Filter Commands Such as head, tail, cat, more, sort, cut, grep

**1.Display the first 10 lines of /etc/mime.types**

**2.Display the last 5 lines of /etc/mime.types.**

**3.Create three files with the name f6,g7,h8 using cat command with the some meaningful contents with atleast five lines each.**

**4.List all filenames with one screen at a time.**

**5.Sort the data on first names only.**

**6.Sort the data on the marks only.**

**7.Display the lines starting with a vowel.**

**8.Display the lines ending with a vowel.**

Advanced shell operations – enviormental variables,shell features,command line arguments,file tests,using backticks

**1 - Write a program to demonstration of command line arguments**

[students@localhost students]$cat > prog43

#(Positional parameters)

#

# $1, $2 The positional parameters

# $\* Complete set of positional parameters as a single string

# $# Number of arguments specified in command line

# $0 Name of executed command

# $? Exit status of last command

# $! PID of last background job

# $@ Same as $\* except when enclosed in double quote

**2 - Program that searches pattern. Accept he pattern and file name from the user and then search for the given pattern in the file.display the lines containing the pattern.**

**3 - Write a shell script to create a file which stores the name of files and**

**against each name put either "Morning", "Evening" or "Afternoon" depending**

**upon time when file is created.**

**4 - Write and execute the commands for the following:**

1. **Create 3 empty files with the name a1,b2,c3.**
2. **Create 3 files with the name f6,g7,h8 using cat command with some meaningful contents with atleast five lines each.**
3. **Copy the contents of f6 to a1,g7 to b2 and h8 to c3.**
4. **Create two directories with the name dd1,dd2.**
5. **Copy the files a1 and b2 to directory dd1. Copy the files f6 and g7 to directory dd2.**
6. **Remove the directory dd2 along with its contents.**
7. **Rename the files a1 and b2 to newa1 and newb2 respectively.**
8. **Display the login names of all users currently logged in the system.**
9. **Count the number of lines,words and characters in h8.**

**5 - Write and execute the commands to change the directory to/ bin and do the following:**

1. **List all filenames with one screen at a time.**
2. **List all filenames with 1 character and 2 characters.**
3. **List all filenames starting with vowels.**
4. **List all filenames with the last character as a or b or c or d.**
5. **List all filenames with exactly three characters in which the second character is a vowel.**

**6 - Write and execute the commands to change the directory to/ etc and do the following:**

1. **List the contents of the directory.**
2. **List the contents of the directory along with all hidden files.**
3. **List all files with their attributes and file permissions.**
4. **List all files identifying directories and executable files.**
5. **Give the file listing displayed in columns.**
6. **Give the file listing in reverse order.**

**7 - Construct the commands and execute them to**

1. **Create a file named fsp<seat\_no> having the listing of atleast 50 lines (e.g, listing of/usr/sbin or /usr/bin or /etc or can create your own).**
2. **Display first 2 lines of fsp<seat\_no> and convert all the characters into capital letters.**
3. **Display the last 15 lines of fsp<seat\_no>.**
4. **Display the lines starting with a vowel.**
5. **Split the file fsp<seat\_no> into subparts each having at most 20 lines and display the contents of these subparts and count the number of lines in them.**
6. **Split the file fsp<seat\_no> into three subparts named fspaa, fspab, fspac and display the contents of these files and count the number of lines in them.**

**8 - Write and execute the commands to create a file with the name**

**Stud<roll\_no> with the following fields separated by a blank space having the below mentioned values:**

**Field Roll no First Name Last Name Date of Birth Marks**

**Values Numeric Character Characterdd-mm-yy Numeric out of 600**

1. **Insert at least five appropriate records and do the following:**
2. **Sort the data on first names only.**
3. **Sort the data on the Marks only.**
4. **Prepare a ranked merit list with student’s first and last name only and store in the file Merit<roll\_no> and display its contents.**

**9 - Write down the commands and execute them for the following:**

1. **Create a file called test<seat\_no>. Create a hard link called h\_test and a symbolic links\_test. Find out the inode number of the files.**
2. **Remove the original file “test”. Can you still get the contents of the original file?**
3. **Display the contents of the two lines h\_test and s\_test. Justify the output**.

**10 - Write and execute commands**

1. **To create a file named fod1 with some contents having the following contents and display it in (i) octal form only and (ii) octal form along with its text contents.**

**11 - Create two files named fcmp1 and fcmp2 which consists of at least five lines with two or similar lines. Construct the commands**

1. **Using cat to append the fcmp1 and fcmp2 and sort this appended fcmp2 and store it in a file named funiq1.**
2. **Using uniq**
3. **To remove the duplicate lines in funiq1**
4. **To count the duplications and prepend number of each line**
5. **To display the duplicates line only**
6. **To display unique lines only.**

**12 - Create two files with at least three fields (columns) each with the names fcut, fcut2 and do the following:**

1. **Cut first two columns from fcut and store the contents in the file cutlist1 and cut the second and the third column from the fcut2 and store it in cutlist2.**
2. **Paste the contents of cutlist2 to contents of cutlist1.**
3. **Translate the first three lines into capital letters using tr command**.

**13 - Create the file with the name gre2 and the following contents: The grep is an acronym for ‘globally search a regular expression and print it’. The command searches the specified input globally for a match with the specified pattern and displays it. While forming the pattern to be searched we can use shell metacharacters, or regular expressions as professional unix users call them. Write and execute the commands to**

1. **Search the word ‘unix’ and display the word containing it.**
2. **Search for the word ‘the or ‘The’ in the file gre2 and display the lines containing it.**
3. **Search for 4 letter words in gre2 whose first character is ‘w’ and last character is ‘h’.**

**14 Create a file course<seat\_no> with following fields and the values of corresponding type:**

**Course code Course name Batch code Duration (in days) Fees Character CharacterCharacter Numeric Numeric**

**Fields are separated by “:” (colon). Open a file course using vi editor. Write and execute vi commands for the following:**

1. **Move three lines down at a time.-3j**
2. **Copy first line of file course and paste it so that it becomes the last line – 1G,yy,G,p**
3. **Search for a string “Msc”-1G,/MSc**
4. **Go to line number 4-4G**
5. **Move to first word of line-0**
6. **Search for the pattern “BCom” and replace it with “MCom” -:1,s/BCom/MCom/g**
7. **Delete previous character from current cursor position-x**
8. **Delete the whole line –dd**

**Commands/Output:**

Move three lines down at a time (3j)

copy first line of file course and paste it so that it becomes thelast line(1G,yy,G,p)

search for a string ("Msc"-1G,/Msc)

go to line number 4 (4G)

move to first word of line(0)

search for the pattern "Bcom" and replace it with "Mcom" (:1,$s/BCom/MCom/g)

delete previous character from current cursor position (x)

delete the whole line (dd)

**15 – Write a script to reverse the digits of a given number taking the number as a command line argument.**