Notes for 11/10/09

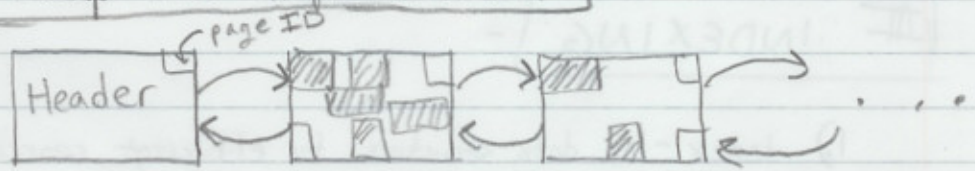
Physical Design

Attribute values → tuple
tuple → page
page → File (table) : collection of pages

1. Heap File - way to organize data such that its in no particular order
2. Sorted File - ordered data

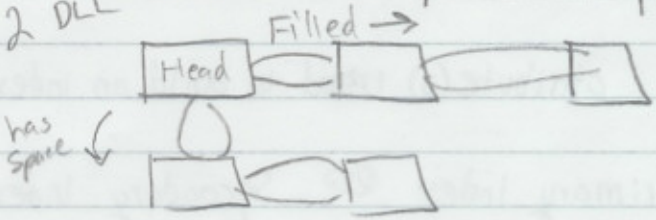
I) Heap File Implementation

1) DLL
1 DLL

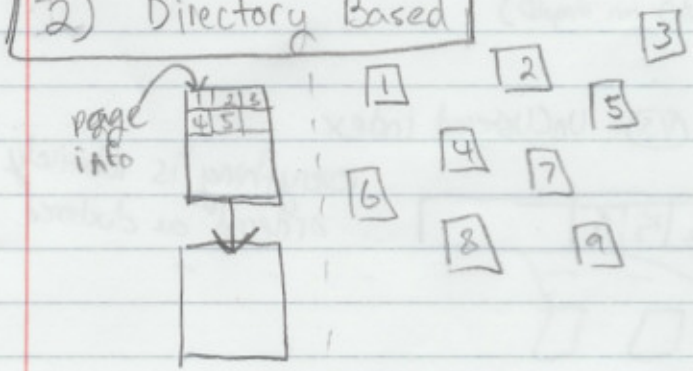


Implementation	search	insertion	deletion
one DLL	O(N)	O(N)	O(N)
two DLL	O(N)	O(1)	O(N)
Directory Based	O(N)	//	//
:			

2 DLL

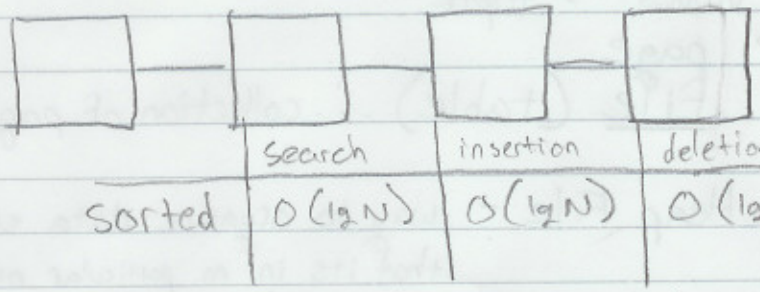


2) Directory Based



* Reserved pages to act as a directory
  - holds info for all other pages
    - page ID
    - # of bytes

II Sorted File - tuples are organized by the order of the values of attributes.

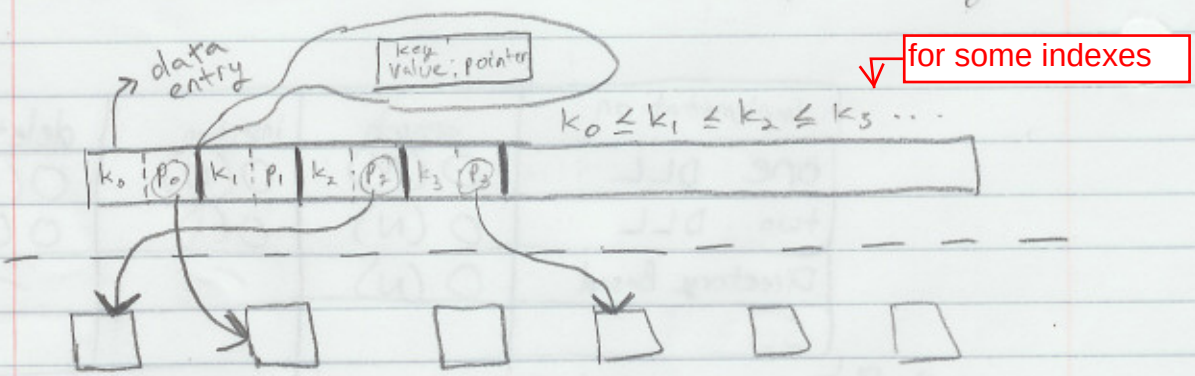


	search	insertion	deletion
sorted	$O(\lg_2 N)$	$O(\lg_2 N)$	$O(\lg_2 N)$

- Sorted Files only help searches that are for the attribute the file is sorted by

III INDEXING -

1.) Index - a data structure for efficient searching

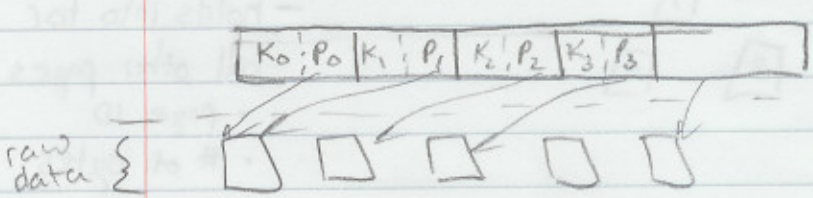


* search key: attribute(s) used to build an index

2). Primary Index (vs.) Secondary Index

↳ index using primary key (e.g. index on emplD)

3) Clustered Index (VS) UnClustered index



everything is relatively ordered as clustered