**Operating System**

**Lab Report 1**

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**Section-6A2**

Introduction to OS and LINUX

**INTRODUCTION:**

An operating system acts as an intermediary between the user of a computer and computer hardware. The purpose of an operating system is to provide an environment in which a user can execute programs conveniently and efficiently. An operating system is a software that manages computer hardware. Linux is an open source operating system. An operating system is the software that directly manages a system's hardware and resources, like CPU, memory, and storage. The OS sits between applications and hardware and makes the connections between all of your software and the physical resources that do the work. We see how some of the basic commands work and by using man command we got the detail of each command. Some of the basic commands are ls which is used to show all the files present in the current directory which we are using. The next command is cd which is used to change the directory then cp is used to copy the file or directory mv command is used to move file or To do work in Linux we used virtual machine so that we can use our windows OS for our data and Linux for our lab task then we took iso file of Ubuntu and inserted it in virtual machine and installed Linux then we open the terminal of the Linux which is like the command prompt of the windows. directory rm command is used to remove a file pwd command is used to show current position mkdir is used to create directory rmdir is used to remove directory less, more and cat command are used to show the contents of file man command is uses to show the detail of any command. What is command is used to give brief detail of any command su is used to switch user passwd is used to change password user id is used to create new user account ushered is used to delete user account mount is used to mount a file unmount is used to unmount the file df is used to show disk space usage clear is used to clear terminal tar cvf archive\_name.tar Dir name or tar cvf alldocs.tar \*.txt commands are used to make archive of existing file or folder tar xvf archive\_name.tar is used to extract archive file tar tvf archive\_name.tar is used for viewing archive file and shutdown command is used to reboot or shutdown machine.

Diagram

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Need of operating system

**OBJECTIVES:**

• To get familiarized with the basics of operating systems

• Learn the basic commands used in Linux

**Application:**

The best Linux apps make provide a simple solution to get the most from your distro, especially when it comes to internet, media, and general computing use. One of the big advantages of most Linux distros isn't just that they are free and open source - so are most of the software applications used for Linux. We perform same task by writing 2-3 commands like making 10 folders we make it one by one but in terminal we can perform same task by writing single command. These commands are so helpful for us.

**Issues:**

As this our first lab which is based on instructions, we never find any issue regarding this lab.

**Conclusion:**

In this lab we understand the basics of operating system and some basics command used in terminal of the Linux.

**Post lab:**

1. **Provide details about the following commands?**

**• apt-get**

It is a command line tool for interacting with the Advanced Package Tool (APT) library (a package management system for Linux distributions). It allows to search for, install, manage, update, and remove software. This tool does not build software from the source code. Instead, it compiles the source code or uses precompiled files to install software packages.

**• yum**

Yum command is the primary tool for getting, installing, deleting, querying and managing Red Hat Enterprise Linux RPM software packages from official Red Hat software repositories as well as other third-party repositories.

**• wget**

wget is a command-line utility for downloading files from the web. With wget, you can download files using HTTP, HTTPS, and FTP protocols. wget provides a number of options allowing you to download multiple files, resume downloads, limit the bandwidth, recursive downloads, download in the background, mirror a website, and much more.

**• gzip tar**

Tar and Gzip are two of the most common utilities for archiving and compressing files. More specifically, tar is used for archiving and gzip is used for compression, however the two are most often used in conjunction.

**• rar**

The command is used to Archive files with compression. To use this command in command line first we have to install it’s utility.

**2 . Find and Execute following commands in Linux Shell?**

**• show architecture of machine**

we have 2 commands uname -m and arch uname command is general command.

Text

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• **show CPU info**

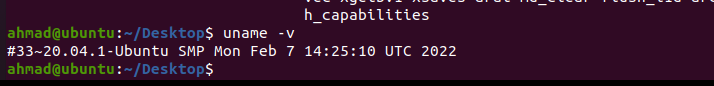
we can use command lscpu whose output :

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• **show version of the kernel**

**We used command uname -v**



• **set date and time**

we can use date -s followed by date and time. we typed sudo to use terminal in admin mode.

 • **show details of files and directory**

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• **show hidden files**

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• **show files and directory containing numbers**

**Ls [1-4]**



**Ls -d f[1-4]**



• **create a directory called dir1**

**mkdir dir1**

• **create two directories simultaneously**

**Mkdir dir2 dir3**

**Then type ls to show all directories**



• **show the path of work directory**

Graphical user interface, text, application

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• **delete file called 'file1’**



**Rm file1**



• **remove a directory called 'dir1' and contents recursively**

**Rm -r dir1**

• **delete directory called 'dir1’**

**Rm dir1**

• **modify timestamp of a file or directory**

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