CS444 Assignment 3

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I. DESIGN PLAN

For this assignment we knew that there was a block device template available through the link provided with the assignment. After some research we found that this was an older version of the code and with a little searching we found an open source updated version that we used for the base of our project. Inside this code we found where the information was being transferred so we decided to encrypt and decrypt the information there. We keep track of the block size and encrypt and decrypt one block at a time when the data is being written or read.

II. CONCURRENCY QUESTIONS

1. We feel like the purpose of this assignment was to learn how to work with encryption and decryption. The concept was fairly simple but it became more complicated as we apply it on a block by block level. This assignment also allowed us to work with other open source code which helps us how to learn to read other people's code as well as add to it effectively.

2. We approached this problem in pieces. First we took the time to research block drivers. After that we took the time to review the base code and find an updated version that worked with this project. Next we worked on the encryption and decryption and then figured out how to apply it block by block as the data was being transferred.

3. In order to see if the project was working correctly we added print statements in the code. These allowed us to see the data before and after encryption and even though the data looked jumbled after encryption it showed that it was not the same as it was when it was first added.

4. We learned how to work with encryption and decryption. We also learned how block devices function. During this project we worked with some base code so we also got some practice reading and adding to already written code.

III. Version control log

TABLE I

GitHub log

Daniel Garlock, Mon Nov 14 19:33:36 2016 -0700 : Added writeup files
Michael Phelps, Mon Nov 14 17:54:56 2016 -0700 : added testing files
Michael Phelps, Mon Nov 14 15:24:56 2016 -0700 : Finished sbd.c crypto
Daniel Garlock, Mon Nov 14 10:31:24 2016 -0700 : added crypto key inintialization
Michael Phelps, Wed Nov 9 11:05:53 2016 -0700 : added initial sbd.c file

IV. Work log

TABLE II

Full log

Daniel Garlock, Mon Nov 14 19:33:36 2016 -0700 : Added writeup files
Michael Phelps, Mon Nov 14 17:54:56 2016 -0700 : added testing files
Michael Phelps, Mon Nov 14 15:24:56 2016 -0700 : Finished sbd.c crypto
Daniel Garlock, Mon Nov 14 10:31:24 2016 -0700 : added crypto key inintialization
Michael Phelps, Wed Nov 9 11:05:53 2016 -0700 : added initial sbd.c file
Michael Phelps and Daniel Garlock, Wed Nov 9 10:00:00 : Meeting to distribute workload