PSG COLLEGE OF TECHNOLOGY

DEPARTMENT OF APPLIED MATHEMATICS AND COMPUTATIONAL SCIENCES

UNIX SHELL AND SYSTEM PROGRAMMING LAB

V SEM – M.SC SOFTWARE SYSTEMS – MODEL LAB EXAM

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1. (13 marks)
   1. Read a filename (which contains a list of usernames) and a username from the user, if the file doesn’t exist and print an error message and exit if not, check whether the username is already in the file, and then either print a message stating that the name already existed, or add the name to the end of the list.

echo "Enter File Name: "

read fname

echo "Enter User Name: "

read uname

if [ -e $fname ]

then

if [ -e $uname in $fname ]

then

echo "Username exists"

else

cat $fname >> $uname

fi

else

echo "File does not exist."

fi

* 1. Generate a report on type of files in the current directory

**Type of files Count**

Regular files 5

Directories 2

ls | wc –l

1. Create a file *Student.txt which* has a set of records containing each Student’s ID, name, department, city, CGPA, exemption details and number of credits earned. Use “|” to separate the fields.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 01318 | John | CSD | Coimbatore | 8 | Yes | 80 |
| 22115 | Jerome | CSD | Chennai | 9 | No | 67 |
| 73623 | Daniel | ECE | Salem | 5 | Yes | 0 |
| 84944 | Charles | ECE | Coimbatore | 6 | No | 65 |
| 65056 | Angela | IT | Trichy | 7 | Yes | 79 |

**Write awk scripts to accomplish the following tasks:**

1. Display the details of students whose CGPA is between 7 and 9. (2)
2. Display the name(s) of the student(s) who earned the maximum credit. (2)
3. From the record 2 to 5, print the first, third and last field. Use “- “to separate the fields in the output. (2)
4. Print those students who actually earned credits along with number of credits earned. Also find the sum of credits earned by all the students. (3)
5. Calculate the CGPA of students based on department (Note: Use associative arrays to display average CGPA of students in the following format). (5)

Department Average CGPA

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CSD 8.5

ECE 5.5

IT 7

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1. Write a menu driven shell script to perform the following: (13 marks)
   1. Print the list of files present in the current working directory, along with the count in one command.
   2. List the names of directories that start with letter ‘f’.
   3. Print the filenames and size of the two largest sized files in your current working directory
   4. Create an alias called ‘tclean’ that would remove the files from your current directory that starts with the letter‘t’.
   5. Display current time in the following format

TIME: h:m:s

* 1. Delete only lines that do not contain any lower-case vowels from a file.
  2. Display the following:

There are \_\_\_\_\_\_ users currently logged in.  
(Note: The \_\_\_\_\_\_ (dash) is to be replaced with the number of users currently logged in)

* 1. Display only the lines common to two files.
  2. List five recently used commands.
  3. You have two directories dir1 and dir2 in your home directory. Use one command to copy the file temp1 from dir1 to dir2 and call this file temp2.
  4. Search for a given string recursively in all files.
  5. Copy the contents of 3 files to a new file using one command.
  6. Display all the files in your home directory for which the group has write permissions.

echo "Enter your choice"

read choice

case $choice in

1) ls

;;

2) ls | cut -c 1| grep f

;;

5) echo "TIME:" `date +%H:%M:%S`

;;

6) echo "Enter a file name:"

read fname

if [ !grep '[a-z]' $fname ]

then

rm $fname

fi

;;

7)echo 'There are ' `users | wc -l` ' users currently logged in.'

;;

10)cat ./dir1/temp1 >> ./dir2/temp2

;;

12)cat f1 f2 f3 >> f4

;;

13) cd ..

wl=`ls -l | cut -c 6 | grep w | wc -l`

echo $wl

;;

14) exit

esac