11/14/2024 – Day-1 of Linux training.

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GNU – GNU stands for GNU’s not Unix, it’s a program like Unix with different internal program. The GNU in GNU is pronounced goo nuu.

Kernel - Device access, file system, multi tasking.

Multi tasking - doing multiple tasks at the same time but there is very little time gap(ns).

Multi threading - In a task multiple threads are used to do task.

Shell - bash, sh, tcsh.

Utilities - wc, cat, sort, gcc, emax, grep, awk.

Linux O/S core was developed by Linus Torvalds.

GNU utilities were written by Richard stallman and team.

Connection transfer and protocols - ssh(Secure shell), x-win(X - windowing), sftp(secure file transfer protocols).

Linux command basics:

[username@scc1 ~]$ command --option argument

Command: Command/program that does one thing

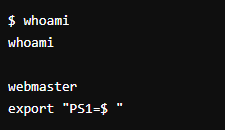
Options: Change the way a command does that one thing

* Short form: Single-dash and one letter e.g. ls -a
* Long form: Double-dash and a word e.g. ls --all

Argument: Provides the input/output that the command interacts with.

**Commands practice:**

**Whoami**

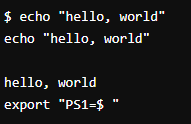
****

**Hostname**

**A screen shot of a computer

Description automatically generated**

**echo "hello, world"**

****

**Echo $HOME**

**A black background with white text

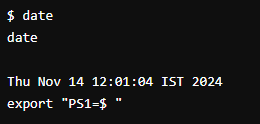
Description automatically generated**

**echo my login is $(whoami)**

**A screenshot of a computer screen

Description automatically generated**

**Date**

****

**Cal ---------- Not working**

**A black screen with white text

Description automatically generated**

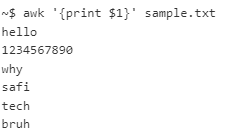
**Shazam ---------------------- Not working**

**A black screen with white text

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**Commands: Selected text processing utilities**

* **awk : Pattern scanning and processing language**
* **Example: awk ‘{print $1}’ file.txt**

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* **cat : Display file(s)**
* **Example: cat sample.txt**

****

**The output is shown after next few pages**

* **cut : Extract selected fields of each line of a file**
* **Example:**

**A screenshot of a computer code

Description automatically generated**

* **diff : Compare two files**
* **Example:**

**A screenshot of a computer code

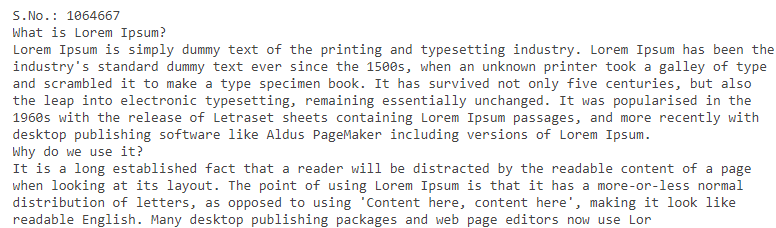
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* **grep : Search text for a pattern**
* **Example:**

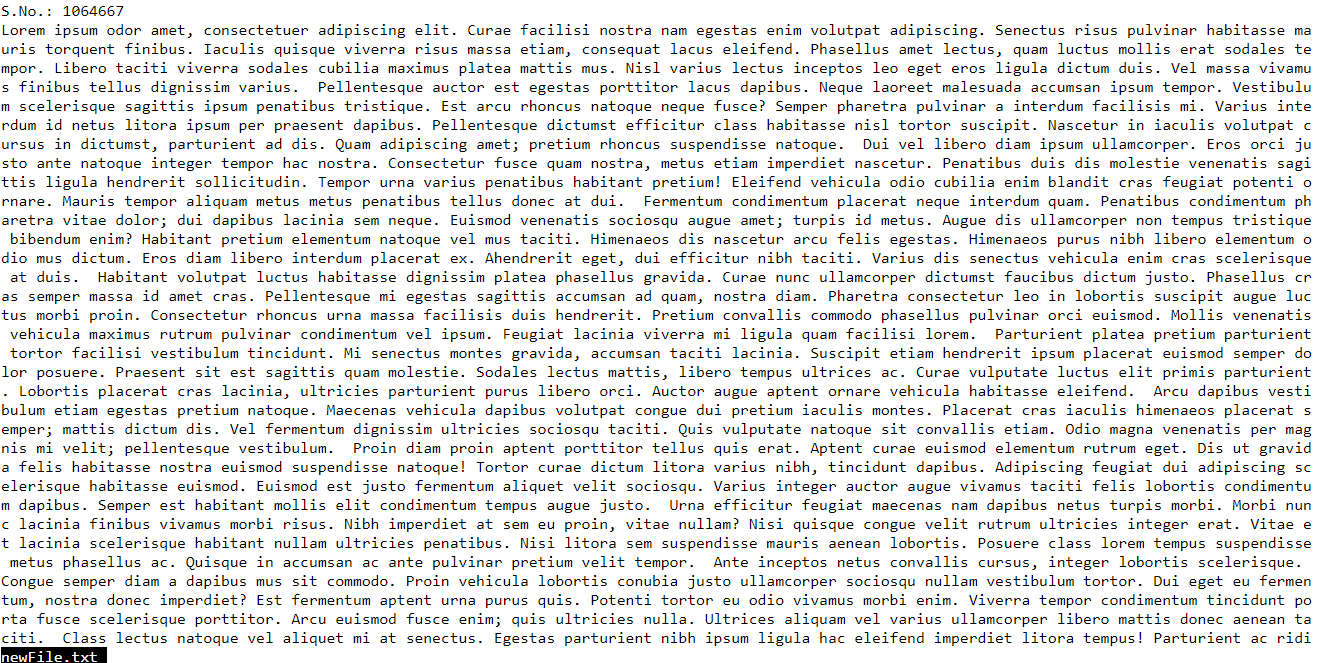
**A close up of text

Description automatically generated**

* **head : Display the first part of files**
* **Example: **

****

* **less : Display files on a page-by-page basis**
* **Example: **

****

**A close up of text

Description automatically generated**

* **sed : Stream editor (esp. search and replace)**
* **Example: The -> boo**

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Description automatically generated**

* **sort : Sort text files**
* **Example:**

**A computer code with numbers and symbols

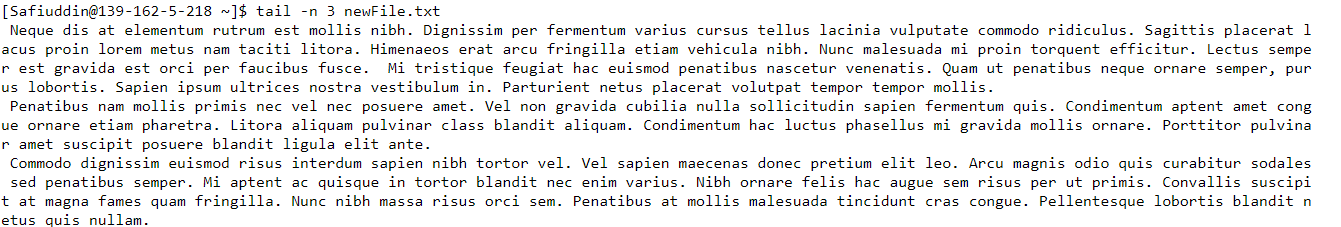
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* **split : Split files**
* **Example:**

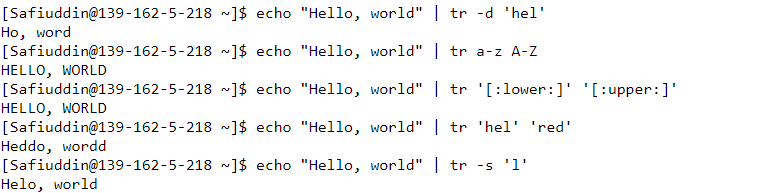
**A white background with black text

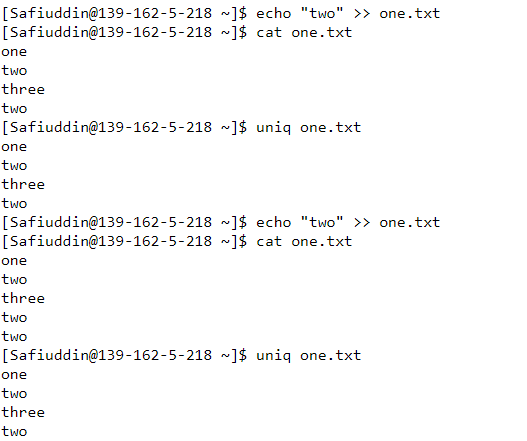
Description automatically generated**

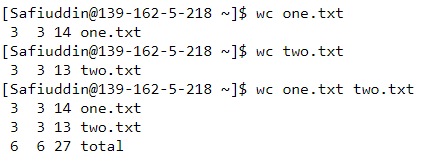
* **tail : Display the last part of a file**
* **Example:**

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* **tr : Translate/delete characters**
* **Example:**

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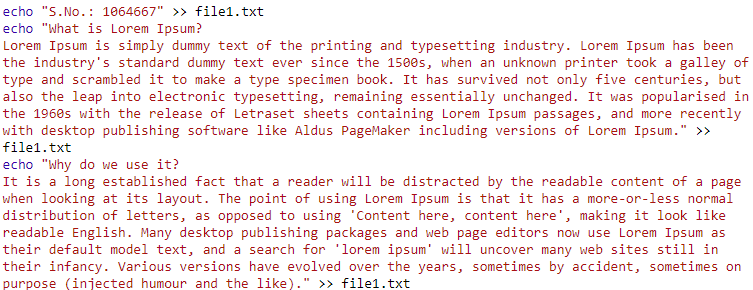
* **uniq : Filter out repeated lines in a file**
* **Example:**
* **wc : Line, word and character count**
* **Example:**

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**Creating a file:**

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**Putting content to the file:**

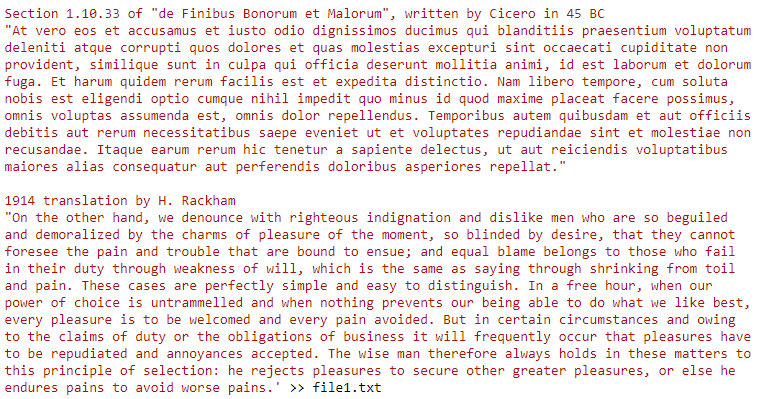
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**A white text with red text

Description automatically generated**

**A red text on a white background

Description automatically generated**

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**Displaying content of the file**

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**A white text on a white background

Description automatically generated**

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**Renaming the file**

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