**Topic Name:**

The main aim of this lab session is to provide hands-on experience on

* Getting Help
* Basic Commands
* Navigation
* File System
* simple shell script

1. Getting Help

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Task | Command Name | Syntax | Example | Screenshots |
| To get manual page for the known command | man | man <command\_name> | man ls |  |
| To get manual page for the unknown command | man -k | man -k command\_name | man -k list |  |
| To know the source file binary | readelf -a | readelf -a /bin/ls | readelf -a /bin/ls |  |
| To know the path of the command | **type -a** | type -a command\_name | type -a ls |  |
| To know the command is external or internal | **type** | type command\_name | type ls |  |
| To get help for the internal command | **help** | help command\_name | help ls |  |
| To list out bash commands | **help** | bash --help | bash –help |  |
| To know the usage of the command | **apropos** | apropos command\_name | apropos cd |  |

1. **Basic Commands**

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| --- | --- | --- | --- | --- |
| Task | Command Name | Syntax | Example | Screenshots |
| To know today’s date | **date** | date | date |  |
| To print calendar | **./calendar** | ./calendar.py year month | ./calendar.py 2024 1 |  |
| To print kernel version | **uname** | uname -a | uname -a |  |
| To print default shell | **echo** | echo $shell | echo $shell |  |
| To print currently logged in user | **whoami** | whoami | whoami |  |
| To create shortcut for command | **alias** | alias name = command\_name | alias c=clear |  |
| To delete shortcut | **unalias** | unalias name | unalias c |  |
| To change the timestamp of the file | **touch** | touch -t <yearmonthdaytime> file\_name | touch -t 202401040910 |  |
| To clear the screen | **clear** | clear | clear |  |
| To create empty files | **touch** | touch filename | touch a1.txt |  |
| To know disk usage | **du** | du[options][path] | du -h |  |
| To know free space in the system | **df** | df[options] | df -h |  |
| To know about the Linux release | **lsb\_release** | lsb\_release -a | lsb\_release -a |  |

1. **Navigation**

|  |  |  |  |
| --- | --- | --- | --- |
| Task | Command | Syntax | Screenshots |
| To navigate home directory | **cd** | cd |  |
| To navigate to the parent directory | **cd ..** | cd .. |  |
| To navigate to the child directory | **cd<directory\_name>** | cd<directory\_name> |  |
| Alternate command to cd | **pushd** | pushd<directory\_name> |  |
| To go back to the previous directory | **cd -** | cd - |  |
| To go to the root directory | **cd/** | cd/ |  |

1. **File System**

|  |  |  |
| --- | --- | --- |
| **Task** | **Syntax** | **Command** |
| **How to identify the file system** | lsblk -f | **lsblk -f** |

1. Create Folder “CYS”
2. Navigate to CYS
3. Create folder LS1 and LS2 under CYS
4. Go back to CYS
5. Working with Files
6. Add commands which you learnt during lab session in the file commands.txt
7. Change the timestamp of the file to yesterday

A screenshot of a computer screen

Description automatically generated

1. Copy the contents from the file commands.txt to commands\_demo.txt

A close up of a sign

Description automatically generated

1. Rename the file commands\_demo.txt to duplicate

A screenshot of a computer code

Description automatically generated

1. Rename all .html to .hldd

A screenshot of a computer code

Description automatically generated

1. Delete the file duplicate
2. Copy the contents commands.txt to unit4 and unit5 (using relative path)

A group of blue and white text

Description automatically generated

1. Delete the contents from unit5 (using absolute path)

A screenshot of a computer code

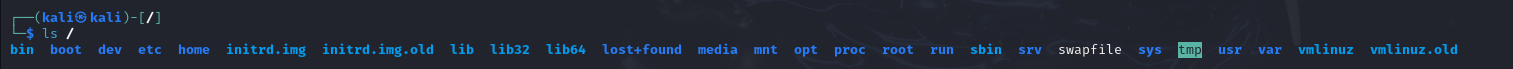
Description automatically generated

1. Navigate to root

A computer code with white text

Description automatically generated

1. List all the files under root



1. Explore all the folders (Do not delete any folder)



1. Navigate to /etc/passwd

A close up of a computer screen

Description automatically generated

1. Open the file passwd



1. Explore the file passwd
2. Navigate to /etc/group and explore

A blue and white text on a black background

Description automatically generated

1. **Difference between** 
   * + 1. GUI vs. CLI

GUI stands for graphical user interface, it contains the interaction with graphical elements like icons and windows

CLI stands for command line interface, Here the interaction with the system is through the commands.

* + - 1. man vs info

man command provides the manual page of the command/ filename which we give and is succinct where info provides the hierarchical structure and interconnected information.

* + - 1. which vs. whereis

“which” is used to locate a distinct known path whereas the command “whereis” gives the path containing source, manual page , and binary files.

* + - 1. Terminal vs shell

Terminal is an interface, it provides the environment where shell can be run, where as shell is a interpreter that allows to interact with the operating system through commands.

1. Write a simple shell script to print your name and your hobbies!

**Interesting commands to Explore**

Banner

History

**Note:** Include your screenshots

Evaluation :

Marks : 10 (Deadline : 4 – Originality :3 – Completeness :3 )

Deadline: 06.08.2024

“All our dreams can come true if we have the courage to pursue them.”

Walt Disney