

Lab 3 Submission

Question 1

The screenshot shows a Linux desktop environment with a dark theme. At the top, there's a horizontal bar with application icons. Below it is a window titled "Institution Page" showing a navigation menu for "Linux Fundamentals Module 3 Administration". The menu includes sections like "WEEK_REPORT", "LABS", "DOCUMENTATION", and "GUIDES". To the right of this is a terminal window with the command `fc-cache -f -v` running. Next to it is a file manager window titled "Exploring the File Manager (GNOME Files / Nautilus)". The file manager shows a folder structure under "Desktop". Below these are two system settings windows: one for "Settings" (Network, Bluetooth, Displays, Sound, Power, Multitasking, Appearance, Apps, Notifications, Search, Online Accounts, Sharing, Wellbeing) and another for "Tweaks" (Windows, Titlebar Buttons, Click Actions). The "Tweaks" window has several checkboxes and dropdown menus.

Question 2

The screenshot shows a Linux desktop environment with a dark theme. At the top, there's a horizontal bar with application icons. Below it is a window titled "Institution Page" showing a navigation menu for "Linux Fundamentals Module 3 Administration". The menu includes sections like "WEEK_REPORT", "LABS", "DOCUMENTATION", and "GUIDES". To the right of this is a terminal window with the command `fc-cache -f -v` running. Next to it are three other terminal windows, each with a different session number (1, 2, 3) and a different user name (frandyta or jjean). This illustrates how multiple terminals can be run simultaneously. A note on the right side states: "Note: It is common to use multiple terminals simultaneously. This is an essential skill for your final exam. Advanced users often use tools like tmux to achieve similar workflows, but Tilix makes it easier for beginners."

Question 3

The screenshot shows a terminal window with two panes. The left pane (window 1) displays command-line examples of the echo command:

```
frandyta@cis106:~$ man echo
frandyta@cis106:~$ echo "Hello"
Hello
frandyta@cis106:~$ echo -n "Hello"
Hellofrandyta@cis106:~$ echo -e
frandyta@cis106:~$ echo -e "\Hello"
\Hello
frandyta@cis106:~$ echo -e "\tHello"
frandyta@cis106:~$ echo -e "Line1\n\tLine2"
Line1
    Line2
frandyta@cis106:~$
```

The right pane (window 2) shows the man page for the echo command:

```
echo      [SHORT-OPTION]...
[STRING]...
echo LONG-OPTION

DESCRIPTION
Echo the STRING(s) to standard
output.

-n      do not output the trailing
        newline

-e      enable interpretation of
        backslash escapes

-E      disable interpretation
        of backslash escapes
        (default)

--help  display this help and
        exit

--version
        output version information and exit

If -e is in effect, the following sequences are recognized:
-- MOST: *stdin*
```

A status bar at the bottom indicates "(7,1)7%".

Challenge Question

Tilix: frandyta@cis106: ~

```
1: frandyta@cis106: ~
frandyta@cis106:~$ free
total        used        free      shared  buff/cache available
Mem:   4016028     2308144     740184    143364   1383268    1707884
Swap:  2715644     440068   2275576
frandyta@cis106:~$ free -h --line
429Mi MemTotal       1.3Gi MemUsed      2.2Gi MemFree      733Mi
frandyta@cis106:~$ 
```

2: frandyta@cis106: ~

```
and also that not all reclaimable memory slabs will be
reclaimed due to items being in
use (MemAvailable in /proc/mem-
info, available on kernels 3.14,
emulated on kernels 2.6.27+, 
otherwise the same as free)

OPTIONS
  -b, --bytes
    Display the amount of memory in
    bytes.

  -k, --kibi
    Display the amount of memory in
    kibibytes. This is the default.

  -m, --mebi
    Display the amount of memory in
    mebibytes.

  -g, --gibi
    Display the amount of memory in
    gibibytes.

  --tebi Display the amount of memory in
    tebibytes.

  --pebi Display the amount of memory in
    pebibytes.

  --kilo Display the amount of memory in
    kilobytes. Implies --si.

-- MOST: *stdin* (51,1)28%
Press 'Q' to quit, 'H' for help, and SPACE to scroll.
```

Tilix: frandyta@cis106: ~

```
1: frandyta@cis106: ~
frandyta@cis106:~$ uname -s -r -v -o
Linux 6.12.73+deb13-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6
.12.73-1 (2026-02-17) GNU/Linux
frandyta@cis106:~$ 
```

2: frandyta@cis106: ~

UNAME(1)	User Commands	UNAME(1)
NAME	uname - print system information	
SYNOPSIS	uname [OPTION]...	
DESCRIPTION	Print certain system information. With no OPTION, same as -s.	
-a, --all	print all information, in the following order, except omit -p and -i if unknown:	
-s, --kernel-name	print the kernel name	
-n, --nodename	print the network node hostname	
-r, --kernel-release	print the kernel release	
-v, --kernel-version	print the kernel version	
-m, --machine	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		

```
-- MOST: *stdin* (1,1)0%
Press 'Q' to quit, 'H' for help, and SPACE to scroll.
```

The screenshot shows two terminal windows side-by-side. The left window (Tilix) displays the output of the command `date --rfc-3339=2025-09-10 18:39:53.467197335-04:00`, which results in an error message: "date: invalid argument '2025-09-10' for '--rfc-3339'". It also lists valid arguments: 'date', 'seconds', and 'ns'. A note says to try `'date --help'` for more information. The right window (Tilix) shows the man page for the `date` command. It includes sections for options like `-d`, `--debug`, `-f`, `-I`, `--resolution`, `-R`, `--rfc-email`, and `--rfc-3339`. The `--rfc-3339` section is highlighted with a red rectangle and describes outputting date/time in RFC 3339 format with precision up to nanoseconds. The status bar at the bottom of the right window shows "(7,1)2%".

```
frandyta@cis106:~$ date --rfc-3339=2025-09-10 18:39:53.467197335-04:00
date: invalid argument '2025-09-10' for '--rfc-3339'
Valid arguments are:
- 'date'
- 'seconds'
- 'ns'
Try 'date --help' for more information.
frandyta@cis106:~$ date --rfc-3339=ns
2026-02-23 03:06:10.224151107-05:00
frandyta@cis106:~$ 
```

```
date [OPTION]... [+FORMAT]
date [-u|--utc|--universal] [MMD-HHMM[[CC]YY][.ss]]
```

DESCRIPTION

Display date and time in the given FORMAT. With `-s`, or with `[MMDHHMM[[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 time-
stamps 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. Ex-
ample: 2006-08-14 02:34:56-06:00

-r, --reference=FILE
display the last modification time of FILE

-s, --set=STRING

-- MOST: *stdin* (7,1)2%

Press 'Q' to quit, 'H' for help, and SPACE to scroll.