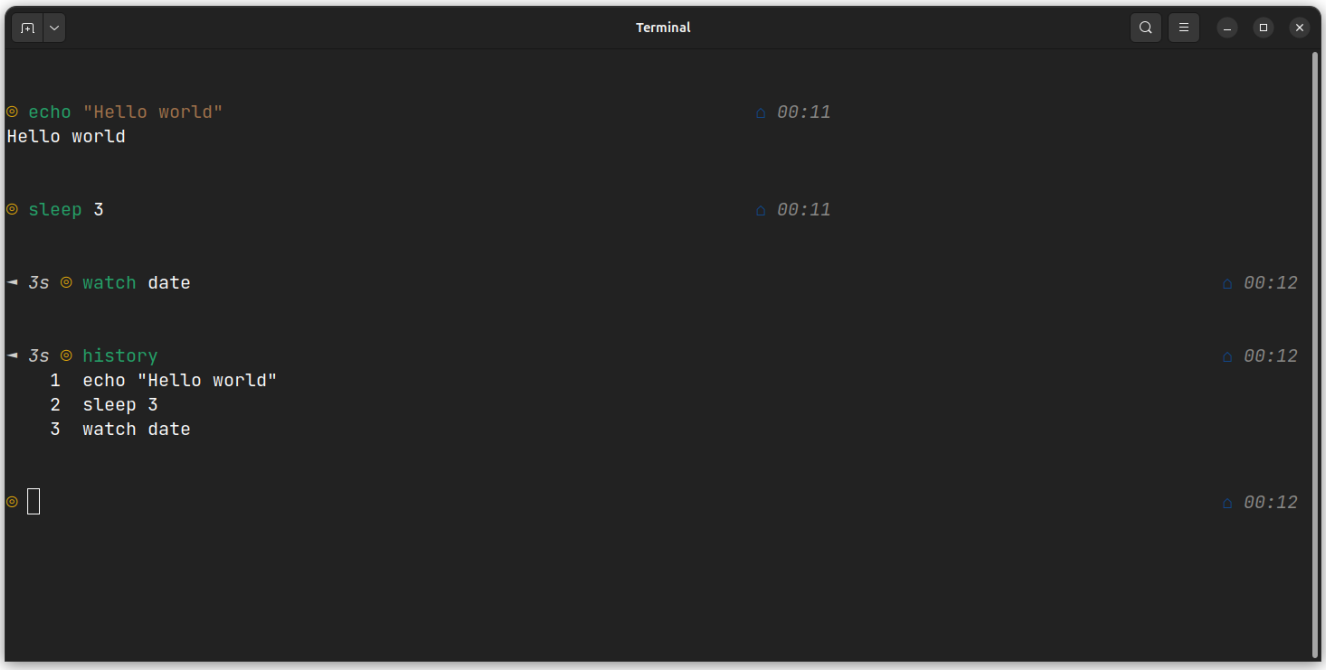
Week Report 3

Completed work for week 3

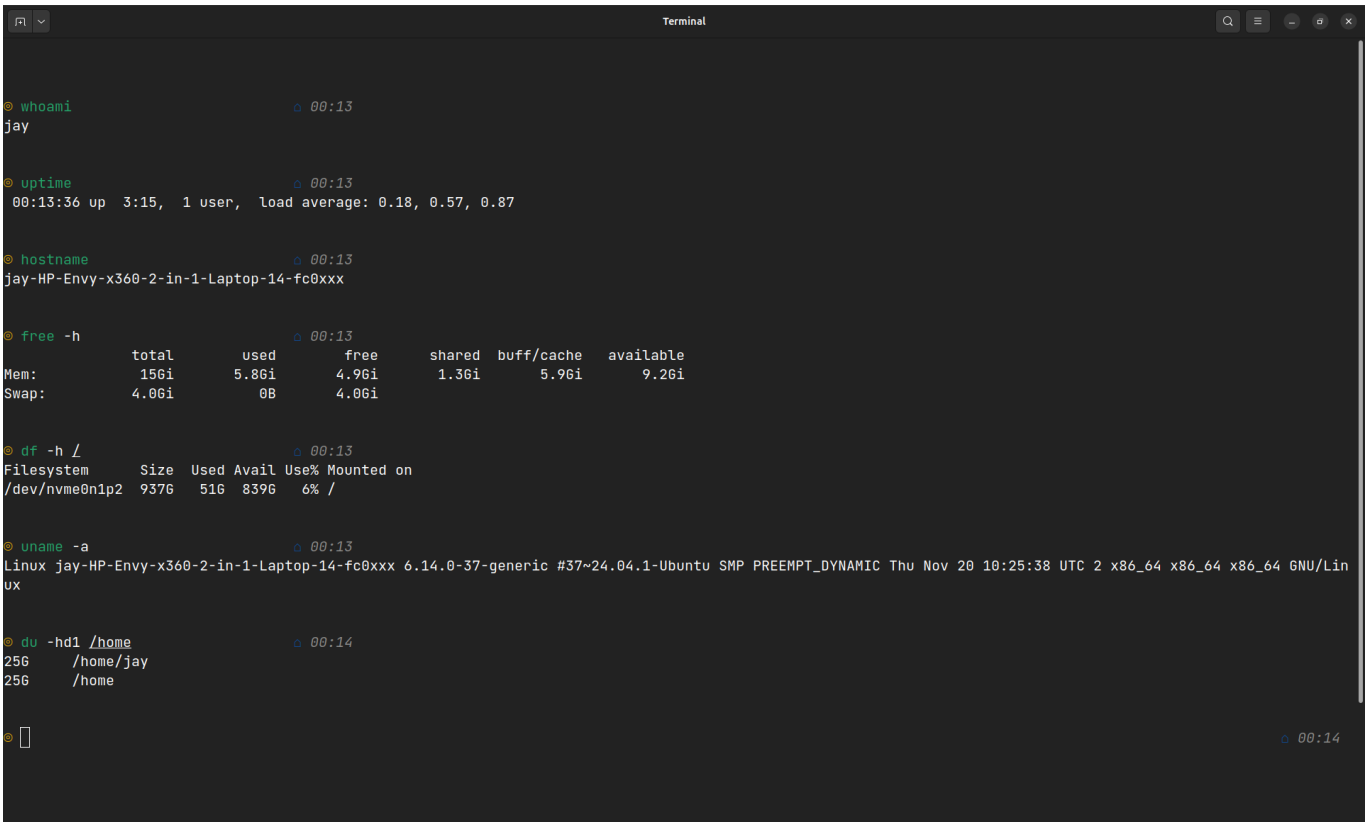
- lab3
- notes3

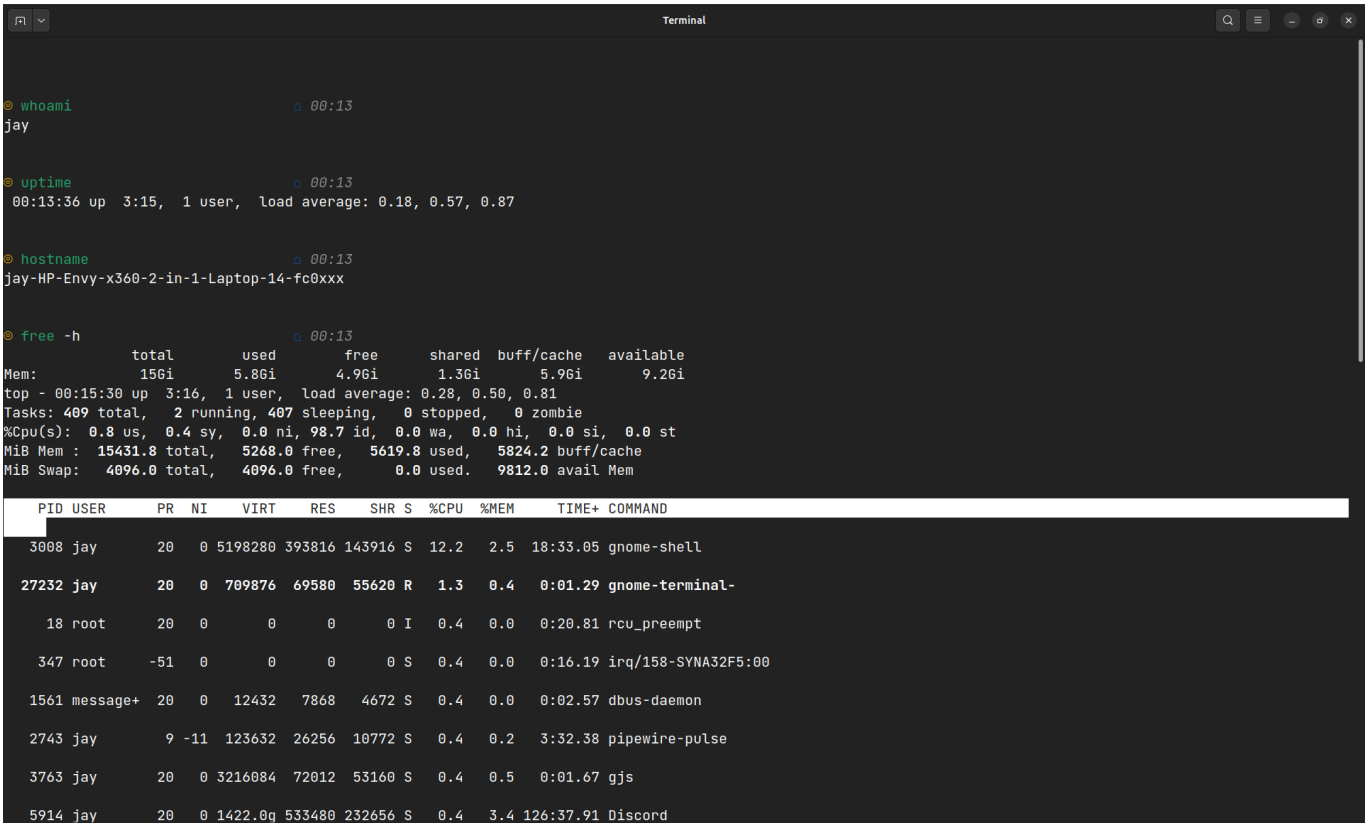
Practice screenshots

Practice 3

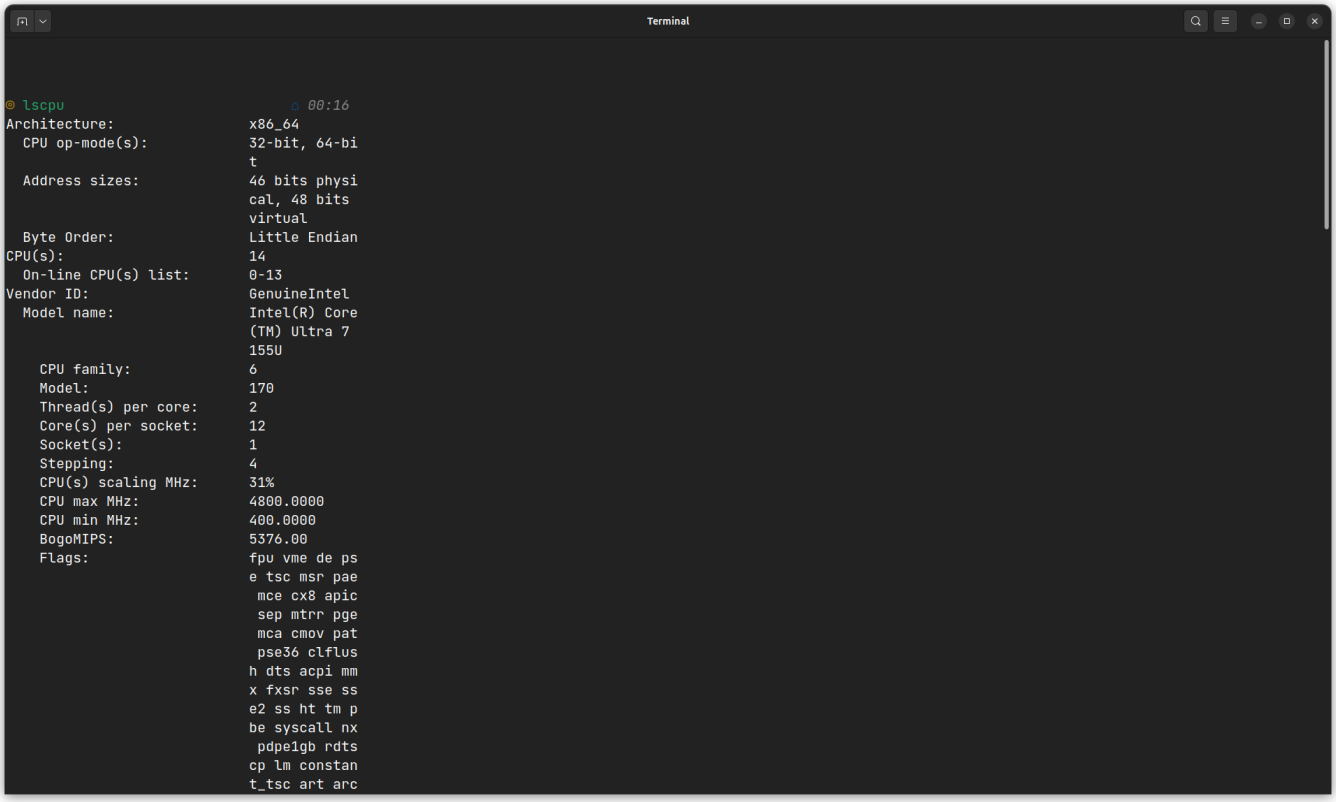


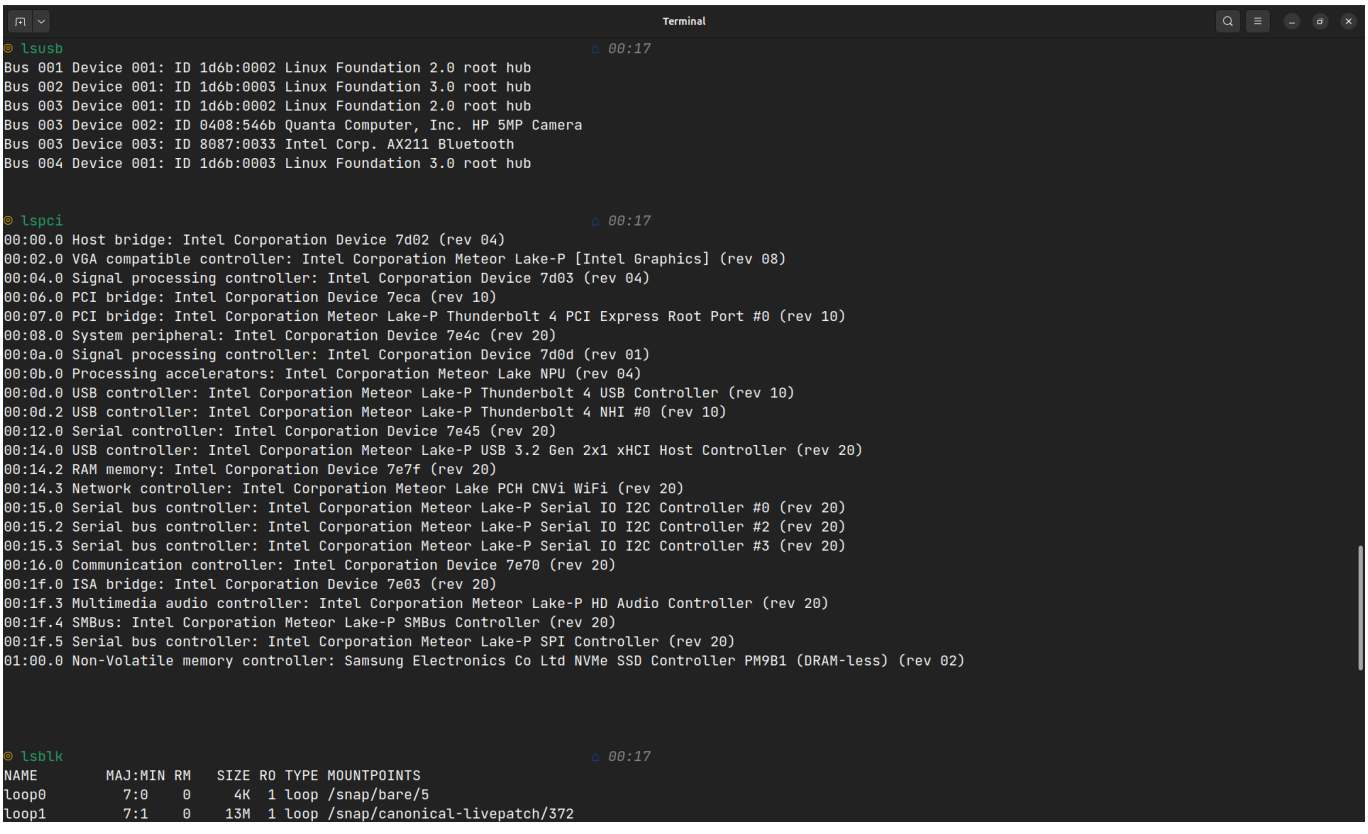
Practice 4

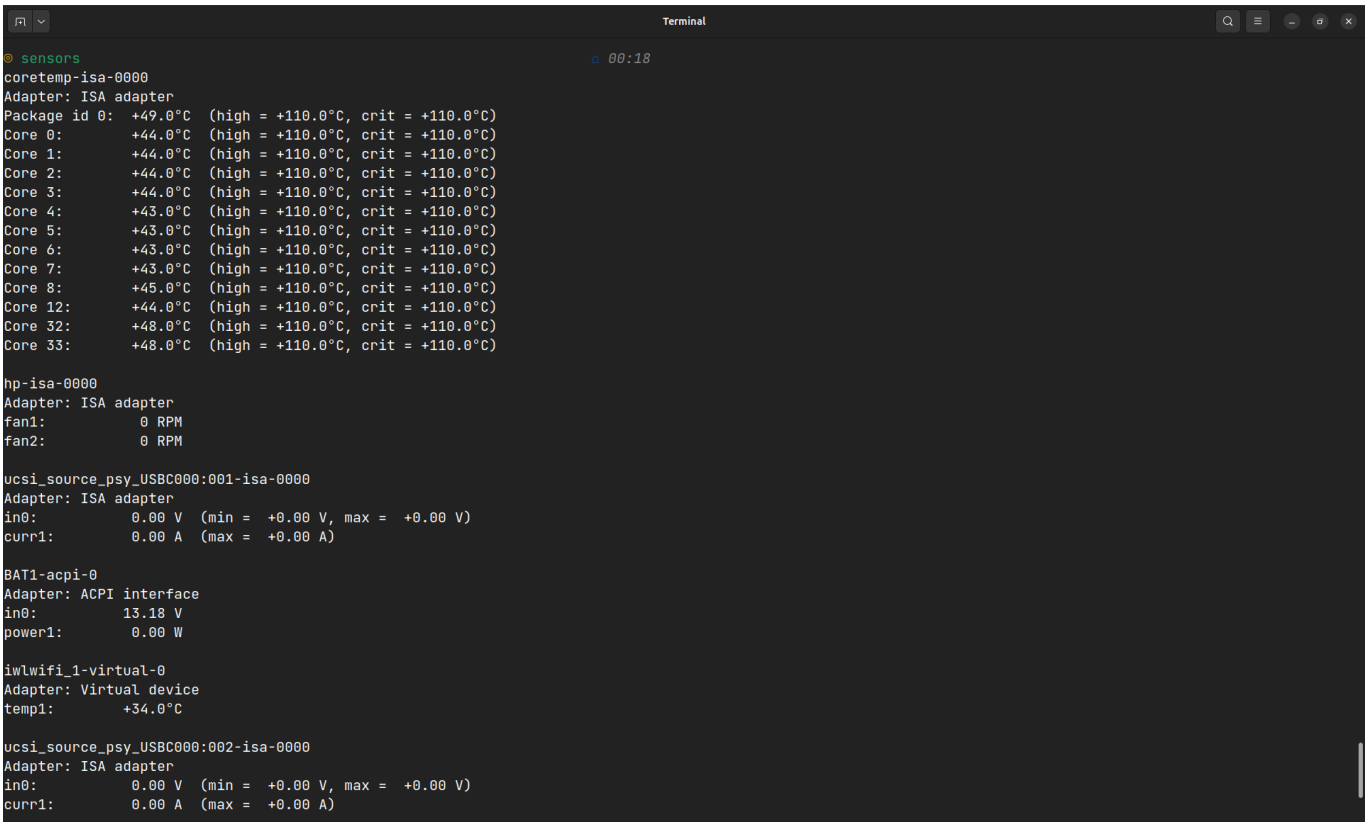

Terminal
whoami 00:13
jay
uptime 00:13
00:13:36 up 3:15, 1 user, load average: 0.18, 0.57, 0.87
hostname 00:13
jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx
free -h 00:13
total used free shared buff/cache available
Mem: 15Gi 5.8Gi 4.9Gi 1.3Gi 5.9Gi 9.2Gi
Swap: 4.0Gi 0B 4.0Gi
df -h / 00:13
Filesystem Size Used Avail Use% Mounted on
/dev/nvme0n1p2 937G 51G 839G 6% /
uname -a 00:13
Linux jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx 6.14.0-37-generic #37~24.04.1-Ubuntu SMP PREEMPT_DYNAMIC Thu Nov 20 10:25:38 UTC 2 x86_64 x86_64 x86_64 GNU/Linux
du -hd1 /home 00:14
25G /home/jay
25G /home
00:14


Terminal
whoami 00:13
jay
uptime 00:13
00:13:36 up 3:15, 1 user, load average: 0.18, 0.57, 0.87
hostname 00:13
jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx
free -h 00:13
total used free shared buff/cache available
Mem: 15Gi 5.8Gi 4.9Gi 1.3Gi 5.9Gi 9.2Gi
top - 00:15:30 up 3:16, 1 user, load average: 0.28, 0.50, 0.81
Tasks: 409 total, 2 running, 407 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.8 us, 0.4 sy, 0.0 ni, 98.7 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
MiB Mem : 15431.8 total, 5268.0 free, 5619.8 used, 5824.2 buff/cache
MiB Swap: 4096.0 total, 4096.0 free, 0.0 used. 9812.0 avail Mem
PID USER PR NI VIRT RES SHR S %CPU %MEM TIME+ COMMAND
3008 jay 20 0 5198280 393816 143916 S 12.2 2.5 18:33.05 gnome-shell
27232 jay 20 0 709876 69580 55620 R 1.3 0.4 0:01.29 gnome-terminal-
18 root 20 0 0 0 0 I 0.4 0.0 0:20.81 rcu_preempt
347 root -51 0 0 0 0 S 0.4 0.0 0:16.19 irq/158-SYNA32F5:00
1561 message+ 20 0 12432 7868 4672 S 0.4 0.0 0:02.57 dbus-daemon
2743 jay 9 -11 123632 26256 10772 S 0.4 0.2 3:32.38 pipewire-pulse
3763 jay 20 0 3216084 72012 53160 S 0.4 0.5 0:01.67 gjs
5914 jay 20 0 1422.0g 533480 232656 S 0.4 3.4 126:37.91 Discord

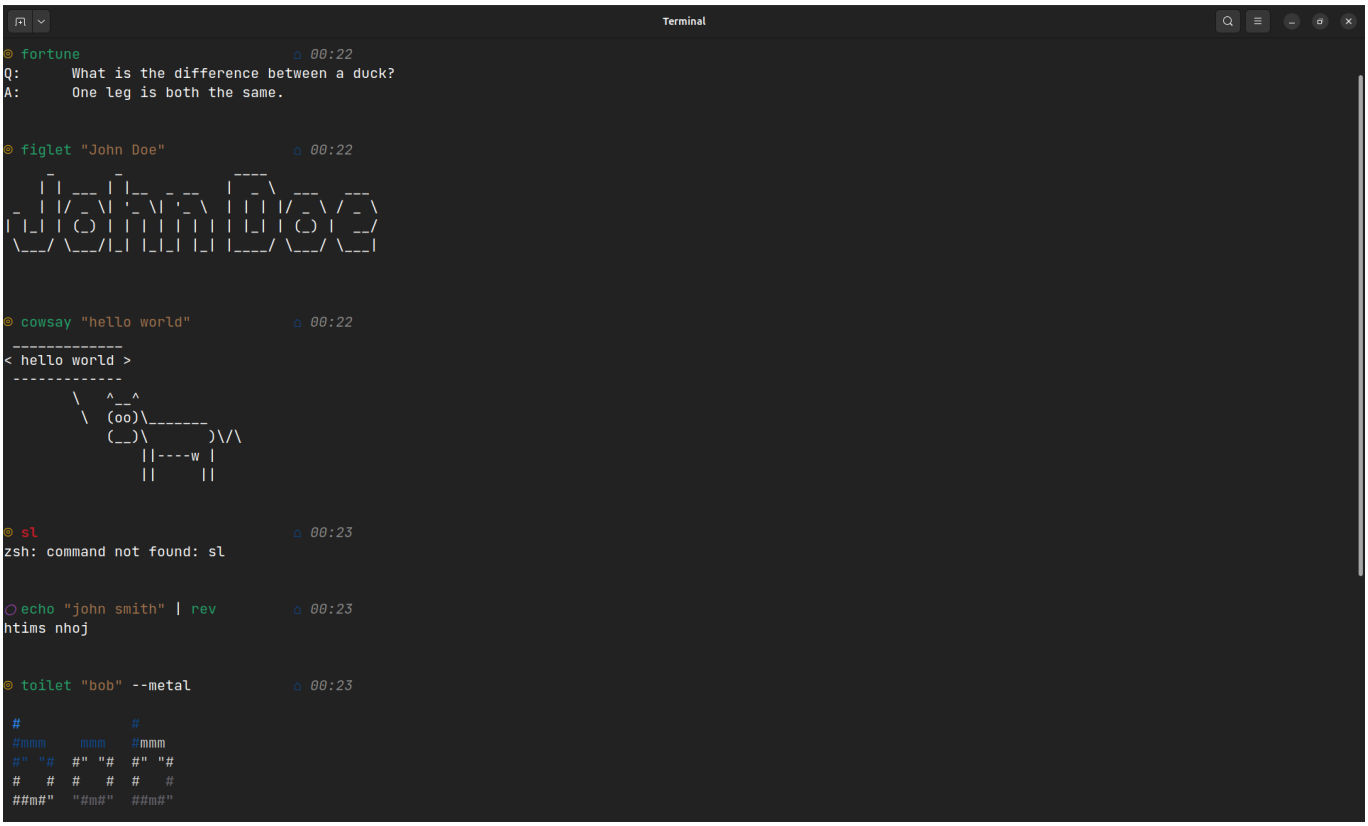
Practice 5


Terminal
lscpu
00:16
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Address sizes: 46 bits physical, 48 bits virtual
Byte Order: Little Endian
CPU(s): 14
On-line CPU(s) list: 0-13
Vendor ID: GenuineIntel
Model name: Intel(R) Core (TM) Ultra 7 155U
CPU family: 6
Model: 170
Thread(s) per core: 2
Core(s) per socket: 12
Socket(s): 1
Stepping: 4
CPU(s) scaling MHz: 31%
CPU max MHz: 4800.0000
CPU min MHz: 400.0000
BogoMIPS: 5376.00
Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arc


Terminal
lsusb
00:17
Bus 001 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 002 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
Bus 003 Device 001: ID 1d6b:0002 Linux Foundation 2.0 root hub
Bus 003 Device 002: ID 0408:546b Quanta Computer, Inc. HP 5MP Camera
Bus 003 Device 003: ID 8087:0033 Intel Corp. AX211 Bluetooth
Bus 004 Device 001: ID 1d6b:0003 Linux Foundation 3.0 root hub
lspci
00:17
00:00.0 Host bridge: Intel Corporation Device 7d02 (rev 04)
00:02.0 VGA compatible controller: Intel Corporation Meteor Lake-P [Intel Graphics] (rev 08)
00:04.0 Signal processing controller: Intel Corporation Device 7d03 (rev 04)
00:06.0 PCI bridge: Intel Corporation Device 7eca (rev 10)
00:07.0 PCI bridge: Intel Corporation Meteor Lake-P Thunderbolt 4 PCI Express Root Port #0 (rev 10)
00:08.0 System peripheral: Intel Corporation Device 7e4c (rev 20)
00:0a.0 Signal processing controller: Intel Corporation Device 7d0d (rev 01)
00:0b.0 Processing accelerators: Intel Corporation Meteor Lake NPU (rev 04)
00:0d.0 USB controller: Intel Corporation Meteor Lake-P Thunderbolt 4 USB Controller (rev 10)
00:0d.2 USB controller: Intel Corporation Meteor Lake-P Thunderbolt 4 NHI #0 (rev 10)
00:12.0 Serial controller: Intel Corporation Device 7e45 (rev 20)
00:14.0 USB controller: Intel Corporation Meteor Lake-P USB 3.2 Gen 2x1 xHCI Host Controller (rev 20)
00:14.2 RAM memory: Intel Corporation Device 7e7f (rev 20)
00:14.3 Network controller: Intel Corporation Meteor Lake PCH CNVi WiFi (rev 20)
00:15.0 Serial bus controller: Intel Corporation Meteor Lake-P Serial IO I2C Controller #0 (rev 20)
00:15.2 Serial bus controller: Intel Corporation Meteor Lake-P Serial IO I2C Controller #2 (rev 20)
00:15.3 Serial bus controller: Intel Corporation Meteor Lake-P Serial IO I2C Controller #3 (rev 20)
00:16.0 Communication controller: Intel Corporation Device 7e70 (rev 20)
00:1f.0 ISA bridge: Intel Corporation Device 7e03 (rev 20)
00:1f.3 Multimedia audio controller: Intel Corporation Meteor Lake-P HD Audio Controller (rev 20)
00:1f.4 SMBus: Intel Corporation Meteor Lake-P SMBus Controller (rev 20)
00:1f.5 Serial bus controller: Intel Corporation Meteor Lake-P SPI Controller (rev 20)
01:00.0 Non-Volatile memory controller: Samsung Electronics Co Ltd NVMe SSD Controller PM9B1 (DRAM-less) (rev 02)
lsblk
00:17
NAME MAJ:MIN RM SIZE RO TYPE MOUNTPOINTS
loop0 7:0 0 4K 1 loop /snap/bare/5
loop1 7:1 0 13M 1 loop /snap/canonical-livepatch/372


Terminal
sensors
00:18
coretemp-isa-0000
Adapter: ISA adapter
Package id 0: +49.0°C (high = +110.0°C, crit = +110.0°C)
Core 0:   +44.0°C (high = +110.0°C, crit = +110.0°C)
Core 1:   +44.0°C (high = +110.0°C, crit = +110.0°C)
Core 2:   +44.0°C (high = +110.0°C, crit = +110.0°C)
Core 3:   +44.0°C (high = +110.0°C, crit = +110.0°C)
Core 4:   +43.0°C (high = +110.0°C, crit = +110.0°C)
Core 5:   +43.0°C (high = +110.0°C, crit = +110.0°C)
Core 6:   +43.0°C (high = +110.0°C, crit = +110.0°C)
Core 7:   +43.0°C (high = +110.0°C, crit = +110.0°C)
Core 8:   +45.0°C (high = +110.0°C, crit = +110.0°C)
Core 12:   +44.0°C (high = +110.0°C, crit = +110.0°C)
Core 32:   +48.0°C (high = +110.0°C, crit = +110.0°C)
Core 33:   +48.0°C (high = +110.0°C, crit = +110.0°C)
hp-isa-0000
Adapter: ISA adapter
fan1:   0 RPM
fan2:   0 RPM
ucsi_source_psy_USBC000:001-isa-0000
Adapter: ISA adapter
in0:   0.00 V (min = +0.00 V, max = +0.00 V)
curr1:   0.00 A (max = +0.00 A)
BAT1-acpi-0
Adapter: ACPI interface
in0:   13.18 V
power1:   0.00 W
iwlwifi_1-virtual-0
Adapter: Virtual device
temp1:   +34.0°C
ucsi_source_psy_USBC000:002-isa-0000
Adapter: ISA adapter
in0:   0.00 V (min = +0.00 V, max = +0.00 V)
curr1:   0.00 A (max = +0.00 A)

Practice 6

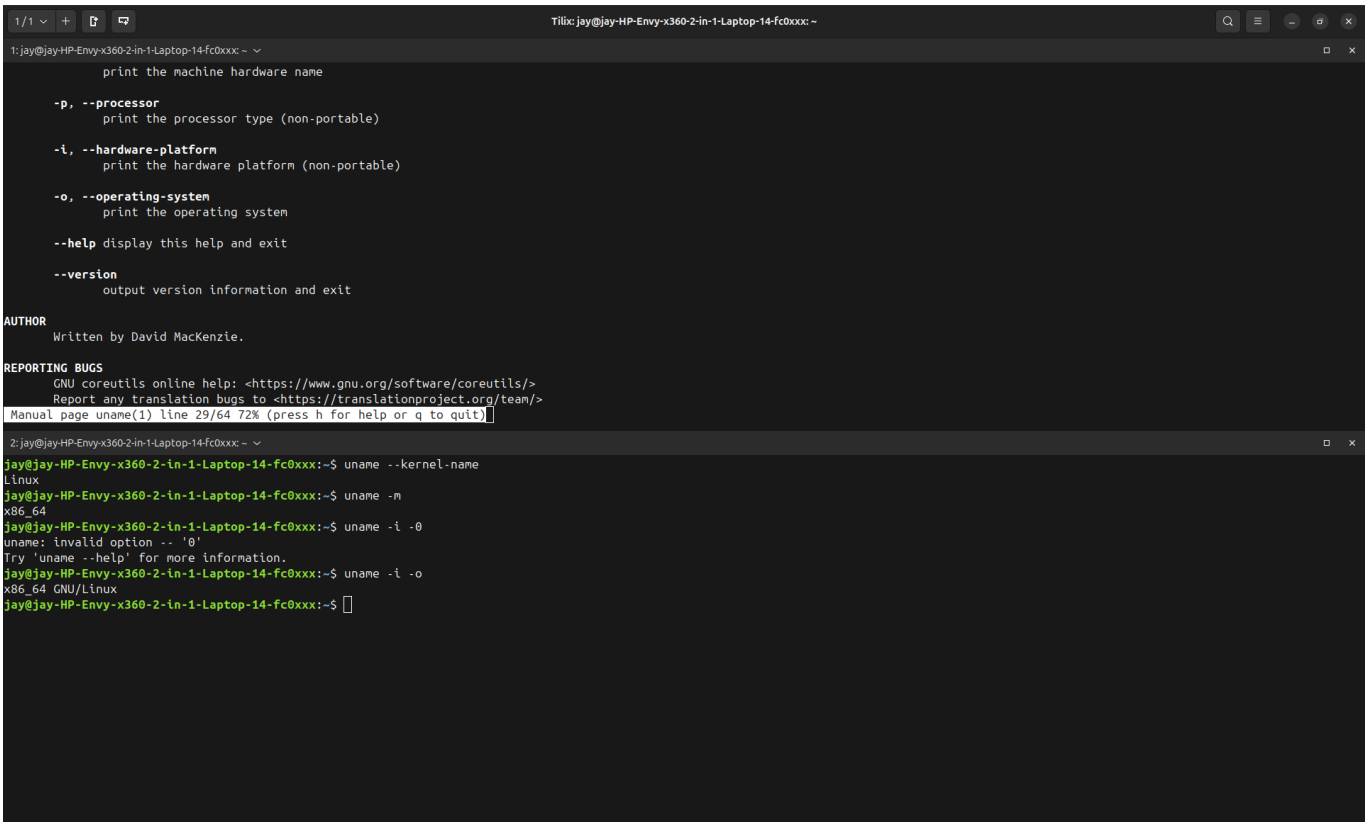

Terminal
fortune 00:22
Q: What is the difference between a duck?
A: One leg is both the same.
figlet "John Doe" 00:22
cowsay "hello world" 00:22
< hello world >
sl 00:23
zsh: command not found: sl
echo "john smith" | rev 00:23
htims nhoj
toilet "bob" --metal 00:23

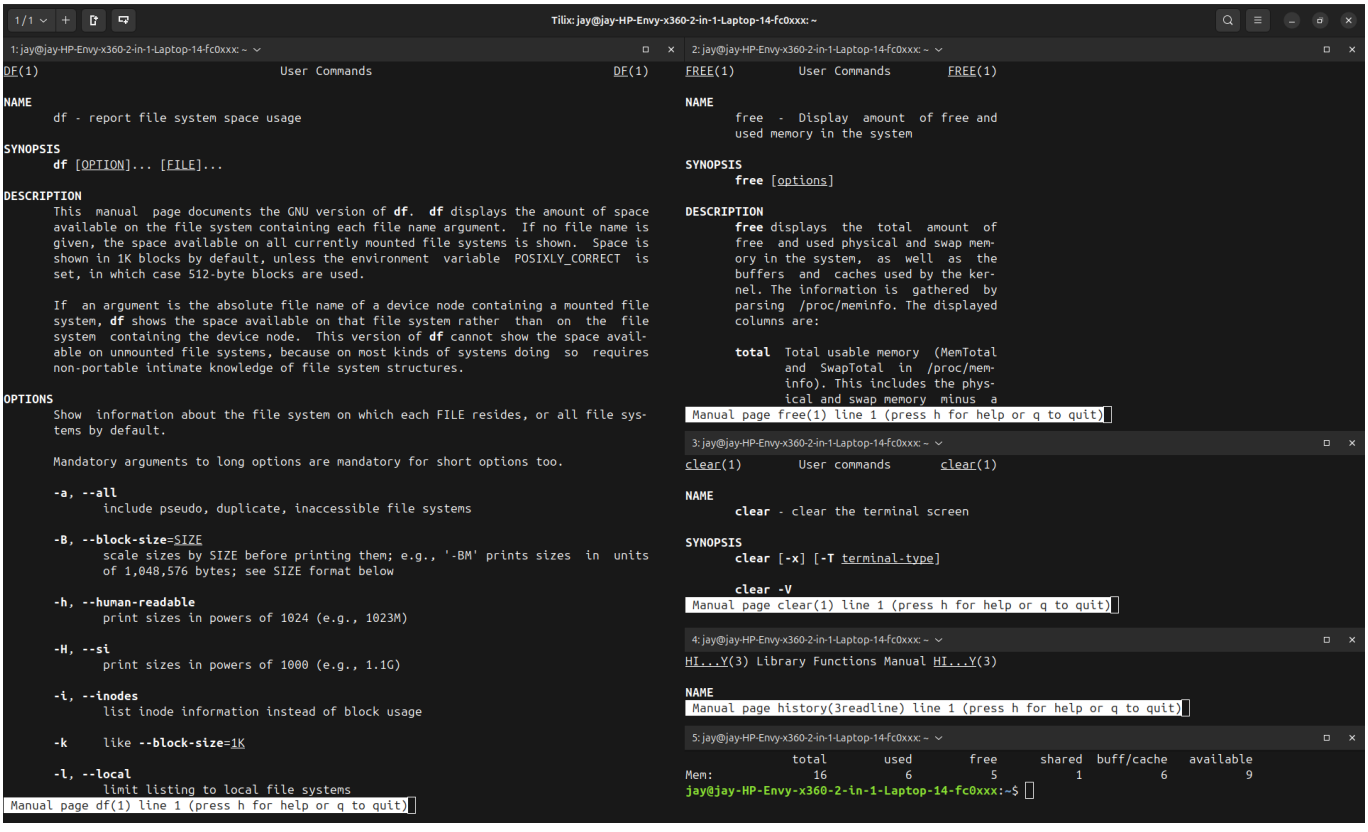

Terminal

Practice 7

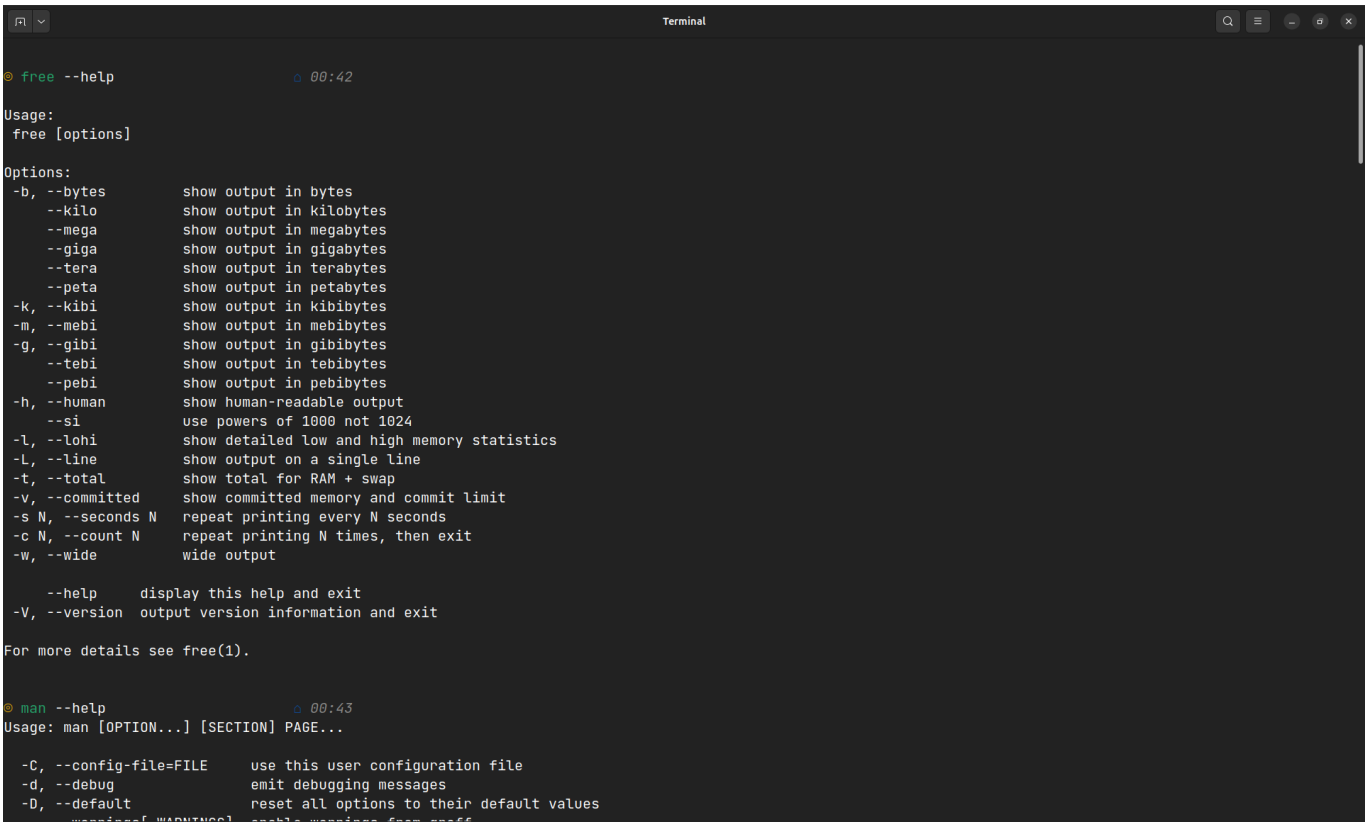

Terminal
date 00:26
Thu Dec 18 12:26:21 AM EST 2025
echo "hello world" 00:26
hello world
uname -a 00:26
Linux jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx 6.14.0-37-generic #37~24.04.1-Ubuntu SMP PREEMPT_DYNAMIC Thu Nov 20 10:25:38 UTC 2 x86_64 x86_64 x86_64 GNU/Linux
history 00:26
1 date
2 echo "hello world"
3 uname -a
!# 00:26
zsh: no such word in event
!# echo "hello world" 00:26
zsh: no such word in event
!! 00:27
history
1 date
2 echo "hello world"
3 uname -a
4 history
!!world 00:27
historyworld
zsh: command not found: historyworld

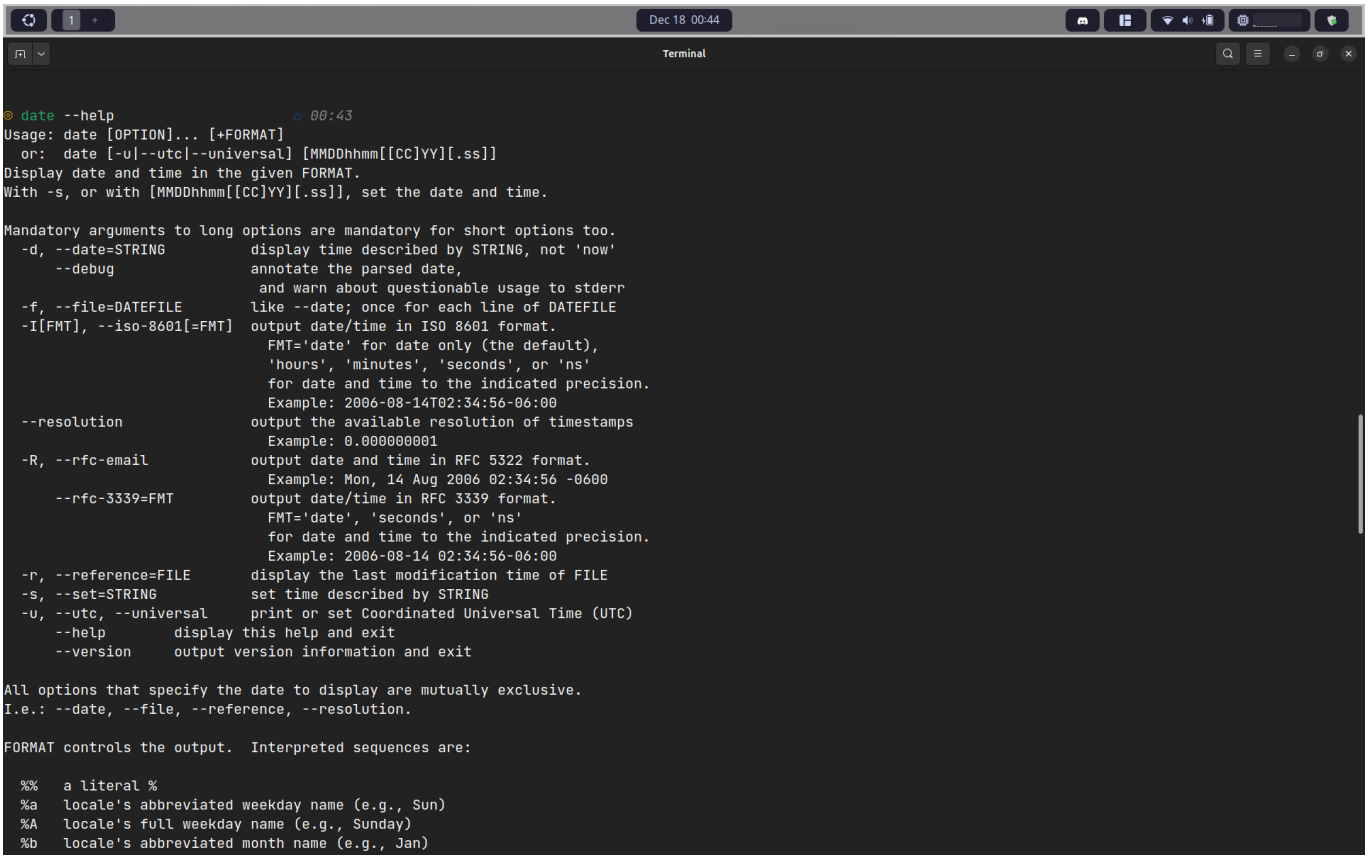
Practice 8

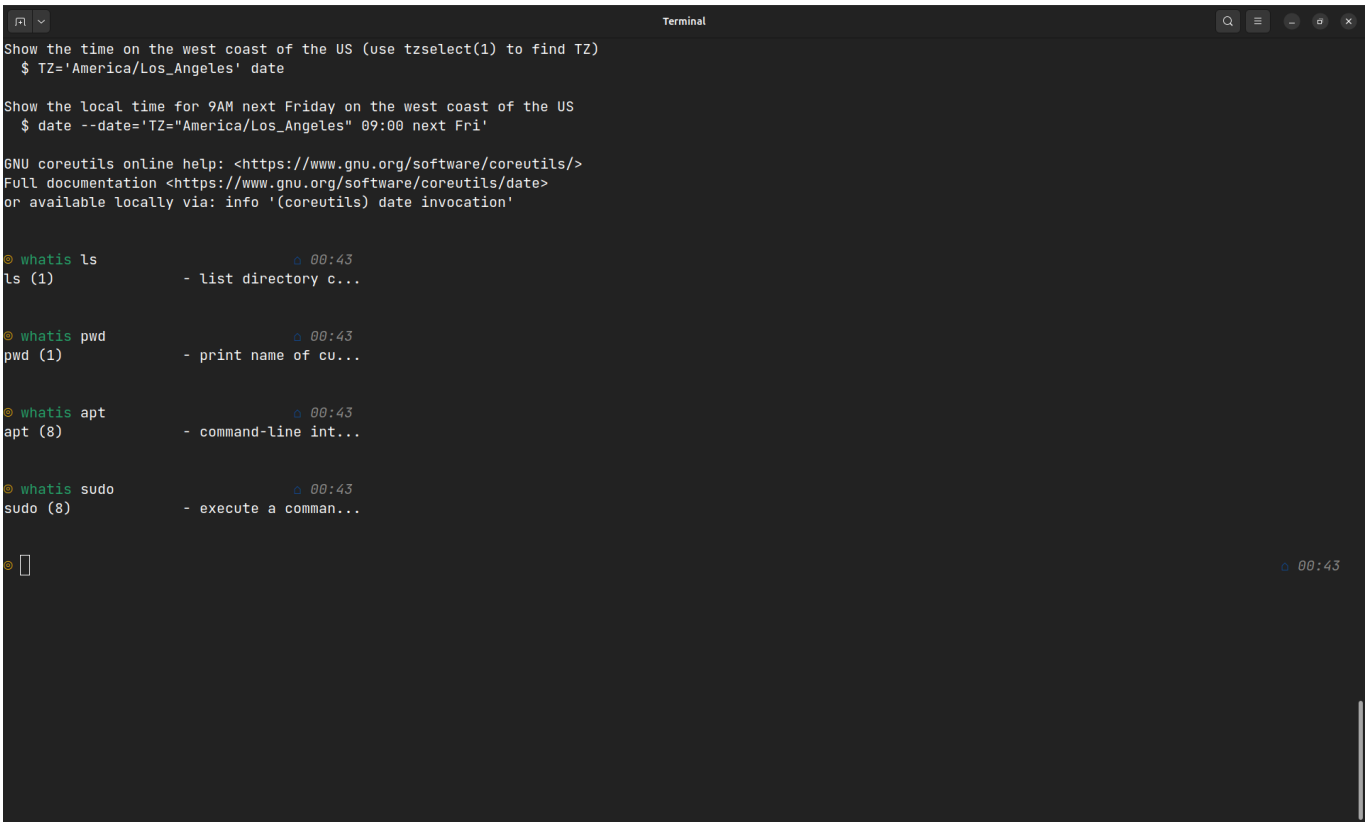

Tilix: jay@jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx: ~
print the machine hardware name
-p, --processor
print the processor type (non-portable)
-i, --hardware-platform
print the hardware platform (non-portable)
-o, --operating-system
print the operating system
--help display this help and exit
--version
output version information and exit
AUTHOR
Written by David MacKenzie.
REPORTING BUGS
GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Report any translation bugs to <https://translationproject.org/team/>
Manual page uname(1) line 29/64 72% (press h for help or q to quit)
jay@jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx:~$ uname --kernel-name
Linux
jay@jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx:~$ uname -m
x86_64
jay@jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx:~$ uname -i -0
uname: invalid option -- '0'
Try 'uname --help' for more information.
jay@jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx:~$ uname -i -o
x86_64 GNU/Linux
jay@jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx:~$


Tilix: jay@jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx: ~
DF(1) User Commands DF(1)
NAME
df - report file system space usage
SYNOPSIS
df [OPTION]... [FILE]...
DESCRIPTION
This manual page documents the GNU version of df. df displays the amount of space available on the file system containing each file name argument. If no file name is given, the space available on all currently mounted file systems is shown. Space is shown in 1K blocks by default, unless the environment variable POSIXLY_CORRECT is set, in which case 512-byte blocks are used.
If an argument is the absolute file name of a device node containing a mounted file system, df shows the space available on that file system rather than on the file system containing the device node. This version of df cannot show the space available on unmounted file systems, because on most kinds of systems doing so requires non-portable intimate knowledge of file system structures.
OPTIONS
Show information about the file system on which each FILE resides, or all file systems by default.
Mandatory arguments to long options are mandatory for short options too.
-a, --all
include pseudo, duplicate, inaccessible file systems
-B, --block-size=SIZE
scale sizes by SIZE before printing them; e.g., '-BM' prints sizes in units of 1,048,576 bytes; see SIZE format below
-h, --human-readable
print sizes in powers of 1024 (e.g., 1023M)
-H, --si
print sizes in powers of 1000 (e.g., 1.1G)
-i, --inodes
list inode information instead of block usage
-k like --block-size=1K
-l, --local
limit listing to local file systems
Manual page df(1) line 1 (press h for help or q to quit)
FREE(1) User Commands FREE(1)
NAME
free - Display amount of free and used memory in the system
SYNOPSIS
free [options]
DESCRIPTION
free displays the total amount of free and used physical and swap memory in the system, as well as the buffers and caches used by the kernel. The information is gathered by parsing /proc/meminfo. The displayed columns are:
total Total usable memory (MemTotal and SwapTotal in /proc/meminfo). This includes the physical and swap memory minus a
Manual page free(1) line 1 (press h for help or q to quit)
clear(1) User commands clear(1)
NAME
clear - clear the terminal screen
SYNOPSIS
clear [-x] [-T terminal-type]
clear -V
Manual page clear(1) line 1 (press h for help or q to quit)
HI...Y(3) Library Functions Manual HI...Y(3)
NAME
Manual page history(3readline) line 1 (press h for help or q to quit)
total used free shared buff/cache available
Mem: 16 6 5 1 6 9
jay@jay-HP-Envy-x360-2-in-1-Laptop-14-fc0xxx:~$

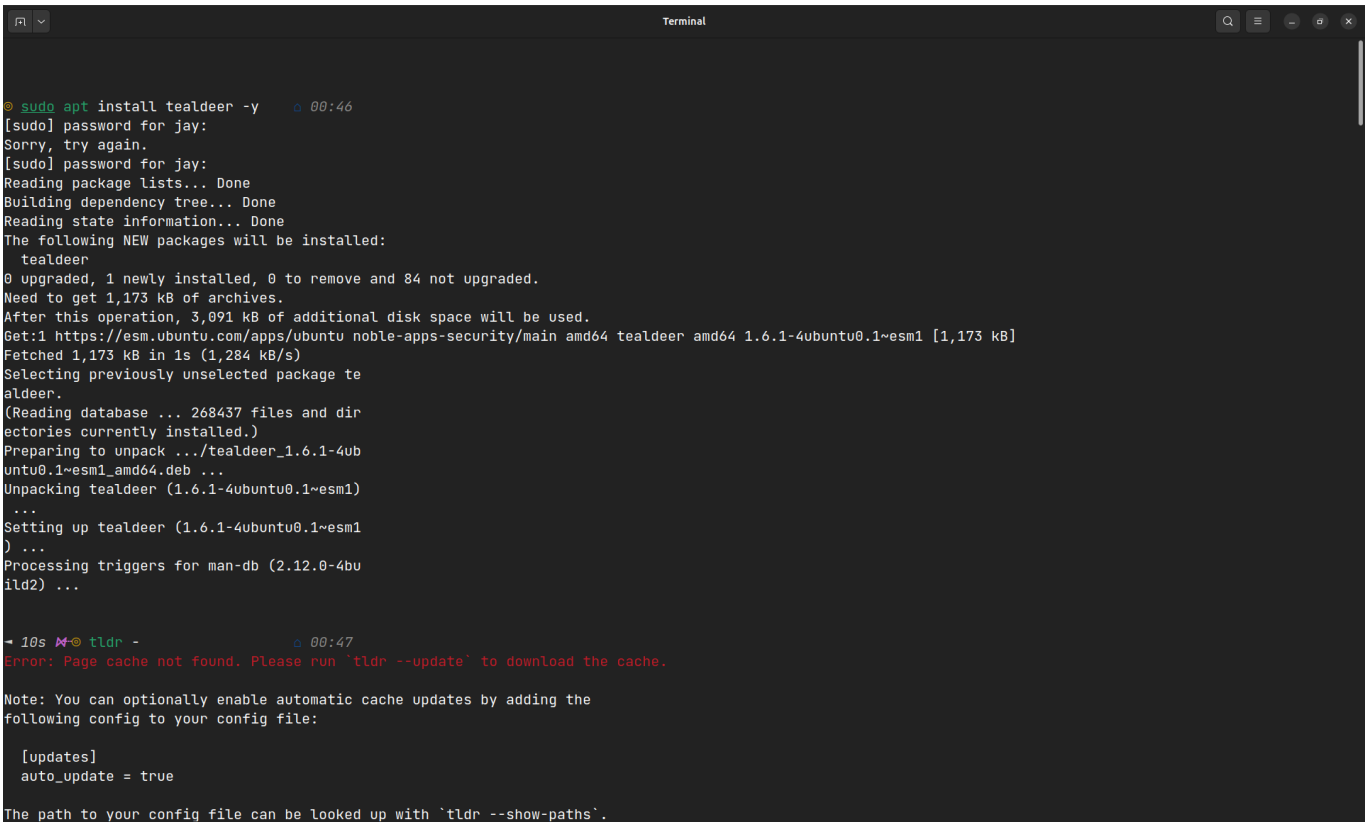
Practice 9

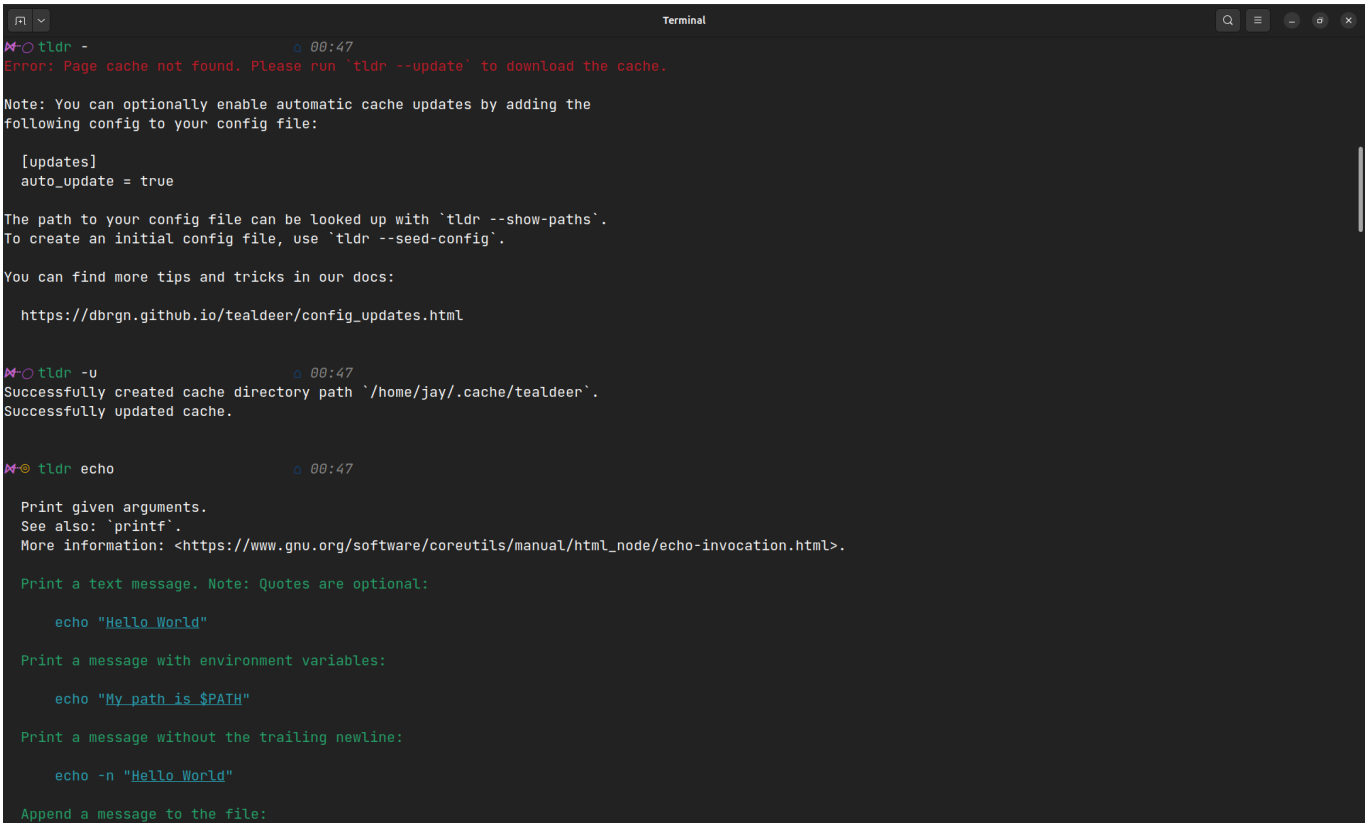

Terminal
free --help
00:42
Usage:
free [options]
Options:
-b, --bytes show output in bytes
--kilo show output in kilobytes
--mega show output in megabytes
--giga show output in gigabytes
--tera show output in terabytes
--peta show output in petabytes
-k, --kibi show output in kibibytes
-m, --mebi show output in mebibytes
-g, --gibi show output in gibibytes
--tebi show output in tebibytes
--pebi show output in pebibytes
-h, --human show human-readable output
--si use powers of 1000 not 1024
-l, --lohi show detailed low and high memory statistics
-L, --line show output on a single line
-t, --total show total for RAM + swap
-v, --committed show committed memory and commit limit
-s N, --seconds N repeat printing every N seconds
-c N, --count N repeat printing N times, then exit
-w, --wide wide output
--help display this help and exit
-V, --version output version information and exit
For more details see free(1).
man --help
00:43
Usage: man [OPTION...] [SECTION] PAGE...
-C, --config-file=FILE use this user configuration file
-d, --debug emit debugging messages
-D, --default reset all options to their default values

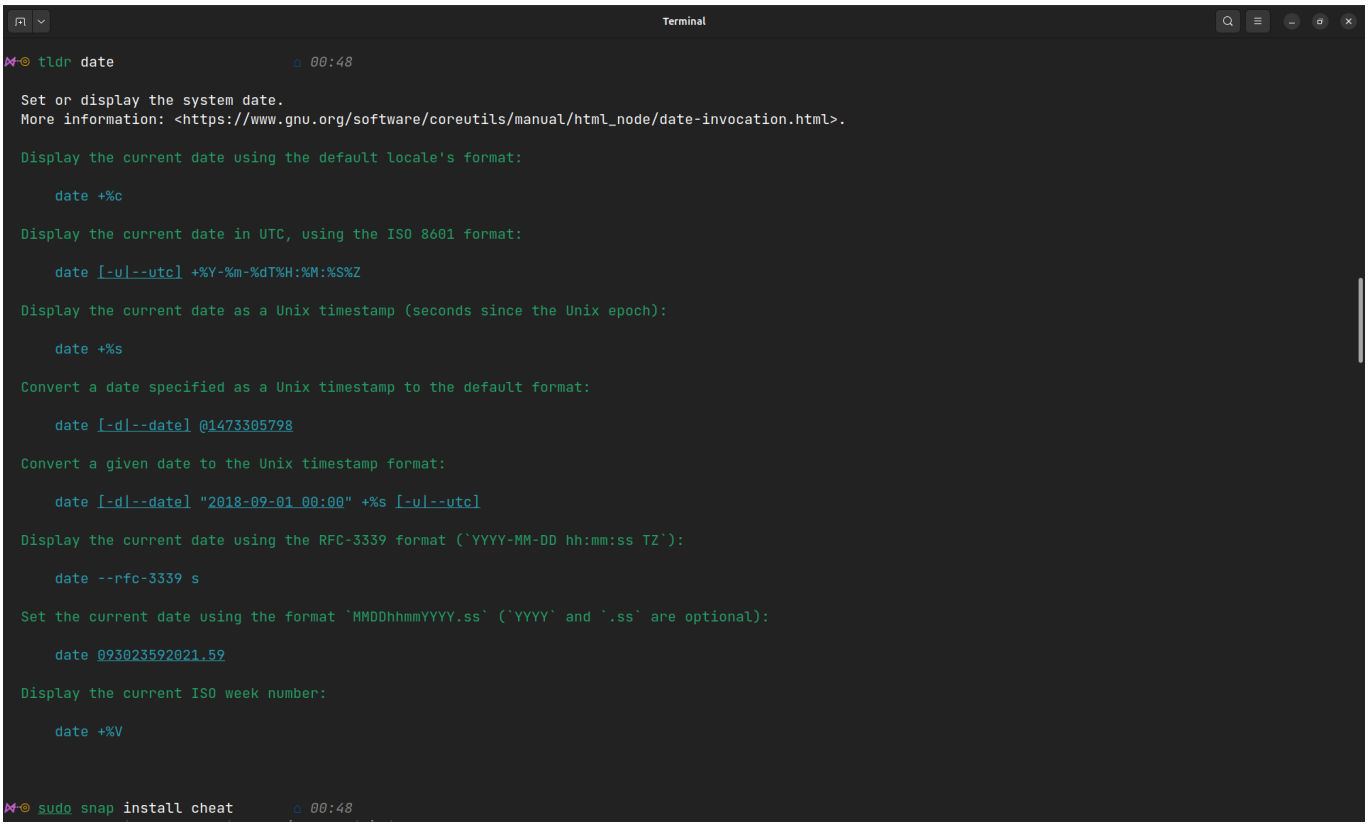

Dec 18 00:44
Terminal
date --help
00:43
Usage: date [OPTION]... [+FORMAT]
or: date [-u|--utc|--universal] [MMDDhhmm[[CC]YY][.ss]]
Display date and time in the given FORMAT.
With -s, or with [MMDDhhmm[[CC]YY][.ss]], set the date and time.
Mandatory arguments to long options are mandatory for short options too.
-d, --date=STRING display time described by STRING, not 'now'
--debug annotate the parsed date,
and warn about questionable usage to stderr
-f, --file=DATEFILE like --date; once for each line of DATEFILE
-I[FMT], --iso-8601[=FMT] output date/time in ISO 8601 format.
FMT='date' for date only (the default),
'hours', 'minutes', 'seconds', or 'ns'
for date and time to the indicated precision.
Example: 2006-08-14T02:34:56-06:00
--resolution output the available resolution of timestamps
Example: 0.000000001
-R, --rfc-email output date and time in RFC 5322 format.
Example: Mon, 14 Aug 2006 02:34:56 -0600
--rfc-3339=FMT output date/time in RFC 3339 format.
FMT='date', 'seconds', or 'ns'
for date and time to the indicated precision.
Example: 2006-08-14 02:34:56-06:00
-r, --reference=FILE display the last modification time of FILE
-s, --set=STRING set time described by STRING
-u, --utc, --universal print or set Coordinated Universal Time (UTC)
--help display this help and exit
--version output version information and exit
All options that specify the date to display are mutually exclusive.
I.e.: --date, --file, --reference, --resolution.
FORMAT controls the output. Interpreted sequences are:
%% a literal %
%a locale's abbreviated weekday name (e.g., Sun)
%A locale's full weekday name (e.g., Sunday)
%b locale's abbreviated month name (e.g., Jan)

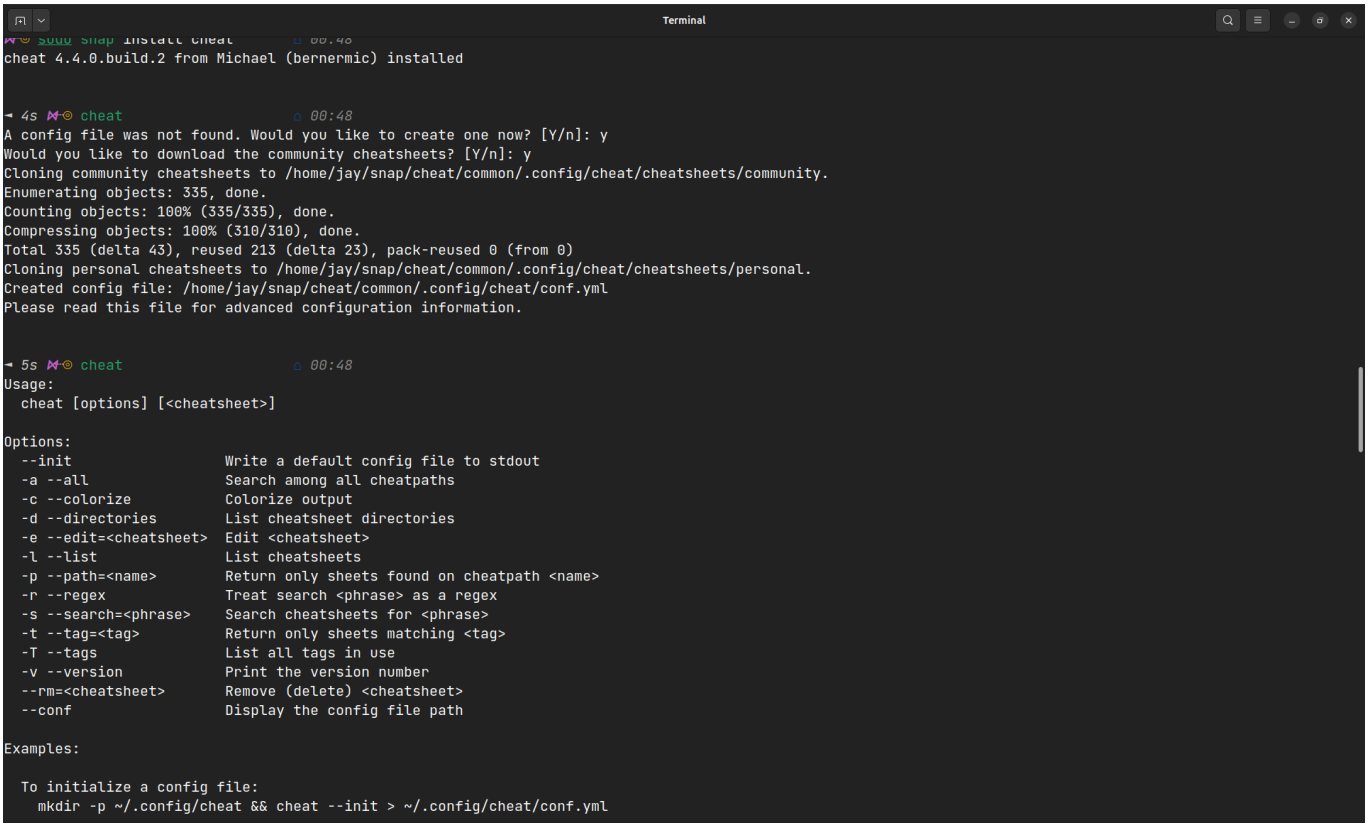

Terminal
Show the time on the west coast of the US (use tzselect(1) to find TZ)
$ TZ='America/Los_Angeles' date
Show the local time for 9AM next Friday on the west coast of the US
$ date --date='TZ="America/Los_Angeles" 09:00 next Fri'
GNU coreutils online help: <https://www.gnu.org/software/coreutils/>
Full documentation <https://www.gnu.org/software/coreutils/date>
or available locally via: info '(coreutils) date invocation'
whatis ls 00:43
ls (1) - list directory c...
whatis pwd 00:43
pwd (1) - print name of cu...
whatis apt 00:43
apt (8) - command-line int...
whatis sudo 00:43
sudo (8) - execute a comman...
00:43

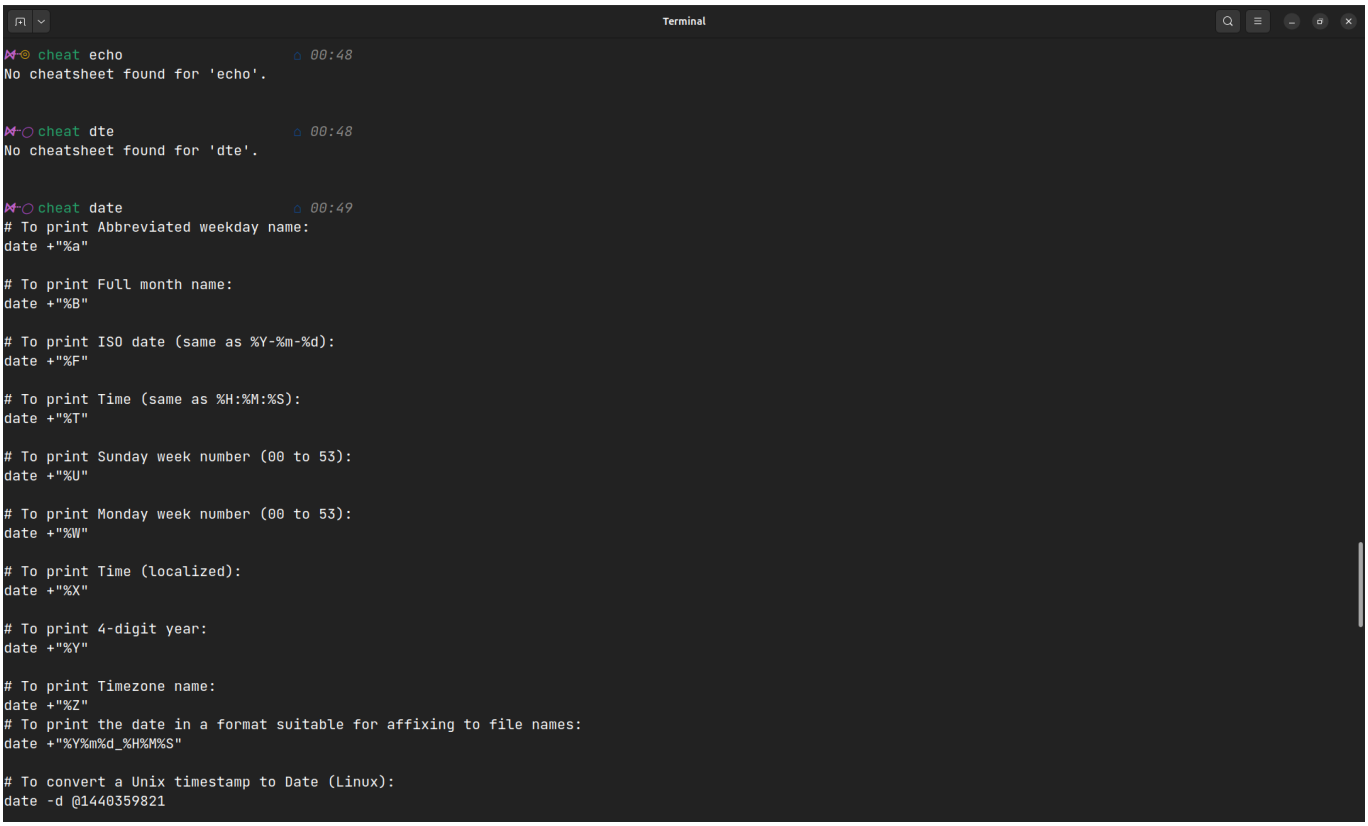
Practice 10


Terminal
sudo apt install tealdeer -y 00:46
[sudo] password for jay:
Sorry, try again.
[sudo] password for jay:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
tealdeer
0 upgraded, 1 newly installed, 0 to remove and 84 not upgraded.
Need to get 1,173 kB of archives.
After this operation, 3,091 kB of additional disk space will be used.
Get:1 https://esm.ubuntu.com/apps/ubuntu noble-apps-security/main amd64 tealdeer amd64 1.6.1-4ubuntu0.1~esm1 [1,173 kB]
Fetched 1,173 kB in 1s (1,284 kB/s)
Selecting previously unselected package te
aldeer.
(Reading database ... 268437 files and dir
ectories currently installed.)
Preparing to unpack .../tealdeer_1.6.1-4ub
untu0.1~esm1_amd64.deb ...
Unpacking tealdeer (1.6.1-4ubuntu0.1~esm1)
...
Setting up tealdeer (1.6.1-4ubuntu0.1~esm1
) ...
Processing triggers for man-db (2.12.0-4bu
ild2) ...
10s tldr - 00:47
Error: Page cache not found. Please run `tldr --update` to download the cache.
Note: You can optionally enable automatic cache updates by adding the
following config to your config file:
[updates]
auto_update = true
The path to your config file can be looked up with `tldr --show-paths`.


Terminal
tldr - 00:47
Error: Page cache not found. Please run `tldr --update` to download the cache.
Note: You can optionally enable automatic cache updates by adding the
following config to your config file:
[updates]
auto_update = true
The path to your config file can be looked up with `tldr --show-paths`.
To create an initial config file, use `tldr --seed-config`.
You can find more tips and tricks in our docs:
https://dbrgn.github.io/tealdeer/config_updates.html
tldr -u 00:47
Successfully created cache directory path `/home/jay/.cache/tealdeer`.
Successfully updated cache.
tldr echo 00:47
Print given arguments.
See also: `printf`.
More information: <https://www.gnu.org/software/coreutils/manual/html_node/echo-invocation.html>.
Print a text message. Note: Quotes are optional:
echo "Hello World"
Print a message with environment variables:
echo "My path is $PATH"
Print a message without the trailing newline:
echo -n "Hello World"
Append a message to the file:


Terminal
tldr date
00:48
Set or display the system date.
More information: <https://www.gnu.org/software/coreutils/manual/html_node/date-invocation.html>.
Display the current date using the default locale's format:
date +%c
Display the current date in UTC, using the ISO 8601 format:
date [-u|--utc] +%Y-%m-%dT%H:%M:%S%Z
Display the current date as a Unix timestamp (seconds since the Unix epoch):
date +%s
Convert a date specified as a Unix timestamp to the default format:
date [-d|--date] @1473305798
Convert a given date to the Unix timestamp format:
date [-d|--date] "2018-09-01 00:00" +%s [-u|--utc]
Display the current date using the RFC-3339 format (`YYYY-MM-DD hh:mm:ss TZ`):
date --rfc-3339 s
Set the current date using the format `MMDDhhmmYYYY.ss` (`YYYY` and `.ss` are optional):
date 093023592021.59
Display the current ISO week number:
date +%V
sudo snap install cheat
00:48


Terminal
cheat 4.4.0.build.2 from Michael (bernermic) installed
4s cheat
00:48
A config file was not found. Would you like to create one now? [Y/n]: y
Would you like to download the community cheatsheets? [Y/n]: y
Cloning community cheatsheets to /home/jay/snap/cheat/common/.config/cheat/cheatsheets/community.
Enumerating objects: 335, done.
Counting objects: 100% (335/335), done.
Compressing objects: 100% (310/310), done.
Total 335 (delta 43), reused 213 (delta 23), pack-reused 0 (from 0)
Cloning personal cheatsheets to /home/jay/snap/cheat/common/.config/cheat/cheatsheets/personal.
Created config file: /home/jay/snap/cheat/common/.config/cheat/conf.yml
Please read this file for advanced configuration information.
5s cheat
00:48
Usage:
cheat [options] [<cheatsheet>]
Options:
--init Write a default config file to stdout
-a --all Search among all cheatpaths
-c --colorize Colorize output
-d --directories List cheatsheet directories
-e --edit=<cheatsheet> Edit <cheatsheet>
-l --list List cheatsheets
-p --path=<name> Return only sheets found on cheatpath <name>
-r --regex Treat search <phrase> as a regex
-s --search=<phrase> Search cheatsheets for <phrase>
-t --tag=<tag> Return only sheets matching <tag>
-T --tags List all tags in use
-v --version Print the version number
--rm=<cheatsheet> Remove (delete) <cheatsheet>
--conf Display the config file path
Examples:
To initialize a config file:
mkdir -p ~/.config/cheat && cheat --init > ~/.config/cheat/conf.yml


Terminal
cheat echo 00:48
No cheatsheet found for 'echo'.
cheat dte 00:48
No cheatsheet found for 'dte'.
cheat date 00:49
To print Abbreviated weekday name:
date +"%a"
To print Full month name:
date +"%B"
To print ISO date (same as %Y-%m-%d):
date +"%F"
To print Time (same as %H:%M:%S):
date +"%T"
To print Sunday week number (00 to 53):
date +"%U"
To print Monday week number (00 to 53):
date +"%W"
To print Time (localized):
date +"%X"
To print 4-digit year:
date +"%Y"
To print Timezone name:
date +"%Z"
To print the date in a format suitable for affixing to file names:
date +"%Y%m%d_%H%M%S"
To convert a Unix timestamp to Date (Linux):
date -d @1440359821


Terminal
cheat eho | pygmentize 00:49
No cheatsheet found for 'eho'.
cheat date | pygmentize 00:49
To print Abbreviated weekday name:
date +"%a"
To print Full month name:
date +"%B"
To print ISO date (same as %Y-%m-%d):
date +"%F"
To print Time (same as %H:%M:%S):
date +"%T"
To print Sunday week number (00 to 53):
date +"%U"
To print Monday week number (00 to 53):
date +"%W"
To print Time (localized):
date +"%X"
To print 4-digit year:
date +"%Y"
To print Timezone name:
date +"%Z"
To print the date in a format suitable for affixing to file names:
date +"%Y%m%d_%H%M%S"
To convert a Unix timestamp to Date (Linux):
date -d @1440359821
To convert a Unix timestamp to Date (OSX):
date -r 1440359821