BASIC LINUX COMMANDS

Cd / -> go to home folder

* pwd -> present working directory
* sudo apt upgrade && upgrade -> upgrade repository
* touch filename -> create a file [touch file1.txt file2.txt]
* cat filename -> show the content of file in terminal
  + cat >> filename -> than enter your text -> to exit press ctrl+d . cat also create the file if not existed. “>>” appends the info
  + cat > filename -> override the file.
  + less filename -> show one one page content -> some commands to navigate
    - down arrow -> go downwards
    - up arrow -> go upwards
    - space -> go to next page
    - b -> go page backward
    - shift + g -> go to the end of the file
    - g -> go to the top of the file
    - q -> exit
  + more filename -> show percentage of file shown
    - enter -> go to next line
    - q -> exit
* ls -> list all the file in that folder
  + ls -a -> show hidden files in that folder.
* mkdir filename -> create a folder
* cd filename -> change directory to filename
* cd . -> go in the current working directory
* cd .. -> go to the parent folder
* absolute path -> cd "/mnt/c/Users/Sunil.A.Kumar/OneDrive - Gemini Solutions/Desktop/linux/sunil\_folder"
* relative path -> cd /sunil\_folder
* history -> show the commands that we have used till now
* cp source\_filename destination\_folder/ -> copy a file to a specific folder
* cp -r folder\_name/ folder/ -> copy whole folder to a specific folder . -r means recursive
* cp source\_folder/\* destination\_folder/ -> \* means content of the source\_folder will copy to destination folder
* cp \*.doc dest\_folder/ -> copy all the doc files to dest\_folder/
* mv \*.doc folder/ -> move all .doc files to folder
* rm filename = delete file
* rm -r folder/ -> remove the folder
* rmdir folder/ -> remove the folder
* rm \*.doc -> remove all the files which have extention doc
* .filename -> it is a hidden file in ubuntu
* Find source\_folder/ -name filename.txt -> search for file on source-folder
  + Find source\_folder/ -name \*.doc -> search for all docs files in source-folder
* Sudo apt install python3
* head filename -> print top 10 lines of file
  + head -n 5 filename -> print top 5 lines
* tail filename -> print last 10 lines
  + tail -n 5 filename -> print last 5 lines
* echo “hello world” -> prints hello world in terminal
  + echo -e "sunil \n kumar" -> enable escape character sequence
* shell scripting
  + name=”sunil” -> decalring a variable
  + echo $name -> gives name as output in terminal
* whoami -> show current user logined
* who -> same as above
* sort filename -> sort the file content in alphabetically order. And no changes in real file
  + sort -r filename
  + sort -n num.txt -> sorting for numbers
  + sort -n -r num.txt -> sorting of numbers in reverse order
* wc filename -> count the number of words
  + show “lines words chars” filename
  + wc -l filename -> show number of lines
  + wc -w filename -> show number of words
  + wc -c filename -> show number of characters
* du -> means disc usage for that directrtory
  + du -h -> disc usage in human readable format
  + du -s -h -> folder size
* free -> show ram usage
  + free -h -> ram usage in human readable format
  + free -t -> also show the total of used and unused mem
  + free -b -> show in bytes
  + free -g -> show in gb
  + free -m -> show in mb
* df -> related to disc size
* Permissions
  + 3 type of access -> read, write, execute, - means file type
  + 3 type of people -> user, group, other user/guest
    - ./filename -> execute the file that is executable in .sh files
  + Change mode
    - chmod u+x filename -> provide execute permission to user to a specific file. u -> user, g-> group, o->other user.
    - chmod o+wx filename -> provide write and read permissions to other users.
    - chmod u-w filename -> remove write permission from user
    - chmod a+wrx filename -> give read write execute permissions to all users i.e u,g,o
  + change owner
    - chown newownername filename -> change the owner of the file. if not working than apply sudo.
    - chgrp newgroupname filename -> change the group of the file. if not working then apply sudo.
  + Create user
    - sudo useradd new\_user\_name -> creating a new\_user or sudo adduser new\_user\_name
    - id username -> gives the id of the user.
    - Id root -> id of root is always fixed
    - sudo password user\_name -> setting password for new user. sahil passwd -> 1234
    - su user\_name -> go to specific user
    - exit -> exit the user
    - sudo userdel user\_name -> delete a user
    - sudo groupadd grp\_name -> creating a new group
    - sudo usermod -g group\_name user\_name -> add user to a group
    - sudo gpasswd -d user\_name grp\_name -> removing the user from a group
    - cat etc/group -> show all main files such as user , groups
    - sudo groupdel group\_name -> delete a group
  + pipe and grep
    - pipe operator is used to combine 2 or more commnds.
      * cat filename.txt | head -2 -> print first 2 lines of filename.txt
      * cat alpha.txt | grep v -> grep is used to find the pattern in file. v refer to the pattern
  + edit a file
    - vim and nano editor
      * vim filename.txt -> open file in vim editor
      * vim editor opens in command mode by default. So press i to insert . after editing go to command mode by pressing esc key. Press :wq to exit , esc + :w -> save , esc + :q! -> quit and don’t save , esc + /word\_you\_want\_to\_find -> find the word in file , esc + dd -> current line deleted, esc + d3 -> delete 3 line below from current line, navigation keys -> j-> go down, k->go\_up, l->go right, h->go left, A -> go to end of the line
    - nano editor
      * ctrl + o + enter -> save a file
      * ctrl + x -> exit
  + awk command -> google it
  + uname -> show OS name
  + cut command
  + uniq filename -> print uniqe line from file
  + sed -> replace a word in file
  + cmp file1 file2 -> compare 2 files
  + diff file1 file2 -> what line should be change so that it become identical to second file
  + zip file
    - tar cvf file.tar \*.txt -> all .txt file in file.tar zip file -> creating zip file
    - tar xvf file.tar -> unzip file.tar
  + compress file
    - gzip filename -> replace file with compressed one
    - gzip -k filename -> do not replace and create a new one also
    - gzip -r foldername -> zip all the files inside folder
    - gzip -d compressed file name -> d for decompress , decompress the file
    - similarty gunzip

SHELL SCRIPTING

* cat /etc/shells -> displays how many shells are there in our system
* #!/bin/sh -> recommended start of every script aka shebangline
* echo $0 -> show which shell you are working on
* .sh -> is extention of shell files like .cpp files
* If a .sh file does not have execute permission than give it excetue permission
  + ./filename -> running the exe file in bash
* # -> refer to the comments In shell scripting
* name=”sunil kumar” -> decalring a variable in shell scripting
  + $name -> variable name is precede by $ sign. Accessing variable
* How to input a file.txt into a .sh file into a variable
  + content=$(cat content.txt) -> here content.txt file contain names in each line. All the content of .txt file is gone to content variable
  + echo "content is: $content" -> access content variable
* taking input from user
  + read variable\_name -> take input from the user in shell
  + read -p "Enter your name: " name -> -p flags helps to prompt in command line
  + in a .sh file write
    - PROGRAM
    - echo $0 -> print the file name
    - echo $1 -> take user input 1 via cli ->print arg1
    - echo $2 -> print argument2
    - echo $3 -> print argument3
    - echo $# -> count no of argument given in cli
    - echo $\* -> output all the cli arguments given
      * ./filename.sh arg1 arg2 arg3
    - echo $# -> stores the return value that a function returns
  + for loop
    - PROGRAM
    - for item in $\*
    - do
    - echo $item
    - done
    - ./filename.sh my name is sunil kumar -> print the cli arguments
  + If than statement