The degree of success with this project is about 100%. The main method that I take to handle this project is that I divide this project into several small tasks, and figure out the order of doing these things: say we need build 2 pipe first, and spawn the child, parent transmit the data to the child and let child sort or “grep” the data, then parent read the sorted data or “greped” data back from the child. After I build the main frame of this project, I finish all the coding details of this project.

The behavior of grep1 program is different from the behavior of grep2 program. Grep1 program has the explicit result when the program is executed. While grep2 program comes across deadlock in the end. Because the source data used in the grep1 program is small while the source source data used in the grep2 program is extremely huge compared to the finite buffer. The command “grep” is different from the sort command, child grep the data and send the matched data back to parent through one pipe imediately, then one pipe got filled, when child wait space on this pipe, it can not read data from another pipe anymore, another pipe also got filled, and when parent can not clean up any space for child transferring data back. Then the entire program has deadlock in it.

Actually, it was extremely hard for me to finish this assignment. I have watched every recorded video no less than 3 times until I get to understand the assignment that I should finish. I have tried to read the related material carefully before I began to finish this assignment, which caused my late submission. Fortunately, I learn a lot through this assignment.

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