

Laboratory Assignment 1
Subject: Design Principles of Operating Systems
Subject code: CSE- 3249

Assignment 1: Basic Commands in Unix Operating System.

Objective of this Assignment:

- To study the basic commands such as who, who am i, date, cal, pwd, man, mkdir, cd, rmdir, cat, mv, cp, rm, wc, sort, head, tail, cmp, diff, ls, chmod, grep, echo for accessing files and directories.

- 1) Write the commands to create the following directory hierarchy:
-> DOS_Regdno -> DOSass1 -> dir1
- 2) Write the commands to create another directory with name dir2 in directory DOSass1 and make dir2 as the current working directory.
- 3) Write the command to delete the directory dir2 , when DOS_Regdno will be the current working directory. `rmdir Dosass1/dir`
- 4) Write the command to create a file named as file1 using cat command inside dir1. Write your name, regdno, branch, semester and section in file1. Then display the content of the file.
- 5) Write the command to create a file named as file2 using cat command inside dir1. Write your semester wise SGPA in file2.
- 6) Create a file named as file3 storing content of file1 merged with content of file2. `cat file1 file2>file3`
- 7) Write the command to rename file2 as markinfo. `mv file2 markinfo`
- 8) Write the command to copy the content of file1 to reginfo. `cp file1 reginfo`
- 9) Write the command to display the inode values of file1, markinfo, reginfo. `ls -li file1 markinfo reginfo`
- 10) Write the command to delete file1. `rm filename`
- 11) Write the command to count the number of lines, words, characters in markinfo. `wc filename`
- 12) Write the command to create a file named as Personalinfo inside dir1. Write your name, regdno, address in the file.
- 13) Write the command to display the content of markinfo in reverse order. `tac markinfo reverse`
- 14) Check the output of the following command:
 `cmp reginfo personalinfo`
 `diff reginfo personalinfo`

- 15) Write a command to count the number of files in the current working directory and display that number. `ls -l | wc -l`
- 16) Write a command to include all the file names present in a current working directory in a file named as filelist without causing filelist to be included in the names. `ls | grep -v "filelist" > filelist`
`cat filelist`
- 17) Write a command to give write permission to all the users of file reginfo. `chmod a+w reginfo`
`ls -l reginfo`
- 18) Write a command to discard write permission from group users group users of file reginfo. `chmod g-w reginfo`
`ls -l reginfo`
- 19) Write the command to set rwx permissions for all the users of file reginfo. `chmod 777 reginfo`
- 20) Differentiate between following commands:
- ```
date; pwd
date; pwd | wc -l
(date; pwd) | wc -l
```

`date`: Prints the current date and time.  
`pwd`: Prints the current working directory.  
`| wc -l`: Pipes the output of the `pwd` command to `wc -l`, which counts the number of lines in the output.
- 21) Interpret the output of the following commands:
- ```
echo *
echo ***
echo '***'
echo \***
echo \*\*\*
echo */*
echo Don't do this
echo "Don't do this" (Quotes of one kind protect quotes of other kind)
echo Hello # world
echo " Hello # world"
echo ' Hello # world'
echo date
echo 'date'
echo "date"
echo `date`
echo "$(date)"
```
- `(date; pwd)`: Executes the `date` and `pwd` commands together in a subshell, combining their outputs.
`| wc -l`: Sends the combined output of `date` and `pwd` to `wc -l` to count the total number of lines.

