Quiz 2 Indexing

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Name all of the types of single level ordered indexes.

Primary Index

Secondary Index
Clustering Index
~~Dense Index~~
~~Sparse Index~~

What is the idea behind using a multileveled index? State your answer in terms of bfr.

One idea behind multileveled indexes is that they reduce the part of the index that we search for by bfr, an index's blocking factor, which should be greater than 2. Because of this, the space we search is reduced down much faster.

What does it mean to be a balanced tree?

The idea behind a balanced tree is that each of its nodes are at least half full. -1

What is the difference between a tree pointer and a data pointer in a multi-level index?

A tree pointer is a pointer to another node within the b-tree. A data pointer is a pointer to the record whose search key is eual to the data file block containing that record.

What is the disadvantage of using physical indexing?

A disadvantage of physical indexing is that the pointer must be changed if a record is moved to another disk location.

What is meant by a dynamic multilevel index? Give two names of dynamic multilevel indexes.

Dynamic multilevel index means that it leaves some space in each of its blocks for the insertion of new entries. Two names of dynamic multilevel indexes are B-Trees and B+-Trees.

How is a B+ tree constructed differently than a B Tree?

In a B-Tree a pointer exists at all levels of the tree structure.

In a B+-Tree all of the pointers to data records exist at the leaf level nodes.

A B+-Tree can have less levels than a B-Tree.

A B+-Tree can have a higher capacity of search values.

A B+-Tree doesn't have data associated with internal nodes.

The leaf nodes of a B+-Tree are ordered in a sequential linked list.

In A B-Tree frequentley accessed nodes are closer to the root and are able to be accessed quicker.

Insertion into a B-Tree is more complicated than a B+-Tree.