**DATE** : **07.06.2024**

**DT/NT** : **DT**

**LESSON** : **LINUX**

**SUBJECT** : **COMMAND LINE BASICS**

**SESSION** : **2**

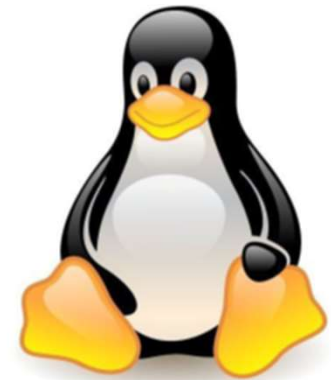**BATCH** : **B 279**

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# Command Line Basics-2

# Basic Shell Commands

| rmdir [dir] | delete an empty directory |
|---|---|

```
linuxuser@techproeducation:~$ ls
file1  file2  linux_lesson
linuxuser@techproeducation:~$ rmdir linux_lesson/
linuxuser@techproeducation:~$ ls
file1  file2
linuxuser@techproeducation:~$
```

# Basic Shell Commands

| rm | delete a file |
|----|---------------|

```
linuxuser@techproeducation:~$ ls
file1  file2
linuxuser@techproeducation:~$ rm file1
linuxuser@techproeducation:~$ ls
file2
linuxuser@techproeducation:~$ |
```

# Basic Shell Commands

| cp | copy a file to another location |
|----|--------------------------------|

```
linuxuser@techproeducation:~$
linuxuser@techproeducation:~$ ls
file2
linuxuser@techproeducation:~$ mkdir linux_lesson
linuxuser@techproeducation:~$ ls
file2  linux_lesson
linuxuser@techproeducation:~$ cp file2 ./linux_lesson/file3
linuxuser@techproeducation:~$ ls
file2  linux_lesson
linuxuser@techproeducation:~$ cd linux_lesson/
linuxuser@techproeducation:~/linux_lesson$ ls
file3
linuxuser@techproeducation:~/linux_lesson$ cd ..
linuxuser@techproeducation:~$ ls
file2  linux_lesson
linuxuser@techproeducation:~$ |
```

# Basic Shell Commands

| mv | move a file to another location |
|---|---|



```
linuxuser@techproeducation:~$ ls
file2   linux_lesson
linuxuser@techproeducation:~$ mv file2 ./linux_lesson/file2
linuxuser@techproeducation:~$ ls
linux_lesson
linuxuser@techproeducation:~$ cd linux_lesson/
linuxuser@techproeducation:~/linux_lesson$ ls
linuxuser@techproeducation:~/linux_lesson$
linuxuser@techproeducation:~/linux_lesson$
```

# Basic Shell Commands

| | |
|---|---|
| **echo** | print message to screen |
| **echo > [file]** | print message into a file |

```
linuxuser@techproeducation:~/linux_lesson$ ls
file2  file3
linuxuser@techproeducation:~/linux_lesson$ echo techproeducation
techproeducation
linuxuser@techproeducation:~/linux_lesson$ echo techproeducation > file1
linuxuser@techproeducation:~/linux_lesson$ ls
file1  file2  file3
linuxuser@techproeducation:~/linux_lesson$ cat file1
techproeducation
linuxuser@techproeducation:~/linux_lesson$
```

# Basic Shell Commands

| cat | show file contents |
|-----|-------------------|

# Basic Shell Commands

| COMMAND | DESCRIPTION |
|---------|-------------|
| pwd | show current path |
| ls | lists directory contents |
| cd | change (current) directory |
| mkdir | create a new directory |
| rmdir | delete an empty directory |
| touch | create a file |
| rm | delete a file |
| cp | copy a file to another location |
| mv | move a file to another location |
| cat | show file contents |
| echo | print message to screen |
| clear | clear the terminal screen |

# Basic Shell Commands

# Basic Shell Commands
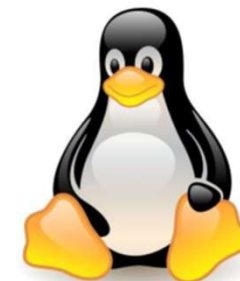
| File system Commands | |
|---|---|
| **ls** | lists directories and files |
| **ls** -a | lists all files including hidden files |
| **ls** -lh | formatted list including more data |
| **ls** -t | lists sorted by date |
| **pwd** | returns path to working directory |
| **cd** *dir* | changes directory |
| **cd** .. | goes to parent directory |
| **cd** / | goes to root directory |
| **cd** | goes to home directory |
| **touch** *file_name* | creates an empty file |
| **cp** *file file_copy* | copy a file |
| **cp** -r | copy files contained in directories |
| **rm** *file* | deletes a file |
| **rm** -r *dir* | deletes a directory and its files |
| **mv** *file1 file2* | moves or renames a file |
| **mkdir** *dir_name* | creates a directory |
| **rmdir** *dir_name* | deletes a directory |

| Text handling commands | |
|---|---|
| command > *file* | saves STDOUT in a file |
| command >> *file* | appends STDOUT in a file |
| **cat** *file* | concatenate and print files |
| **cat** *file1 file2 > file3* | merges files 1 and 2 into *file3* |
| **cat** *\*fasta > all.fasta* | concatenates all fasta files in the current directory |
| **head** *file* | prints first lines from a file |
| **head** -n 5 *file* | prints first five lines from a file |
| **tail** *file* | prints last lines from a file |
| **tail** -n 5 *file* | prints last five lines from a file |
| **less** *file* | view a file |
| **less** -N *file* | includes line numbers |
| **less** -S *file* | wraps long lines |
| **grep** *'pattern' file* | Prints lines matching a pattern |
| **grep** -c *'pattern' file* | counts lines matching a pattern |
| **cut** -f 1,3 *file* | retrieves data from selected columns in a tab-delimited file |
| **sort** *file* | sorts lines from a file |

# Task

📁 techproeducation

    📁 **lessons**

       📄 **linux.txt**

           "I love linux"

       📄 **html.txt**

           "I can create a website"

📁 **materials**

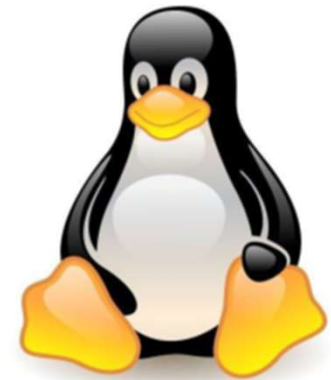    📄 **lms.txt**

       pre-class

    📄 try-it.txt

    post-class

# Ping & SSH & Wget & Curl Command

# Ping Command

Ping or Packet Internet Groper is a network administration utility used to check the connectivity status between a source and a destination device.

`ping host-name/IP`

`ping 54.93.34.220`

```
linuxuser@techproeducation:~/linux_lesson$ ping 8.8.8.8
PING 8.8.8.8 (8.8.8.8) 56(84) bytes of data.
64 bytes from 8.8.8.8: icmp_seq=1 ttl=112 time=47.6 ms
64 bytes from 8.8.8.8: icmp_seq=2 ttl=112 time=45.0 ms
64 bytes from 8.8.8.8: icmp_seq=3 ttl=112 time=45.7 ms
64 bytes from 8.8.8.8: icmp_seq=4 ttl=112 time=44.2 ms
64 bytes from 8.8.8.8: icmp_seq=5 ttl=112 time=44.8 ms
^C
--- 8.8.8.8 ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4009ms
rtt min/avg/max/mdev = 44.155/45.442/47.617/1.195 ms
linuxuser@techproeducation:~/linux_lesson$
```

# SSH Command

* ssh stands for "Secure Shell".
* It is a protocol used to securely connect to a remote server/system.

ssh user@host(IP/Domain_name)

    ssh -i cert.pem ec2-user@54.93.34.220

```
linuxuser@techproeducation:~/.ssh$ ls
known_hosts  okutan.pem
linuxuser@techproeducation:~/.ssh$
linuxuser@techproeducation:~/.ssh$ ssh -i "okutan.pem" ubuntu@ec2-54-242-1-68.compute-1.amazonaws.com
Welcome to Ubuntu 22.04.3 LTS (GNU/Linux 6.2.0-1012-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Tue Dec  5 15:30:03 UTC 2023

  System load:  0.0               Processes:             97
  Usage of /:   20.7% of 7.57GB   Users logged in:        0
  Memory usage: 21%               IPv4 address for eth0: 172.31.26.190
  Swap usage:   0%


Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status


The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Tue Dec  5 15:23:35 2023 from 31.155.235.132
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-26-190:~$
```

# wget command

GNU 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** [options] [url]

```
linuxuser@techproeducation:~$ wget -O latest-hugo.zip https://github.com/gohug
oio/hugo/archive/master.zip
--2023-11-30 11:03:33--  https://github.com/gohugoio/hugo/archive/master.zip
Resolving github.com (github.com)... 140.82.121.3
Connecting to github.com (github.com)|140.82.121.3|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://codeload.github.com/gohugoio/hugo/zip/refs/heads/master [fol
lowing]
--2023-11-30 11:03:33--  https://codeload.github.com/gohugoio/hugo/zip/refs/he
ads/master
Resolving codeload.github.com (codeload.github.com)... 140.82.121.9
Connecting to codeload.github.com (codeload.github.com)|140.82.121.9|:443... c
onnected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [application/zip]
Saving to: 'latest-hugo.zip'

latest-hugo.zip              [                                       <=
>                                  ] 20.76M  3.27MB/s    in 6.9s

2023-11-30 11:03:41 (3.02 MB/s) - 'latest-hugo.zip' saved [21765972]

linuxuser@techproeducation:~$ ls
latest-hugo.zip  linux_lesson
linuxuser@techproeducation:~$ |
```

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# curl command

curl (short for "Client URL") is a command line tool that enables data transfer over various network protocols

**curl** [options/URLs]
**curl** [url] > [local-file]

```
linuxuser@techproeducation: ×    +  ∨                              —    □    ×

linuxuser@techproeducation:~$ curl https://www.gnu.org/gnu/gnu.html
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
<head>
<meta http-equiv="content-type" content="text/html; charset=utf-8" />
<link rel="author" href="mailto:webmasters@gnu.org" />
<link rel="icon" type="image/png" href="/graphics/gnu-head-mini.png" />
<meta name="ICBM" content="42.355469,-71.058627" />
<link rel="stylesheet" type="text/css" href="/layout.min.css" media="screen" /
>
<link rel="stylesheet" type="text/css" href="/print.min.css" media="print" />



<!-- Parent-Version: 1.98 -->
<!-- This page is derived from /server/standards/boilerplate.html -->
<title>About the GNU Operating System
- GNU project - Free Software Foundation</title>
<style type="text/css" media="print,screen"><!--
#dynamic-duo { display: none; }
@media (min-width: 45em) {
   .short-lines { width: 48em; max-width: 100%; }
   #dynamic-duo {
       display: block;
       padding: .9em;
```

# Getting Help
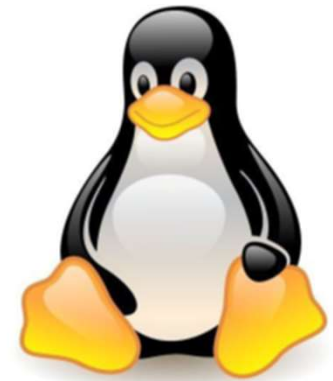
# Man Pages

➢ A man page (short for manual page) is a form of software documentation usually found on a Unix or Unix-like operating system.

➢ If we install a package to do some task, the man page for that package will typically be installed at the same time. This gives us the ability to take a look at that documentation and make sure that we're using it in a manner consistent with its design.

➢ The man page for a particular command is invoked by man command.

```
man  <command>
```

# Man Pages

man ls

# Info Pages

➢ Info pages are additional documentation with more robust capability in detail. Info pages normally provide more detailed information about a command than its respective man page.

➢ The info page for a particular command is invoked by info command.

```
info  <command>
```

# Info Pages

info  ls

# --help Option

gives a short explanation about how to use the command and a list of available options.

# Do you have any questions?

Send it to us! We hope you learned something new.

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