Individual Report - Project 2

CS 5348 Operating Systems Concepts Fall 2021

Author of Report

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- Group number - 12

Other Members of Group

1. Raj Mishra (RXM190093)
2. Yu Chen (YXC190072)

Contribution of members

Adithya Iyer(Me)

Part 1 - In the first week of working on the project, we went through past notes for understanding concepts needed like lseek, read and write. I was better able to understand these concepts as they are taught in an undergraduate course I'm grading at UTD. My teammates and I worked together on campus for part 1 and I mainly took up the methods openfs() and quit(). Then Raj and I worked together on the main() method after which I focused on final commenting and refactoring of the code.

Part 2 - This part took much longer to understand as well as implement. Our team had to meet over call and in person more than once. With the help of understanding from lectures and online reference materials, I started to work on the methods cd(), cpin(), cpout() and rm(). When us teammates we decided the split of commands to be implemented, not all of these methods were assigned to me. But I tried them out with the objective of learning and it helped a great deal. While debugging and testing, Raj helped go through my code and showed his own implementation. Finally I modified the main() method to be used for part 2. We used Raj's final code for cpin and cpout as I had missed one key factor in both of these methods. We used the methods path_to_inode() (used directly for cd), rm() and process_path() from my code contribution towards the final submission. Final Testing was done together by all three of us together on campus where Raj and I both fixed some final errors with some console debugging, and once we were satisfied with the working, Yu Chen and I did the logging in the code to explain the logic flow during execution, and sent the file to Raj, which he submitted.

Raj Mishra

Part 1 - He handled the methods like chaining(), getFreeBlock() and addFreeBlock() by himself. These were used in many of our functions for part 1 and part 2. He also worked on the main() method with me and did the debugging and testing of the code along with Yu Chen.

Part 2 - He worked on the helper methods findUnallocatedInode() and also addFreeBlock() which he modified from part 1. Apart from this he worked on every function implementation in part 2. When we sat together to analyze each other's implementations, he showed the modifications that were necessary to cpin() and cpout(). While testing his code, we both identified some bugs and tried to see what needed to be fixed. Once we identified it together, he made some final small changes and also worked on the commenting in the code for the purpose of explaining the code logic used.

Yu Chen

Part 1 - He handled the initfs() method along with helper methods like writeBlockToFS() and writeInodeToFS(). He also did the debugging and testing of the code with Raj.

Part 2 - He worked on helper methods such as allocateFreeBlockToDir() and allocateNewInodeToDir(). He also modified initfs() along with major implementation of makedir(). He contributed to adding the logging in the code to explain the logic flow during execution.

Grade for other members

Raj Mishra

Grade: 99

Reason: Raj is a great team member and has a really good understanding of the concepts. He has worked tirelessly on the project and always contributed.

Yu Chen

Grade: 98

Reason: Yu Chen is a dedicated student and finishes all tasks assigned to him on time. He has good conceptual knowledge and clear coding skills.