C/C++ Programming in a UNIX Environment, CS 3377, Problem Set 02

1. [50 = 25*2] Create a script of the session while experimenting with the following commands in one your directories: (start with script command and then run the following commands in sequence.)

    I.   List currently running jobs
    II.   Kill one of the running jobs
    III.   Cat an existing file using a command that misspells one character in the filename
    IV.   Correct the character using the next command run cat on correct file
    V.   Try to list files in \lost+found directory
    VI.   Find utilities to compress files and directories on your system
    VII.   Run the ls command with –help option
    VIII.   Run the help command on echo
    IX.   Echo your name and pipe it to the od command to see each character
    X.   Create a new file containing only your name using echo
    XI.   Remove the file you just created
    XII.   Copy an existing file in your directory to another file
    XIII.   Move the copies file to another file
    XIV.   Use grep to search for a word in one of your files
    XV.   Display the first line of a file
    XVI.   Display the last line of a file
    XVII.   Sort the contents of a file
    XVIII. Compare two files
    XIX.   Find the type of files in your directory
    XX.   Compress a directory using tar command
    XXI.   Compress the tar file you created using gzip
    XXII.   Put this .tar.gz file into another directory and uncompresss to get original directory back
    XXIII. List the users on your system
    XXIV.   Write today's date and time
    XXV.   Exit the script using exit command

Upload the script file you just created as the submission for this assignment on eLearning. You can start with the script command which will put the result of all of the commands that you run into a file name typescript. You can submit the created file.

Submit a separate file with answers to Questions 2-5 [12.5 X 4 = 50]

2. Is each of the following an absolute pathname, a relative pathname, or a simple filename?

    a. milk_co

    b. correspond/business/milk_co

c. /home/max

d. /home/max/literature/promo

e. ..

f. letter.0210

3. List the commands you can use to perform these operations:

a. Make your home directory the working directory

b. Identify the working directory

4. If the working directory is **/home/max** with a subdirectory named **literature**, give three sets of commands you can use to create a subdirectory named **classics** under **literature**. Also give several sets of commands you can use to remove the **classics** directory and its contents.

5. You should have read permission for the **/etc/passwd** file. To answer the following questions, use cat or less to display **/etc/passwd**. Look at the fields of information in **/etc/passwd** for the users on the local system.

a. Which character is used to separate fields in **/etc/passwd**?

b. How many fields are used to describe each user?

c. How many users are on the local system?

d. How many different login shells are in use on your system? (*Hint:* Look at the last field.)

e. The second field of **/etc/passwd** stores user passwords in encoded form. If the password field contains an **x**, your system uses shadow passwords and stores the encoded passwords elsewhere. Does your system use shadow passwords?