**Data Structures**

**Final Project**

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Our project was to create a simple Database system. On running the program, the user is asked which type of indexing would he/she like.

* B tree indexing
* Avl indexing
* Red black indexing

All the files provided to us were first read by all the trees and indexed in different directories. B-tree data is saved in Bind folder in 10 files, AVL reads data , balances and stores each node in AVLind directory in 10 files and so does the red black tree.

**Files:**

* Btree.h has B tree implemented along with features like delete, update, search and traverse.
* AVLtree.h has Avl tree implemented along with features like delete, update, search and traverse.
* RBtree.h has Red blacktree implemented along with features like delete, update, search and traverse.
* Source.h has our menu and includes all these tree files in header.

First the user is asked which indexing to use then that tree gets the root value from files. A menu is shown to the user where he/she can perform the following actions.

* See all data from the file
* Search data
* Delete data
* Update data
* Search from any field
* Range search

Each tree class has all thes functions defined and implemented inside them and just needs parameter passing. After deletion or updation, the file that had that stored in it also gets updated.