Jackson Hsu

EC440

HW3

In this homework we had to create a simple shell for the RPi. I took advantage of the many examples given to us on the website as well as in the textbook. With the examples given I used those as the base to build my shell code. I had to add many more features such as implementing pipes so that the code could redirect and interrupt. To satisfy the requirements of the homework, I had implemented many functions in the code. The commands required that I was able to redirect and append to a file or another command. Therefore I wrote 2 functions, one for redirecting and one for appending. They are called REDIRECT\_FUNC and APPEND\_FUNC respectively. They were created based on various examples. Then I had a function to control and maintain forking processes called FORK\_EXEC. The PIPECOMMAND function is another form of redirection necessary for the functionality of the code. It serves to send the output from one program to another so that it can be further executed and processed. The INTHANDLER serves to control interrupts. When the standard combination of buttons for interrupts is pressed (control and c) then the function will interrupt the current process. Finally the parser is what ties all of these components together into a functional shell by taking the input and turning it into a comprehensive structure of data for other programs/functions to access. The code succeeded in that it runs and can print out tokens. It fails in that the parser doesn’t always print out the right tokens.