**OPERATING SYSTEM**

**ASSIGNMENT-1**

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Roll no.: 50

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Batch - 1

1. **Change your password to a password you would like to use for the remainder of the semester.**

2**.Display the system’s date.**

student@admins-iMac ~ % date Wed Jul 5 15:08:45 IST 2023

**3.Count the number of lines in the etc/passwrd file.** student@admins-iMac ~ % wc -l myfile 0 myfile

**4.Find out who else is on the system.**

student@admins-iMac ~ % who student console Jul 5 14:54 student ttys000 Jul 5 15:02

**5.Direct the output of the man pages for the date command to a file named mydate**

student@admins-iMac ~ % touch mydate student@admins-iMac ~ % man date > mydate student@admins-iMac ~ % cat mydate

**6.Create a subdirectory called mydir**

student@admins-iMac ~ % mkdir mydirs

**7.Move the file mydate into the new subdirectory** student@admins-iMac ~ % mv mydate > mydate usage: mv [-f | -i | -n] [-v] source target mv [-f | -i | -n] [-v] source ... directory

1. **Go to the subdirectory mydir and copy the file mydate to a new file called ourdate**

student@admins-iMac mydir % touch mydate student@admins-iMac mydir % cp mydate ourdate

1. **List the contents of mydir.**

student@admins-iMac ~ % ls mydir mydate mydate.txt ourdate

1. **Do a long listing on the file ourdate and note the permissions.** student@admins-iMac mydir % ls -l ourdate -rw-r--r-- 1 student staff 0 Jul 12 14:34 ourdate
2. **Display the name of the current directory starting from the root.**

student@admins-iMac ~ % pwd /Users/student

1. **Move the files in the directory mydir back to your home directory.**

student@admins-iMac ~ % cd mydir student@admins-iMac mydir % ls

ourdate student@admins-iMac mydir % cd .. student@admins-iMac ~ % mv mydir Users student@admins-iMac ~ % cd Users student@admins-iMac Users % ls

ourdate

1. **Display the first 5 lines of mydate**.

student@admins-iMac ~ % head -5 mydate.txt

hel fc rfgf ff f

1. **Display the last 8 lines of mydate.**

student@admins-iMac ~ % tail -8 mydate.txt h ryh erh 4 t ht fd

1. **Remove the directory mydir.**

student@admins-iMac ~ % rmdir mydir

1. **Redirect the output of the long listing of files to a file** named list.

student@admins-iMac ~ % ls -l > list

1. **Select any 5 capitals of states in India and enter them in a file named capitals1. Choose 5 more capitals and enter them in a file named capitals2. Choose 5 more capitals and enter them in a file named capitals3. Concatenate all 3 files and redirect the output to a file named capitals.**

student@admins-iMac ~ % touch capitals1

student@admins-iMac ~ % touch capitals2 student@admins-iMac ~ % touch capitals3 student@admins-iMac ~ % touch capitals

student@admins-iMac ~ % cat > capitals1 student@admins-iMac ~ % cat > capitals2 student@admins-iMac ~ % cat > capitals3 student@admins-iMac ~ % cat capitals1 capitals2 capitals3 > capitals

1. **Concatenate the file capitals2 at the end of file capitals**. student@admins-iMac ~ % cat capitals2 >> capitals
2. **Give read and write permissions to all users for the file** capitals. student@admins-iMac ~ % chmod 777 capitals
3. **Give read permissions only to the owner of the file capitals.** Open the file, make some changes and try to save it. What happens ? student@admins-iMac ~ % chmod 400 capitals student@admins-iMac ~ % cat> capitals zsh: permission denied: capitals
4. **Create an alias to concatenate the 3 files capitals1, capitals2, capitals3 and redirect the output to a file named capitals. Activate the**

**alias and make it run**

$ alias concat\_capitals="cat capitals1 apitals2 capitals3 > capitals"

1. **Find out the number of times the string “the” appears in the file mydate**

$ touch mydate

$ grep -o "the" mydate | wc -l

grep -o "the" mydate | wc -l

1. **Find out the line numbers on which the string “date” exists in mydate.**

$ grep -n "date" mydate

grep -n "date" mydate

2:date

1. **Print all lines of mydate except those that have the letter “i” in them.**

$ grep -v "i" mydate

grep -v "i" mydate

export "PS1=$ "

hjj

date

hjkf

1. **List the words of 4 letters from the file mydate.**

$ grep -Eo '\b\w{4}\b' mydate

grep -Eo '\b\w{4}\b' mydate

date

hjkf

1. **List 5 states in north east India in a file mystates. List their corresponding capitals in a file mycapitals. Use the paste command to join the 2 files.**

$ touch mystates

$ echo " maharashtra goa assam bihar gujarat" > mystates

$ touch mycapitals

$ echo " mumbai panji dispur patna Gandhinagar" > mycapitals

$ paste mystates mycapitals

1. **Use the cut command to print the 1 st and 3 rd columns of the /etc/passwd file for all students in this class.**

echo -e "student1\nstudent2\nstudent3" > students.txt

grep -Ff students.txt /etc/passwd

grep -Ff students.txt /etc/passwd | cut -d : -f 1,3

1. **Count the number of people logged in and also trap the users in a file using the tee command**.

who | tee logged\_in\_users.txt | wc -l

who | tee logged\_in\_users.txt | wc -l

0

1. **Convert the contents of mystates into uppercase.**

$ tr '[:lower:]' '[:upper:]' < mystates > mystates\_uppercase

$ cat mystates\_uppercase

cat mystates\_uppercase

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1. **Create any two files & display the common values between them**

$ comm -12 <(sort f2) <(sort f4)

comm -12 <(sort f2) <(sort f4)

grapes

orange