8701 Overview of Database Research  
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Paper Reviewed: Combining Systems and Databases: A Search Engine Perspective (Eric A Brewer)

Questions from reviewed paper

Q1. In the paper the authors describes that usually the updates are done on the search engine database in chunks. But the author also describes a method to perform real-time updates and deletes for individual documents if needed. Describe this method.

Answer:
Realtime deletes and updates can be done using a property table for deletes. To delete a document just mark the document as ‘deleted’ in the property table. The query is always appended with a property ‘not deleted’. So any document marked deleted will not show in search.
To update a document, mark the old version as deleted and insert the new version entry into a different chunk.

Q2. In the paper, the authors have given an example of a small query language to query their example schema. The BNF for the language is as follows

expr: expr and expr  
| expr or expr  
| expr FILTER prop  
| word

prop: prop AND Prop  
| prop OR prop  
| NOT prop  
| NOT expr  
| property

What is the main different between expr and prop in their language?

Answer:
The main difference between expr and prop is that expr has a score while property doesn’t. Property is just a boolean value. Property will determine whether a document will be returned or not. Expr determines the rank of the document.