Bonus

I think history work well as expected. When in a particular directory using cd <directory>, an alter appears that can not find directory. This is intended case. Because we are already in the directory, so if we run same command again by history!<integer> or history!!, that alter is appears.

What did you learn?

1. How far did you get in this project? What grade are you expecting? Did you find the milestones in the description helpful? Do you think you could have gotten the project working as well as you did without the milestones?

   Yes. I found milestones in the description! The milestones are very helpful to me. These are teaching me how to think step to go and which one need to using. If milestones are not here, I will spend time more than now. But it takes a long time, and even without milestones, I think I could have made it!

2. Do you feel like a better programmer now that you've completed this project? How does this compare to programming project that you've had in prior class?

   In last year's computer system and data structure lecture, it was very difficult to do a programming project. Because I lack basic knowledge, and I did the project for the first time. But I think I'm a better programmer now. Because I can find information that can solve this error faster when an error occurs, and by doing many projects, I can now find myself which part to fix when the code is blocked.

3. Describe 3 problems (relating to this assignment) that arose while you were working on this project and explain how you solved them.

   1. **cd case**. When I have to use File object, I have to search how to use it at official document. This is not kindless to Korean. Reading this file and apply it to my code is very difficult.

2. **At cd's absolute path part**, it is hard to implement a function to do that. I found related document, but I can not understand how many operate parent() until meet that path… so I did not do that.

3. When I implement **history**, history is added at cmdlist, but did not operated as expected. The problem is position of the code and continue command. So I add some if operator at history!! And history!<integer> where when target command is history, just operate history function and continue. Then, it works!

4. How long did you spend on this assignment? Give me specifics.

Date	Time	Activities	Outcomes
3/30	6:00~ 12:00	~step 9	Successful
4/2	23:00~07:00	Finish making code	Well operating at window environment.
4/5	14:00~19:00	Test code in Linux system & write report	Well operating at Linux system

5. Total hours spent. Try to be honest and do not exaggerate here.

19 hours