**Basic Commands**

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| ***Linux Command*** | ***Description*** |
| date | The date command tells the system to print the date and time |
| cal | Displays calendar |
| who | show who is logged on |
| echo | Display text on the screen. Mostly useful when writing shell scripts |
| bc | Basic calculator |

**Commands for Navigating the Linux File systems**

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| ***Linux Command*** | ***DOS Command*** | ***Description*** |
| pwd | dir | “Print Working Directory”. Shows the current location in the directory tree. |
| cd | cd, chdir | “Change Directory”. When typed all by itself, it returns you to your home directory. |
| ls | dir /w | List all files in the current directory, in column format. |
| ls –l | dir | List files in “long” format, one file per line. This also shows you additional info about the file, such as ownership, permissions, date, and size. |
| ls –a | dir /a | List all files, including “hidden” files. Hidden files are those files that begin with a “.”, e.g. The  .bash\_history file in your home directory. |

**Working with Files and Directories**

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| ***Linux Command*** | ***DOS Command*** | ***Description*** |
| touch | edit | Creates a blank file  eg. touch sample |
| file |  | Find out what kind of file it is.  For example, “file /bin/ls” tells us that it is a Linux executable file. |
| cat | type | Display the contents of a text file on the screen. |
| head |  | Display the first few lines of a text file. |
| tail |  | Display the last few lines of a text file. |
| cp | copy | Copies a file from one location to another. |
| mv | rename, ren, move | Moves a file to a new location, or renames it. |
| rm | del | Delete a file. |
| mkdir | md | Make Directory. |
| rmdir | rd, rmdir | Remove Directory. |
| tree |  | Lists the contents of directories in a tree-like format. |

**Informational Commands**

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| ***Linux Command*** | ***Explanation*** |
| ps | Lists currently running process (programs) |
| w | Show who is logged on and what they are doing |
| id | Print user-id and group id's |
| top | Displays CPU processes in a full-screen GUI. A great way to see the activity on your computer in real-time. Type “Q” to quit. |
| free | Displays amount of free and used memory in the system. |
| uname –a | Prints system information to the screen (kernel version, machine type, etc.) |

**System Administration**

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| ***Linux Command*** | ***Description*** |
| su | “Switch User”. Allows you to switch to another user's account temporarily. The default account to switch to is the root/superuser account. |
| chmod | Change permissions on a file |
| chown | Change file owner and group |
| passwd | Update a user’s authentication tokens(s) |
| uptime | Used to find the duration for which the system has been running |

**Other Utilities**

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| ***Linux Command*** | ***Description*** |
| clear | Clear the screen |
| more | Display a file, or program output one page at a time. |
| less | An improved replacement for the “more” command. Allows you to scroll backwards as well as forwards. |
| grep | Search for a pattern in a file or program output. |
| lpr | Print a file or program output. |
| sort | Sort a file or program output. |

**Hands On Practice:**

Logon to UNIX system and perform the following:

1. Create five empty files **empty1, empty2, empty3, empty4** and **empty5**.
2. Create a file called **text** and store your name, age and address in it.
3. Display the contents of the file **text** on the screen.
4. Make a copy of the file **text** into another file **newtext.**
5. Create a file matter and type any 2 sentences in t.
6. Combine the contents of the file **text** and **matter** into another file **txtmat**.
7. Delete the file **text**.
8. Change the permission of the file **newtext** to 666.
9. Rename the file **newtext** to **oldtext.**
10. Create a directory **mydir** in the current directory.
11. Move the files **oldtext** and **matter** to the directory **mydir.**
12. Create another directory **mydir** in the current directory.
13. Copy the contents of **mydir** directory to the **newdir** directory.
14. Display the current date in the format **dd/mm/yyyy**.
15. Check the current users.
16. Obtain a complete listing of all files and directories in the whole system.
17. Count the number of users currently logged into the system.
18. When will **rmdir xyz** (assume xyz is directory) fail to work?
19. What does **cd** do when used without arguments?

**Answer:**

1. touch empty1 empty2 empty3 empty4 empty5
2. cat > text
3. cat text
4. cp text newtext
5. cat > matter
6. cat text matter > txtmat
7. rm text
8. chmod 666 newtxt
9. mv newtext oldtext
10. mkdir mydir
11. mv oldtext matter mydir
12. mkdir mydir/newdir
13. mv mydir/\* mydir/newdir
14. date +%d/%m/%y
15. who
16. tree /\*
17. who | wc -l
18. Whenever xyz is non-empty
19. Go to home