

PDF- Ebook Reader

CS13B051 CS13B055

Idea : To implement a pdf viewer that can search for and import files from the system. The file can then be opened from the suggestions displayed after typing a part of the name ... or a wrong spelling.

Also other usual features like search etc have been implemented.

Data Structures : To store the names of all the imported files we used a **ternary tree** data structure. It stores the name of the file and the index to the path of the file which in turn is stored in a arraylist. This ensures that the loading the pdf once we get the name is Order 1.

Ternary Tree : Complexity

Insertion , deletion ,Look up : Avg : $\log(n)$
:Worst : n

And for auto-correction of wrong names , we used a **B-K Tree** . The BKTree is built with the set of all the file names imported and queries are made by the structure, searching for words that differ in levenstehn distance indicated by the precision argument.

About only 5-8 percent of the tree is searched for a precision of 1. Greater the precision required , more the

tree search.

Libraries : Jpedal* library was used.

* Jpedal is not completely open source but there is an open source version with limitations on many classes. We used this one.

To be done :

Highlight

Continuous display of pages

(Both were not done due to class restrictions by Open source jpedal)

Night Mode : Was looking bad.

Text Selection : Will explore this in summer.

All these are integrated into a GUI .