LAB-1

1. pwd (present working directory)
2. cd .. (change directory, one step back)
3. cd / (To navigate into root directory)
4. cd /home/student (change directory to student)
5. ls ~ (will show files/folders that are in home directory)
6. ls (folders in your current directory)
7. ls -l (Gives list of files and folders, no hidden)
8. ls –al (List of the files and folders with hidden)
9. cd /etc (one type of directory under home directory, but need to go first root(/) directory)
10. mkdir folder_name (create a new folder in current location)
11. touch filename.extension(.txt) (create a file, extension not necessary)
12. touch file1 file2 file3….. (create multiple files)
13. gedit file_name.extension (create + open file)
14. cat file_name (open the file in terminal)
15. cp source(file_path) destination(file_path) (copy from source to destination)
16. mv source(file_path) destination(file_path) (move from source to destination)
17. mv old_file_name new_file_name (Renaming a file)
18. rm file_name (Remove a file)
19. rm –f file_name (Remove a file forcefully)
20. cp –r source(file_path) destination(file_path) (directory copy to destination)
21. mv source(file_path) destination(file_path) (move directory to destination)
22. mv –rf directory_name (remove forcefully)
23. mv old_directory_name new_directory_name (Renaming a directory)
24. cat /etc/passwd (User's info)
25. cat /etc/group (Group's info)

LAB-2

1. sudo adduser username (create an user)
2. sudo userdel username (delete an user)
3. id -gn (check a primary group of a user)
4. sudo passwd username (change the password of a user)
5. sudo su username (switch to another user)
6. su username (Back from the switched user to the previous user)
7. sudo groupadd group_name (create a group)
8. sudo groupdel group_name (deleting a group)
9. sudo adduser user_name group_name (adding an user to a group)
10. sudo deluser user_name group_name (delete an user from a group)
11. sudo usermod -g group_name user_name (change the primary group of the user)
12. sudo adduser -g group_name user_name (assigning a user to a group)
13. sudo adduser –g group1,group2…. user_name (assigning an user to multiple group)
14. sudo adduser -a -G group_name1,group2… user_name (assigning the current user to multiple group/single group)
15. ls -l (show file/folder characteristics)
16. groups user_name (Show list of groups a user is assigned)
17. id user_name (user id + groups details of the user, first group is the primary group)

File Permission

1. sudo chmod 750 file_name (change permission of a file, -111 101 000)
2. sudo chmod 777 folder_name (change permission of a group)
3. sudo chmod –R 676 folder_name(permission change of folder+ sub folders recursively)
4. sudo chmod u+x,g+x,o+x (execute enabled for User owner, Group owner and other owner)
5. sudo chmod u-r,g-r,o-r (read mode disabled for all)
6. sudo chown user_name file_name (change user ownership of a file)
7. sudo chgrp group_name file_name (change group ownership of a file)
8. sudo chown -R user_name folder_name (change user ownership of a directory)
9. sudo chgrp -R group_name folder_name (change group ownership of a directory)
10. ls -l (to see all the permissions)

LAB-3

1. uniq file.txt (unique text but the same text must be in successive manner to ignore.
2. sort file.txt (Sort alphabetically)
3. sort file | uniq -c (unique lines in the file and their quantity)
4. sort file | uniq -d (Output duplicate lines only once)
5. sort file | uniq –(dc/cd) (Duplicate + their total count)
6. sort file | uniq -D (Show all the duplicates, no unique value)
7. sort file | uniq -u (show all the unique lines , no duplicate)
8. sort file | uniq -i(u/d/dc/D) (i=**insensitive**)
9. grep the file.txt (show lines which has a **subset** "the")
10. grep -w the file.txt (show lines which has a **word** "the")
11. grep -wn the file.txt (show lines which has a **word** "the" **+** it's **line No**)
12. grep -iwn cat file.txt (case insensitive search)
13. grep -iwnv cat file.txt (w=reverse, n=line no ,w=word)
14. grep -i(w/n/nv/wn) man file.txt
15. grep -(A/C/B) 2 the file.txt (Show **After/ (After+Before**) / **Before** (with 2 lines)
16. head file.txt (show first 10 lines)
17. tail file.txt (show last 10 lines)
18. head/tail -5 file.txt (show first/last 5 lines)
19. head -12 file.txt | tail -3 (show line 12,11,10)
20. head -10 file.txt |tail -5 (>/>>)file2.txt (**<** meas open+replace, **>>** means open+append.
21. wc file.txt (ex. 10 20 116 file.txt=line,word,size,file_name)
22. wc -(wl/w/l) (w=word,l=line)
23. wc -(w/l/wl) >> file2.txt

LAB-4

1. **vi** filename edit filename starting at line 1
2. **ESC** (Command mode)
3. **:q!** (Exit and ignore any changes)
4. **ZZ/wq** (Exit and save changes)
5. **Navigate** (**h, j, k, l**=left, down, up, right)
6. **$** (Move cursor to end of current line)
7. **zero** (**0**) (move cursor the start of the current line)
8. **^** (Move cursor beginning of the word of the line, ignore any spaces before the word)
9. **w** (Jump beginning of the next word, if line is over then beginning of the next line)
   ;/;//%^Dhaka -> jumping from before semicolon to before D. w->counts punctuation
10. **W** (don't count punctuation, ;/;@#;;;;Dhaka is , Jumps form before semicolon(;) to before i, not considering punctuation marks.
11. **a** (Append after the cursor)
12. **A** (Append after line)
13. **O** (Open a new line before the current line)
14. **I** (Insert before line).
15. **i** (insert before cursor)
16. **r** (replace one character)
17. **R** (Replace many character)
18. **D/dd** (Delete current line)
19. **dw** (delete single word beginning with character under cursor)
20. **x** (delete single character under cursor)
21. **yy** (copy the current line into the buffer)
22. **5 yy** (Copy the next 5 lines, including the current line into the buffer)
23. **p** (put/paste after the line)
24. **P** (paste before the line)
25. **u** (undo the last changes)
26. **U** (undo the all changes in a line)

27. **gzip file.txt** creates a file.gz on Linux, replace the original with file.gz
28. **gunzip file.txt** (reproduce the text file replacing the file.gz)
29. **zip myzip.zip file.txt file2.txt pic.zip** (file,file2,pic will be stored as myzip.zip without replacing the original files, folders, zip ..)
30. **unzip myzip.zip** (unzip the .zipped file)
31. **tar –cvf mytar.tar file file2 file4 myzip** (shows all archived materials)
32. **tar –cf mytar.tar file file2 file4 myzip** (Don't show all archived materials)
33. **tar –tvf mytar.tar** (show all the details of the archived materials)
34. **tar –xvf mytar.tar** (Extract a tar)
35. **tar –czvf cpp.tar.gz myzip.zip file file2** (c=create an archive,z=compress the archive with zip,v=display progress in the terminal,f=allows to specify the f_name of the archive)
36. **tar -xzvf cpp.tar.gz** (Extract a tar.gz file on Linux)
37. **find -mtime -7(days) –ls** (show all modified files of N days Under current directory)
38. **find -name *** (show all details under current directory, it won't work sometimes)
39. **find -name myzip.zip** (search a zip file in current directory)
40. **find -type f/d**
41. **find /home/student/Downloads –type f**
42. **find /home/student/Downloads -type f –name lab2**