Assignment 2 - Submission Guidelines and Further Instructions

The answer sheet should be renamed as answers_assign2_[roll no].pdf. For example, if your roll number is 21100115, then the file should be named 'answers_assign2_21100115.pdf'. This answer sheet should contain a screenshot from each of the task (details of screenshots given below). Final submission should contain the following files: simple-shell.c, answers_assign2_[roll no].pdf

Compress the 2 files as zip. Rename the zipped file as "assignment2_[roll no].zip". Submit only this zipped file on LMS.

Project 1 —UNIX Shell:

Instructions:

- The starter code for this task can be found in the file simple-shell.c in directory final-src-osc10e/ch3/
- You can do this task on any Linux, UNIX, or macOS system
- To compile the file, use "*gcc -o simple-shell simple-shell.c*". Note: gcc is usually pre-installed in most Linux systems. In case it's not, please search online on how to install it for your system. If you still run into errors, you can do this part in the provided Debian virtual image, which already has gcc installed.
- To execute the file, use "*./simple-shell*"

Submission guidelines:
- Part I: Just an overview. Nothing to do here
- Part II: Include a screenshot of your program running (i.e. "*./simple-shell*") along with the following commands:
  1) "*ls -l*"
  2) "*ls &*" followed by "*ps*"

- Part III: Include a screenshot of your program running (i.e. "*./simple-shell*") along with the following commands:
  1) Run "*!!*". Your program must show an error.
  2) Run any three Linux commands (e.g. "*ls -l*", "*ps*", and "*ls*" etc.) and then run "*!!*".

- Part IV: In this part, you only need to implement the output redirect ">". You might want to read up on file descriptors here: https://www.geeksforgeeks.org/input-output-system-calls-c-create-open-close-read-write/

  Include a screenshot of the following sequence of commands

1) "*./simple-shell*" followed by "ls -l > *[your_name].txt*". Then exit your program by running Ctrl+C and then print the file contents in normal Linux terminal by running "*cat [your_name].txt*".

- Part V: This is the most interesting part! You must create two child processes in this part (as described in the instruction manual). Apart from this requirement, it's up to you how you want to implement this.

  Include a screenshot of your program running (i.e. "./simple-shell") along with the following commands:
  1) "*ps | grep PID*"
  2) "*cat simple-shell.c | head -10*"