

CSE 451: Operating Systems

Hard Lessons Learned

Windows

Generic Table Package using

Splay Tree

Gary Kimura

A simple package to look up keyed data

- Create() a table, specify a generic ordering function
- Add() an entry to the table
- Lookup() an entry based on a key
- Remove() an entry

- Great for things like symbol tables in a compiler or tracking opened files

- Added a way to enumerate a table from beginning to end, really as a debug tool

Splay trees: the perfect solution

- Just a binary search tree
- Self adjusting based on lookup

Performance gains

- Locality of lookups

What could possibly go wrong?

- My simple solution for enumerating a table linearized the tree. Augh!

Back to the drawing board.

- Red Black replaced Splay