

November 10, 2009

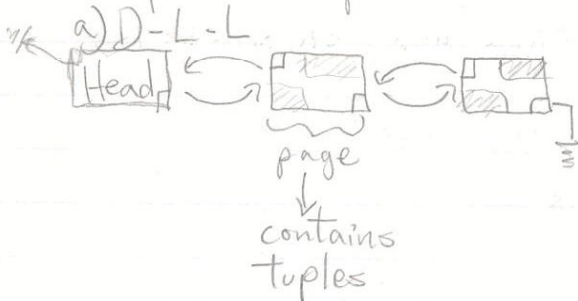
Part I: Filing

Note: Send email to the professor informing him of team members for final project.

attribute values \rightarrow tuple
 tuple \rightarrow page
 page \rightarrow file (table)

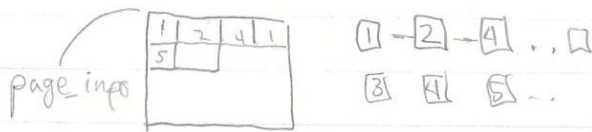
1. Heap file - unordered data inside
2. Sorted file - ordered data inside

1. Heap File Implementation



	1 d-l-l (1 double linked list)	
search	insertion	deletion
$O(N)$	$O(N)$	$O(N)$
	2 d-l-l (2 double linked lists)	
search	insertion	deletion
$O(N)$	$O(1)$	$O(N)$

b) Directory-based



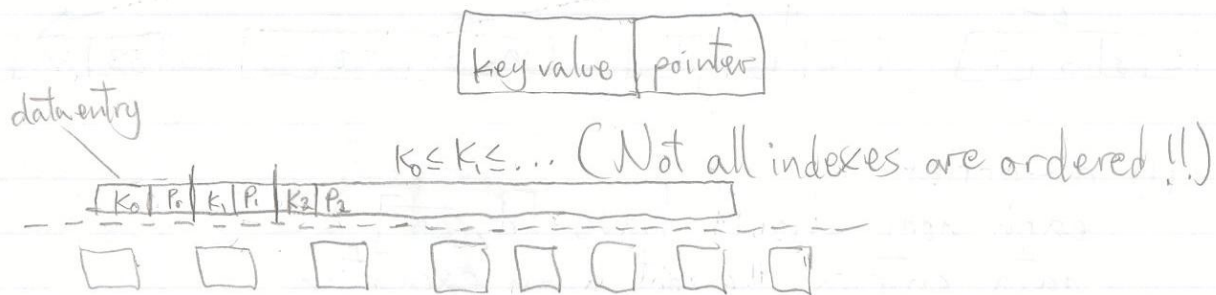
	directory	
search	insertion	deletion
$O(N)$		

2. Sorted file - tuples are organized by the order of the values of attributes

	sorted file	
search	insertion	deletion
$O(\log N)$	$O(\log N)$	$O(\log N)$

Part II: Indexing

Index - data structure for efficient searching



search key: attributes used to build index

primary index vs. secondary index

primary index - index based on the primary key of the table
example: index on emp ID

clustered index vs. unclustered index

clustered index - index keys are organized in the same way as in the tuples in the table

sparse vs. dense indexes

dense index - every single tuple has a key value in the index
sparse index - index values can correspond to a range of key values in the table