Unix :

1969 – At&T DennisRetchie & Thompson

Solaris

Linux, Ubuntu

OperatingSystem – It is a software that acts as an interface between the computer/hardware and User/Application

Computer can understand 1s and 0s.As we cannot communicate in 1 and 0 OS acts

as an interface between user and computer.

Windows – 10 , 8, 7, vista, xp…..

MacOS

Unix – multitasking and multiuser OS

Tasks Of OperatingSystem:

DeviceManagement

IOManagement

MemoryManagement

FileManagement

ProcessManagement

We can interact with OS using GUI or Cmd line interface

To practice Unix commands:

MacOS – Go to terminal and execute the commands

Windows-We can install Cygwin, virtualbox- ubuntu or we can use google cloudconsole to practice the commands.

Go to <https://console.cloud.google.com/>

See that you are signed in to gmail

Create the new project- first time

Active google cloud shell

Open in new window

~ means root directory

. indicates current directory

ls –l :list all the files and directories inside a directory

ls –a : list all the files and directories inside a directory along with hidden files

cat filename – display the content of file

mkdir

touch

redirecting commands:

>

>>

<

eg : Cat > file1.txt : It takes input from user and send to text file

Cat < file1.txt : It takes input from file and send to cat command

after u type using cat>filename.txt- to go back to cmd mode- ctrl+d

cp – copy the file

Assume u have marchqa and marchui dirs in root dir

to copy file from rootdir to marchui when you are in marchqa

cp ~/file.txt ~/marchui

to copy file from rootdir to marchqa(current dir) when you are in marchqa

cp ~/file.txt .

cp ~/file.txt ~/marchui

mv – move the file or rename the file

rm – delete the file or directory

man – after u see manual if u want to go back to cmd mode- press q

who

sort: -r,-n,-m

grep

wc

| - combine 2 or more commands=> output of one command serves as input for other command

--Find no of lines which contain the word “error or exception”

--Count no of files in a directory where filename start with “log”

vi filename – u wil go to editor mode

to start typing in editor – press i

after u r done, to back to cmd mode

give esc, :, wq – one by one

now u wil go back to cmd mode

* count no of lines which have word “rdiff” from the recent 10 lines in log file

head – default it gives first 10 lines in file

head -5 filename – we can get first 5 lines in files

tail-– default it gives last 10 lines in file

more

less

permissions on file:

It is indicated by 10 character string

first char – file or directory

remaining 9 chars are divided into 3 groups of rwx(read, write, execute)

rwx - user

rwx – user group

rwx – all users

drwxrwxrwx

-rw-r--r—

a – all users

u - user

o – others

g - group

chmod a+wx file1.txt

ps

kill

netstat

top

find

ifconfig

export

env

sed

**Assignment** 1:

copy the file which is in current directory to root directory using single command

copy the file which is in current directory to a sub directory under root directory using single command

sort the no of users for this machine

Find last 20 lines in given file which have given search word

Shell Scripting – set of unix commands which can be executed together, which can be reused.

Varibales

Arithmetic Operators : +, -, \*, /, %

Relational Operations: -eq , -le , -ge

Conditional statements:

If [ ]

Then

…logic…

Elif []

Then

…logic

Else

…else logic..

Fi

Case

Loop statements:

For

While

Command line arguments are used to pass variable values dynamically at the time of execution

Eg: sh script.sh 30 40

In the script I can get 30 and 40 using $1 and $2…

We can give n no of arguments and read them in the script.

<http://www.freeos.com/guides/lsst/ch02.html>

https://www.shellscript.sh/

**Assignment-ShellScript:**

1. Take file name as input and get last few lines with word error

2.count no of files in subdir which start with log, if its 10 then delete all files

3.sort first 5 lines in given file

4. To check given number is even or odd

5. To check given number is positive or negative

6. Print given number table

Eg: input num=2

Output:

2\*1=2

2\*2=4……

2\*10=20