

## 1 PLAN

My plan was to first look at no-op to understand IO schedulers work. I looked at the modularization of the functions, and saw that dispatch executed the request while add managed putting the request in the correct place. I then drew out how the add and dispatch function should work on paper. Then using no-op as a reference, I used the correct struct, etc. to finish the implementation.

## 2 REFLECTIONS

1. I think the point of the assignment was to let us figure out how to use kernel modules, and figure out complex code ourselves.
2. I approached the problem in two parts. First, how did elevator work. Once I figured that out, I moved on to figuring out how to implement it and include it in the kernel.
3. I made sure it compiled, make sure the kernel used it as default by setting options, fixed many kernel panics, and used printk statements to show my code was actually running. Doing basic file operations worked.
4. I learned how Kernel modules work, and a lot about Disk I/O and kernel data structures.

| Detail  | Author         | Description  |
|---------|----------------|--|
| 004820e | Taylor Fahlman | Now final makefile   |
| 3b6ac89 | Taylor Fahlman | final makefile   |
| 274304e | Taylor Fahlman | Finished up  |
| a107a20 | Taylor Fahlman | Used this implementation   |
| 1d76d01 | Taylor Fahlman | Using this page <a href="http://www.chronox.de/crypto-API">http://www.chronox.de/crypto-API</a> , I created a cipher structre. |
| 95a5cc9 | Taylor Fahlman | Included crypto ai   |
| bdb3470 | Taylor Fahlman | Fixing make errors   |
| 7750ae7 | Taylor Fahlman | changed function calls to match the most up to date example  |
| 58aab9a | Taylor Fahlman | Remove pointer to correct make errors  |
| 31dc222 | Taylor Fahlman | Fixed <i>xfer<sub>tiobasedonnewcode</sub></i>  |
| 20dad18 | Taylor Fahlman | Moved sbd to bottom in case of dependencies  |
| ee7413d | Taylor Fahlman | Found much newer sbull implementation, using that  |
| 5f9ca5b | Taylor Fahlman | More cleanup from ldd3   |
| 613f79c | Taylor Fahlman | Added target to makefile   |
| 812e57e | Taylor Fahlman | udpated to change deprecated functions   |
| ecc9f2a | Taylor Fahlman | Kconfig target   |
| 2acc30c | Taylor Fahlman | sbd target in makefile   |
| f1c3325 | Taylor Fahlman | Invalidate, ldd3   |
| 9b782d9 | Taylor Fahlman | sbd exit, from ldd3 full implementation  |
| a0a30d2 | Taylor Fahlman | Completed init based off full ldd3 implementation  |
| a5bbcbf | Taylor Fahlman | simple request, from ldd3  |
| c3370db | Taylor Fahlman | oops, moved the code to the real function  |
| ea44a81 | Taylor Fahlman | Handle requests without queue, from ldd3   |
| 556b807 | Taylor Fahlman | <i>xfer<sub>bio</sub>, fromldd3</i>  |
| 043e549 | Taylor Fahlman | <i>xfer<sub>request</sub>, fromldd3</i>  |
| 379346f | Taylor Fahlman | Full request, ldd3   |
| c72f15f | Taylor Fahlman | transfer, controls size of copy  |
| 78b54a5 | Taylor Fahlman | Revalidate, from LDD3  |
| 72ad4fb | Taylor Fahlman | commit 69c6d65e9ca64cf710b2395fb93e8503a453b177 Author: Taylor Fahlman <jyou@  |
| d55496c | Taylor Fahlman | Added skeleton sbd   |
| b24b56f | Taylor Fahlman | Making sure I have a copy of sstf-iosched  |
| d9422f6 | Taylor Fahlman | Cleaning up before proeject 3  |
| 98906f4 | Taylor Fahlman | Actually increased searchers   |
| f196652 | Taylor Fahlman | Added explanitory comments   |
| d407207 | Taylor Fahlman | trying to stop segfault  |
| 646563d | Taylor Fahlman | Started threads  |
| 5ed8151 | Taylor Fahlman | Created base threads and function pointers   |
| 4e7f088 | Taylor Fahlman | searcher too   |
| 127ed1f | Taylor Fahlman | Need to make sure delete doesnt delete a non existant node   |
| 2cf1762 | Taylor Fahlman | Searcher waits until there is one deleter  |
| d85c03a | Taylor Fahlman | Insertor waits until it's the only inserter and there are no deleters  |
| c485a95 | Taylor Fahlman | Deleter now waits until it is the only thread running  |
| 7feb0e  | Taylor Fahlman | Created global counters for threads  |
| c9d6380 | Taylor Fahlman | Added deleter  |
| c851c1d | Taylor Fahlman | Restructured a bit, and it works now   |
| 55cb7dc | Taylor Fahlman | Changed name of argument for threads   |
| c5dc7e1 | Taylor Fahlman | Added another struct to handle all the arguments the threads will ened   |
| cd77e11 | Taylor Fahlman | Void number argument to deleter to count number of links   |
| 6a3ca86 | Taylor Fahlman | Get out of here  |
| 23140fd | Taylor Fahlman | Infinite for loop in main  |
| 851e6f5 | Taylor Fahlman | Track number of links with item member variable, corrected makefile issues   |
| 1b669a7 | Taylor Fahlman | Added void argument to searcher so it can know how many links to traverse  |
| 78be4af | Taylor Fahlman | insserter skeleton   |
| f996c00 | Taylor Fahlman | Added global buffer  |
| d78b590 | Taylor Fahlman | created linked list and linked list item   |
| 3a339f3 | Taylor Fahlman | Changed make clean to target the a3 executable   |
| b204075 | Taylor Fahlman | Outline of searcher, inserter and deleter functions  |
| ee3b08  | Taylor Fahlman | Outline of searcher, inserter and deleter functions  |