**OS experiment no. 04**

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**Batch :** B1

**Exp No:** 04

**Date:** 25th Sept 2021

**Question 1**. Write command which produces a list of all the files on the system, such that:

* their full pathname does not contain the word data
* their filename does not contain the letter x
* the script is Y2K compliant, so all `y's have been replaced by `k's.

At the end, print out the number of files that were found.

**CODE:**

twilight@Devanshs-Ubuntu\_db:~$ ls  
Desktop    Downloads    Music     Public  Templates  
Documents  Devanshfile1  Pictures  snap    Videos  
  
twilight@Devanshs-Ubuntu\_db:~$ touch 'Welcome to OsLab4.term'  
twilight@Devanshs-Ubuntu\_db:~$ touch data  
twilight@Devanshs-Ubuntu\_db:~$ touch Devanshfile.txt  
twilight@Devanshs-Ubuntu\_db:~$ mkdir Devanshyj  
twilight@Devanshs-Ubuntu\_db:~$ cd Devanshyj  
twilight@Devanshs-Ubuntu\_db:~/Devanshyj$ touch fileinDevanshyj  
twilight@Devanshs-Ubuntu\_db:~/Devanshyj$ ls  
fileinDevanshyj  
twilight@Devanshs-Ubuntu\_db:~/Devanshyj$ cd ..

twilight@Devanshs-Ubuntu\_db:~$ ls  
 data        Downloads        Devanshyj   Public      Videos  
 Desktop     Devanshfile1      Music      snap       'Welcome to OsLab4.term'  
 Documents   Devanshfile.txt   Pictures   Templates

twilight@Devanshs-Ubuntu\_db:~$ ls -f $PWD/\* | grep -v "data" | grep -v "x" | tr "y" "k"

**# Here in this whole List we will not find the files/Folders whose name contain the word “data” and the letter “x” (“data” and “Devanshfile.txt” are not displayed)**

/home/Devansh/Devanshfile1  
/home/Devansh/Welcome to OsLab4.term  
  
/home/Devansh/Desktop:  
..  
.  
  
/home/Devansh/Documents:  
..  
.  
  
/home/Devansh/Downloads:  
..  
.

/home/Devansh/Devanshkj:  
..  
.  
fileinDevanshkj

**// Here the Folder name(‘Devanshyj’) as well as the filename of the file inside that folder (“fileinDevanshyj”) which contained letter ‘y’ is modified to ‘Devanshkj’ and ‘fileinDevanshkj’ respectively.**  
  
/home/Devansh/Music:  
..  
.  
  
/home/Devansh/Pictures:  
..  
.  
  
/home/Devansh/Public:  
..  
.  
  
/home/Devansh/snap:  
..  
snap-store  
.  
  
/home/Devansh/Templates:  
..  
.  
  
/home/Devansh/Videos:  
..  
.

# **Here we print out the number of files which are found**  
twilight@Devanshs-Ubuntu\_db:~$ ls -f $PWD/\* | grep -v "data" | grep -v "x" | tr "y" "k"| wc -l>count  
twilight@Devanshs-Ubuntu\_db:~$ cat count  
45

**Question 2**. Write commands that will list the size of each directory given on the command

line, sorted by size. The size includes disk space used by the directory and all

thefiles and subdirectories inside it. The script should take options to sort with

smallest first, and with largest first.

**CODE:**

**#Sorting in Ascending order**

twilight@Devanshs-Ubuntu\_db:~$ du -sk \* | sort -n

0 data

0 Devanshfile1

0 Devanshfile.txt

0 Welcome to OsLab4.term

4 count

4 Desktop

4 Documents

4 Downloads

4 Devanshyj

4 Music

4 Pictures

4 Public

4 Templates

4 Videos

8628 snap

**#Sorting in Descending order**

twilight@Devanshs-Ubuntu\_db:~$ du -sk \* | sort -nR

8628 snap  
4 Videos  
4 Templates  
4 studentinfofile5.txt  
4 studentinfofile4.txt  
4 studentinfofile3.txt  
4 studentinfofile2.txt  
4 studentinfofile1.txt  
4 Public  
4 Pictures  
4 Music  
4 Devanshyj  
4 file1.txt  
4 Downloads  
4 Documents  
4 Desktop  
4 count  
0 Welcome to OsLab4.term  
0 Devanshfile.txt  
0 Devanshfile1  
0 data

**Question 3**.. Write a command to count total number of the files in present working

directory.

**CODE:**

twilight@Devanshs-Ubuntu\_db:~$ find . -maxdepth 1 -type f  
./.bash\_history  
./.bashrc  
./Devanshfile.txt  
./Devanshfile1  
./.sudo\_as\_admin\_successful  
./.bash\_logout  
./count  
./.profile  
./Welcome to OsLab4.term  
./data  
twilight@Devanshs-Ubuntu\_db:~$ find . -maxdepth 1 -type f |wc -l  
10

**Question 4**.. Write command to extract 4 line starting from line number 5 to line number 8 from a file which contains 10 lines in it.

**CODE:**

twilight@Devanshs-Ubuntu\_db:~$ cat>>file1.txt  
This is line 1                          
This is line 2  
This is line 3  
This is line 4  
This is line 5  
This is line 6  
This is line 7  
This is line 8  
This is line 9  
This is line 10  
  
twilight@Devanshs-Ubuntu\_db:~$ tail -n +5 file1.txt | head -n 4  
This is line 5  
This is line 6  
This is line 7  
This is line 8

**Question 5**.. Create a file containing rollno, name and marks of 3 students and another file containing branch and address of same 3 students. Use space as delimiter in both files. Write

commands to cut rollno and name files first file and address field from second file and

paste result in new file and display it.

**CODE:**

twilight@Devanshs-Ubuntu\_db:~$ touch studentinfofile1.txt

twilight@Devanshs-Ubuntu\_db:~$ cat> studentinfofile1.txt  
Roll    Name    Marks                
  
1       Jake    84  
  
2       Amy  95  
  
3       Raymond 92  
^C  
           
twilight@Devanshs-Ubuntu\_db:~$ touch studentinfofile2.txt

twilight@Devanshs-Ubuntu\_db:~$ cat> studentinfofile2.txt  
Branch  Address  
  
IT      Ghatkopar  
  
COMPS   Andheri  
  
EXTC    Vashi  
^C  
  
**#Here the columns 1 and 2( Roll No and Name ) are cut and pasted from file “studentinfofile1.txt” to a new file “studentinfofile3.txt”**

twilight@Devanshs-Ubuntu\_db:~$ touch studentinfofile3.txt

twilight@Devanshs-Ubuntu\_db:~$ touch studentinfofile4.txt

twilight@Devanshs-Ubuntu\_db:~$ cut -d ' ' -f1,2 studentinfofile1.txt | paste -d ' ' -> studentinfofile3.txt  
**#Contents of file** **studentinfofile3.txt**  
Roll Name  
1 Jake  
2 Amy  
3 Raymond

**#Here the column 2( Address ) is cut and pasted from file “studentinfofile2.txt” to a new file “studentinfofile4.txt”**  
  
twilight@Devanshs-Ubuntu\_db:~$ cut -d ' ' -f2 studentinfofile2.txt | paste -> studentinfofile4.txt

**#Contents of file** **studentinfofile4.txt**  
Address  
Ghatkopar  
Andheri  
Vashi

**#Here we combine the two new files “studentinfofile3.txt” and “studentinfofile4.txt” and paste the output in the linux shell.**  
  
twilight@Devanshs-Ubuntu\_db:~$ paste -d ' ' studentinfofile3.txt studentinfofile4.txt -  
Roll Name Address  
  
1 Jake Ghatkopar  
  
2 Amy Andheri  
  
3 Raymond Vashi  
  
^C

**# We can also paste the combined output directely to a new file “studentinfofile5.txt”.**

Devansh@VirtualBox:~$ touch studentinfofile5.txt  
twilight@Devanshs-Ubuntu\_db:~$ paste -d ' ' studentinfofile3.txt studentinfofile4.txt >studentinfofile5.txt

**#Contents of file** **studentinfofile5.txt**  
Roll Name Address  
1 Jake Ghatkopar  
2 Amy Andheri  
3 Raymond Vashi

**Outcomes:** CO4: Demonstrate open source standards usage

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**Conclusion:** We learnt the implementation of pipes and filters in Linux and understood the use of various commands and functionalities related to them.

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