Assignments:

UNIX

Overview:

This assignment has 3 short exercises, each for 30-60 minutes. You are expected to complete the course/ reference reading before attempting the exercise. The learning objectives are given below:

S.No	Exercise	Description	Learning Objective
1	Unix Internal and external Commands	This exercise is to use and observe the output of basic Unix commands.	Use the Unix commands.
2	Unix Internal and external Commands	This exercise is to use the Unix commands to switch between the directories using absolute and relative paths.	Switch between the directories to locate the files from different locations.
3	Unix Internal and external Commands	This exercise is to use the Unix commands to create and manipulate the files.	Perform file level operations.

UNIX Commands

Exercise 1: Exploring UNIX commands

Enter these commands at the UNIX prompt, and try to interpret the output. Ask questions and don't be afraid to experiment (as a normal user you cannot do much harm):

  echo hello world   passwd

       date   hostname

       arch   uname -a

       dmesg | more (you may need to press q to quit)

       uptime

      who am i

      who   id

      last   finger

      w

      top (you may need to press q to quit)

      echo $SHELL   echo

      {con,pre}{sent,fer}{s,ed}   man

      "automatic door"

      man ls (you may need to press q to quit)

      man who (you may need to press q to quit)

      who can tell me why i got divorced   lost

      clear   cal 2000

      cal 9 1752(do you notice anything

      unusual?)   bc -l(type quit or press Ctrl-d

      to quit)   echo 5+4 | bc -l

      yes please (you may need to press Ctrl-c to quit)

      time sleep 5

      history

Recommended duration: *30 minutes*

Exercise 2: Exploring UNIX commands, working with Files and Directories

Try the following command sequence:

cd   pwd   ls

-al   cd .

pwd (Where did that get you?)

cd ..   pwd

ls -al   cd ..

pwd   ls -al

cd ..

pwd (what happens now)

cd /etc   ls -al | more

cat passwd   cd -   pwd

1. Continue to explore the file system tree using cd, ls, pwd and cat. Look in /bin, /usr/bin, /sbin, /tmp and /boot. What do you see?
2. Explore /dev. Can you identify what devices are available? Which are characteroriented and which are block-oriented? Can you identify your tty (terminal) device (typing who am i might help); who is the owner of your tty (use ls -l)?
3. Change to the home directory of another user directly, using cd ~username.
4. Change back into your home directory.
5. Make subdirectories called work and play.
6. Delete the subdirectory called work.
7. Copy the file /etc/passwd into your home directory.
8. Move it into the subdirectory play.
9. What is the difference between listing the contents of directory play with ls -l and ls -L?

Recommended duration: *60 minutes*

Exercise 3:

Exploring additional UNIX commands, Files and Directories commands

1. Create a file called $_{hello.txt}$ that contains the words "$_{hello\ world}$". Can you use "$_{cp}$" using "$_{terminal}$" as the source file to achieve the same effect? 12. Copy hello.txt to terminal. What happens?
2. Imagine you were working on a system and someone accidentally deleted the $_{ls}$ command ($_{/bin/ls}$). How could you get a list of the files in the current directory? Try it.
3. How would you create and then delete a file called "$_{\$SHELL}$"? Try it.
4. How would you create and then delete a file that begins with the symbol $_{\#}$? Try it.
5. How would you create and then delete a file that begins with the symbol $_{-}$? Try it.
6. What is the output of the command: echo {con, pre}{sent, fer}{s,ed}? Now, from your home directory, copy $_{/etc/passwd}$ and $_{/etc/group}$ into your home directory in one command given that you can only type $_{/etc}$ once.
7. Experiment with the options on the $_{ls}$ command. What do the $_{d,}$ $_{i,}$ $_{R}$ and $_{F}$ options do?

Recommended duration: *60 minutes*