Linux Lab Programs (22MCA102)

Week	Program Details
1	1a. The distance between two cities (in KM) is input through the keyboard. Write a program to convert and print this distance in meters, feet, inches and centimetres. 1b. If a five digit number is given as input through the keyboard, write a program to calculate the sum of its digits.
2	2a. The file /etc/passwd contains information about all the users. However it is difficult to decipher the information stored in it. Write a shell script which would receive the log name during execution, obtain information about it from /etc/passwd and display this information on the screen in easily understandable format. 2b. Write a shell script which will receive either the filename or the filename with its full path during execution. This script should obtain information about this file as given by ls –l and display it in proper format.
3	3a. A shell script can receive an argument 'one', 'two', or 'three'. If the argument supplied is 'one' display it in bold, if it is 'two' display it in reverse video and if it is 'three' make it blink on the screen. If a wrong argument is supplied report it. Use a case control instruction. 3b. Write a shell script which gets executed the moment the user logs in. it should display the message "Good morning"/ "Good afternoon"/ "Good evening" depending upon the time at which the user logs in.
4	4a. Write a menu driven program which has following options (Use case statement). 1. Controls of /etc/passwd 2. List of users who have currently logged in 3. Present working directory 4. Exit 4b. Write a shell script which reports names and sizes of all files in a directory (directory would be supplied as an argument to the shell script) whose size is exceeding 1000 bytes. The filenames should be printed in descending order of their sizes. The total number of such files should also be reported.
5	5a. A friend of yours has promised to log in at a particular time. However, he has not kept the promise. You want to contact him as soon as he logs in. write a shell script which checks after every one minute whether your friend has logged in or not. The log name should be supplied to the shell script at command prompt. Use until loop. 5b. A file called word file consists of several words. Write a shell script which will receive a list of filenames, the first of which would be word file. The shell script should report all occurrences of each word in word file in the rest of the files supplied as arguments
6	**1st Lab Internals**

<table>
<tr><td>7</td><td>6a. Write a shell script containing a function mycd() using which you would be able to shuttle between directories. The function should work in the following manner:
$ mycd xyz # should change directory into xyz
$ mycd - # Should change directory into previous directory.
6b. Write a function mkcd() which would create all the directories present in the path supplied to it's as argument and change over to the last directory in this path. Thus, $mkcd d1/d2/d3/d4/d5. Should create the five nested directories and change the present working directory to d5.</td></tr>
<tr><td>8</td><td>7a. Develop an interactive grep script that asks for a word and a file name and then tells how many lines.
7b. XYZ has joined our BMSIT&M and he is very new to the grading system present here. He has finished his first semester and has got some grades. But he doesn't know how to compute the GPA. Below is a list of subjects which he has taken, grade he obtained and the subject credits, can you help him to compute his GPA using awk.
Subject Grade Credits
SM A 4
OS B 4
IP C 6
Maths B 6</td></tr>
<tr><td>9</td><td>8a. Write an awk script to find out total number of books sold in each discipline as well as total book sold using associate array down table as given below.
Electrical 34 Mechanical 67
Electrical 80 Computer Science 43
Civil 98 Mechanical 65
Computer Science 64
8b. Write a awk program to check the palindrome words in the given words of a file.</td></tr>
<tr><td>10</td><td>9a. Consider the following data:
Name Gender Mid1 Mid2(25) Endsem(50)
AA M 20 15 35
BB F 22 17 44
CC F 19 14 25
DD M 15 20 42
EE F 18 22 30
FF M 0 20 45
I. Write an awk program to assign grades to students using if-else block
II. Write an awk program to printing the fields in reverse order using loop.
9b. Write an awk script to delete duplicated line from a text file. The order of the original lines must remain unchanged.</td></tr>
<tr><td>11</td><td>10a. Write a shell script that accepts a list of filenames as its argument, count and report occurrence of each word that is present in the first argument file on other argument files.</td></tr>
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	10b. Write an awk script that accepts date argument in the form of dd-mm-yy and display it in the form month, day and year. The script should check the validity of the argument and in the case of error, display a suitable message.
12	**2nd Lab Internals**