Reading and survey: Due 9/01/10

Read pages 1 through 40 in MOS. During or after your reading, write a response as directed for EACH of the exercises 1-15. Feel free to upgrade your answers, but a response to each question MUST be turned in at the beginning of next class.

This is survey, study guide and graded exercise. You are not expected to solve each problem completely at this time in the course. 3 points for a reasonably correct answer, 2 points for a good solution plan, 1 point for a good question about the question.

Programming Project: Due 9/15/10

“Write a shell similar to Fig. 1-19 but contains enough code that it actually works so you can test it. You might also ...”

1. Use the Gnu readline library to read each command line.

2. Make it execute the programs when the commands are to execute programs. Such commands begin with program names.

3. Make it build the list of commands that had been given so far, store them using a linked list data structure, and print them when the user gives the command “history”.

4. Observe how the bash shell will search its history list incrementally when you type Control-r. Your job is to reproduce this behavior in a simplified form when you give the command “rrr”, with some differences. First, your shell will search the history list backwards based on the prefix (initial characters) only, not an (internal) contiguous substring as the bash shell does it. Second, your shell will print prompts and feedback on separate lines, not on the same line as does bash.

5. Make your shell do standard input and output file redirection.

6. (Grad students:) Make your shell do pipelines.

The class plan is to discuss about C and data structures in class, and to practice using Linux with tools including make in the lab, so that you will be able to complete the project by Wednesday, Sept. 15. That is during the 3rd week of the semester, which is the 2nd full week. The class of Wed, Sept. 8 will be devoted to discussing problems that you have faced while working on the project.

1 ( )Answered below. ( )Below I wrote where to find needed information and how to use it. ( )I have no clue. Below is what puzzles me.

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