Assignment 04 Linux Shell and Networking

1. Explain in your own words: what are relations among Bash, Korn, and C Linux shells? Besides main and popular Bash shell, when do we need to use Korn and C shell?

2. What is the command used to make a variable available to subshell? What shell variable contains the directory stack? How may we may be able to process (access) the related stack contents?

3. How may we kill a Linux process?

4. Does the Korn shell support recursive functions? If yes, we may want to make sure that the function will have an exit condition? Why?

5. Why most computer centers (e.g. national labs, HPC centers) only allow secure shell access, such as ssh etc., while not allow ftp etc. access? Give an example command line on: secure access your remote host account at qbc2.loni.org, with x-window function.

6. What is the difference between the http and https protocols?

7. What is the difference between a gateway and a router? Can a router be a gateway?

8. Using your own words to describe how scp (command) works. Give an example of the following: we need to copy one software folder named src in your qbc2.loni.org home directory to your local current directory. Assume you are using Linux terminal.