Sample Practice Assignment

SHELL SCRIPTING

Write shell scripts to do the following tasks. One script for each question.

Q1. Create a directory named "myprograms" in your home directory. In this directory add hundred thousand (1,000) files with extension of ".jpg", '.c', '.sh'. The size of each file will be between 1kb and 10kb.

Q2. Change the extension of all ".jpg" files to '.jpeg'.

Q3. Display all '.sh' files with size more than 5kb.

Q4. Create another directory "notmyprograms" in the home directory and move all .jpg and/or .jpeg files from the 'myprograms' directory to this directory whose size is larger than 10kb.

Q5. Display files in the current directory with creation time.

Q6.   Rename all files in directory 'myprograms' with extension '.jpg' in such a way that 'img_' is appended to the beginning their filename. e.g 'f1 .jpg' will be renamed as 'img_f1.jpg'

Q7. Create a subdirecotry 'myexecutables' in the directory 'myprograms'. Move all executable files into this subdirectory from 'myprograms' directory .

Q8. Create 3 subdirectories : shelldir, cdir, jpgdir and Move files into these three subdirectories according to their extensions.

Hint: Use ls, grep, mkdir, mv, copy, for loop in shell, if, else, switch for conditions.

SYSTEM CALLS

Q9. The program will fork four child process, each terminating in a different way:
- The Wise Son: sleeps for 1 second and the exits with status 16
- The Simple Son: calls exec to display mac address and exits with status 17.
- The Wicked Son: sleeps for seven seconds and executes date command after waking up and exits with status 20.
- The Son Who Doesn't Know How to Ask Questions: Prints the id of its grand parent and exits status 0.
- In the parent display messages for each child when every child exits.

Q10. implement execve in c program sending.c to send array argv of arguments containing file name to execute as first argument and 5 fruits name randomly selected from an array of 10 fruit names to shell script receiving.sh and sort there in shell before displaying to user.