**Prelab assignment 7. Shell Script (Due date: 4:00pm May 4, 2023)**

|  |
| --- |
| * The TLCL book is publicly available at: <http://sourceforge.net/projects/linuxcommand/> * Prelab report should be your individual work (a prelab report is not a team assignment). It aims to promote every student to read the textbook as the course is moving forward. * HGU CSEE Standard on assignments:   + Submitting assignments or program codes written by others or acquired from the internet without explicit approval of the professor is regarded as cheating.   + Showing or lending one’s own homework to other student is also considered cheating that disturbs fair evaluation and hinders the academic achievement of the other student.   + It is regarded as cheating if two or more students conduct their homework together and submit it individually when the homework is not a group assignment. * Submit your complete prelab report in PDF. |

1. Read Chapters 24-25 of TLCL (pages 364-382) carefully and exercise all commands in the textbook. Write an answer to each of the following questions.

1. There are a few important keywords introduced in this chapter. Explain each of the followings in your own words.
   1. Shell script  
      : A shell script is a file containing a series of commands. The shell reads this file and carries out the commands as though they have been entered directly on the command line.
   2. Shebang (#!/bin/bash)  
      : The shebang is used to tell the kernel the name of the interpreter that should be used to execute the script that follows.
   3. The PATH variable  
      : List of directories is held withing an environment variable named PATH.
   4. The dot (.) command  
      : The dot(.) command is a synonym for the source command, a shell builtin that reads a specified file of shell commands and treats it like input from the keyboard.
   5. A here document (a.k.a. here-document, here-script, hereis, or heredoc)  
      : A here document is and additional form of I/O redirection in which we embed a body of text into our script and feed it into the standard input of a command.
2. *Hongchan* wrote a script file named “welcome\_to\_pi.sh” and would like to make it executable. She would like to make it runnable only for herself and her group members. Write a command for her.

*Answer*chmod ug=rx welcome\_to\_pi.sh

1. *Seokjae* has written a Bash shell script as below. What would you expect to see when you run the script?  
     
    #!/bin/bash  
    fool=genius  
    echo “Can’t believe you are such a $fool!”

*Answer*It will print out “Can’t believe you are such a genius!”

1. What do the following vim configuration settings do?
   1. :set syntax=sh  
      - With this setting, different elements of shell syntax will be displayed in different colors when viewing a script.
   2. :set tabstop=4  
      - The default is eight columns. Setting the value to 4 (which is a common practice) allows long lines to fit more easily on the screen.
   3. :set autoindent  
      - This causes vim to indent a new line the same amount as the line just typed. This speeds up typing on many kinds of programming constructs.