

Muhammad Umer Farooq

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Sir, Muhammad Ossama Razza.

AlphaFileSystem

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Overview

The simulation of the file system aimed to understand the basics of how hash tables of file systems work. There are many file systems like NTFS, EFI etc. But in this project we build a (virtual) file system that will be simple enough. C++ will be used as reference languages.

Data Structures and algorithms use.

1. Hash table
2. Red Black Tree (maybe)
3. Merge sort.

Goals

1. To understand how file systems work underneath the hood.

Requirements

1. This file system is able to write, read, copy, move, and delete files.
2. This file system allows you to create a folder.
3. The files and folder record should be read and written into the Hash table of the file system.
4. Merge the files and folder into one file so to called img file to behave as virtual file system (Optional)
5. GUI using QT C++ (Optional)

There are two requirements options: if time is left and I found time then I will try my best to implement those as well.

License

MIT.

References

<https://www.qt.io/>

https://github.com/lablnet/Data_Structure/tree/main/HashTable

<https://www3.nd.edu/~pbui/teaching/cse.30341.fa17/project06.html>

THANKS AND JAZAKALLAH