

c. analyze efficiency

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1.7 (  $a \vee b$  )  $\wedge (c \vee d)$   $\wedge (e \vee f)$

recommend a query process.

$a: 200k ; b: 87k ; c: 107k ; d: 270k , e: 46k , f: 317k$

(Ref to 1.3(1.5)).

$\hookrightarrow (a \vee b) \wedge (e \vee f) \wedge (c \vee d)$

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1.8  $a \wedge b \vee c$ .

discuss  $\underbrace{\text{freq}(c)}_{\text{opt.}} \longleftrightarrow$  order of query processing



(  $[\text{freq}(a), \text{freq}(b), N - \text{freq}(c)]$  sorted )

- generate the posting list for "Not countryman".
- order these terms by their updated pr-list.

1.9. Not guaranteed

It's optimal for worst case.

example: doclist: ["c", "c", "c", "a b", "a b"].

⊗ query:  $a \wedge b \wedge c$ ;