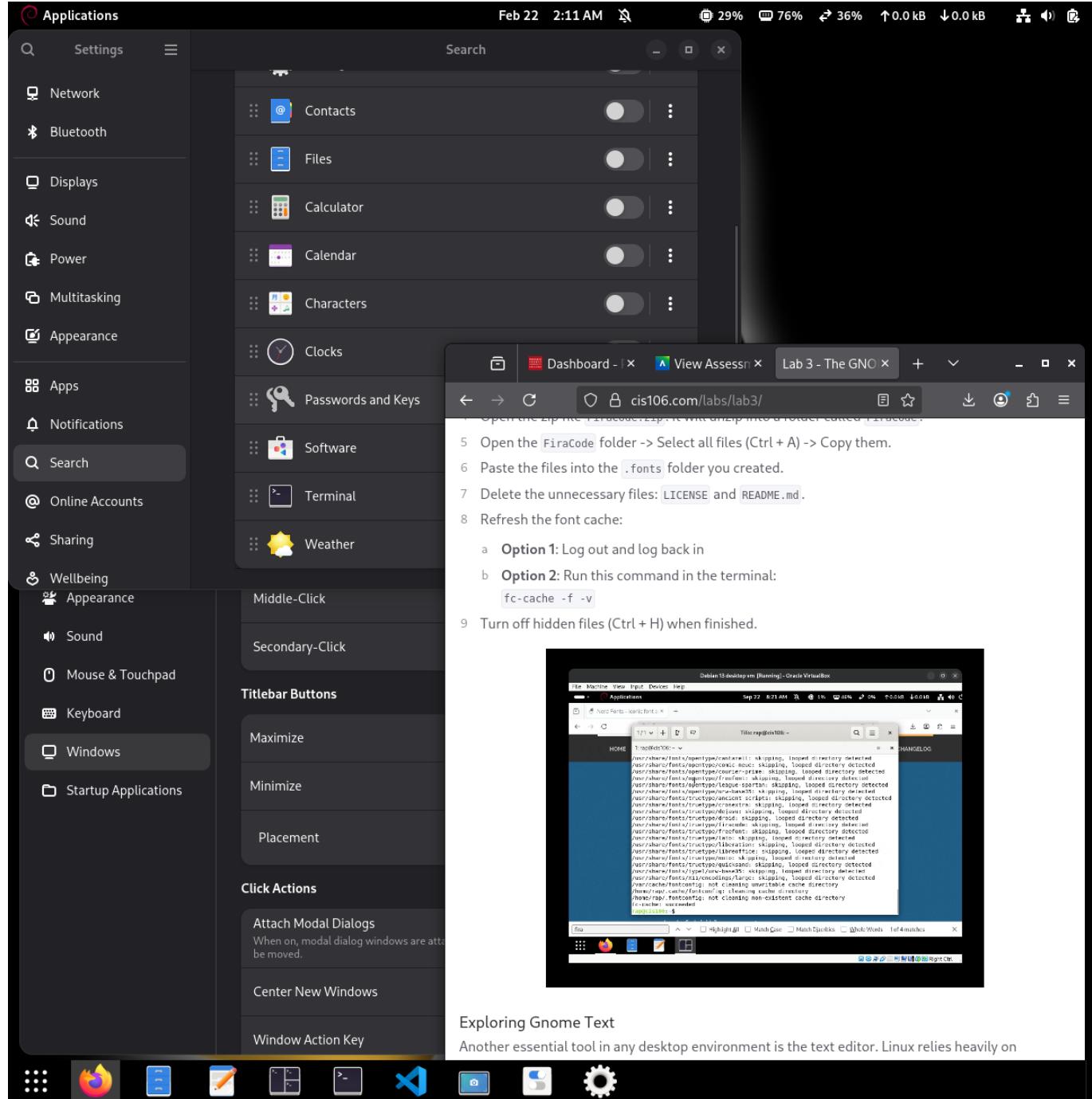


Lab 3 Submission

Question 1



Question 2

```
1: miguel@miguel: ~
miguel@miguel: ~
2: miguel@miguel: ~
miguel@miguel: ~
3: miguel@miguel: ~
miguel@miguel: ~
4: miguel@miguel: ~
miguel@miguel: ~
```

Question 3

```
1: miguel@miguel: ~
miguel@miguel:~$ echo -n "hello world"
hello worldmiguel@miguel:~$ echo -e "\tHello world"
    Hello woloworld
miguel@miguel:~$ echo -e "\tHello world"
    Hello world
miguel@miguel:~$ echo -e "line 1\nline2"
line 1
line2
miguel@miguel:~$ echo -e "line 1\n\line2"
line 1
\line2
miguel@miguel:~$ echo -e "line 1\n\tline2"
line 1
    line2
miguel@miguel:~$ echo -e "\tline 1\n\line2"
    line 1
line2
miguel@miguel:~$ 
```

Tilix: miguel@miguel: ~

ECHO(1) User Commands ECHO(1)

NAME
echo - display a line of text

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

DESCRIPTION
Echo the STRING(s) to standard output.

-n do not output the trailing new-line

-e enable interpretation of back-slash escapes

echo(1) line 1 (press h for help or q to quit)

Challenge

1: miguel@miguel: ~

```
miguel@miguel:~$ ip -j -p addr show dev enp0s3
[ {
    "ifindex": 2,
    "ifname": "enp0s3",
    "flags": [ "BROADCAST", "MULTICAST", "UP", "LOWER_UP" ],
    "mtu": 1500,
    "qdisc": "fq_codel",
    "operstate": "UP",
    "group": "default",
    "txqlen": 1000,
    "link_type": "ether",
    "address": "08:00:27:73:e1:4b",
    "broadcast": "ff:ff:ff:ff:ff:ff",
    "altnames": [ "enx08002773e14b" ],
    "addr_info": [ {
        "family": "inet",
        "local": "10.0.2.15",
        "prefixlen": 24,
        "broadcast": "10.0.2.255",
        "scope": "global",
        "dynamic": true,
        "noprefixroute": true,
        "label": "enp0s3",
        "valid_life_time": 73412,
        "preferred_life_time": 73412
    } ]
}
```

2: miguel@miguel: ~

recently only supported by
ip addr show , ip link
show & ip neigh show
commands.

-j, --json
Output results in
JavaScript Object Notation (JSON).

-p, --pretty
The default JSON format
is compact and more ef-
ficient to parse but
hard for most users to
read. This flag adds
indentation for read-
ability.

-echo Request the kernel to
send the applied config-
uration back.

**IP - COMMAND SYNTAX
OBJECT**

man page ip(8) line 220 (press h for help or q to quit)

1: miguel@miguel: ~

```
miguel@miguel:~$ uname -srvm
Linux 6.12.69+deb13-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6
.12.69-1 (2026-02-08) x86_64 GNU/Linux
miguel@miguel:~$
```

2: miguel@miguel: ~

recently only supported by
ip addr show , ip link
show & ip neigh show
commands.

-j, --json
Output results in
JavaScript Object Notation (JSON).

-p, --pretty
The default JSON format
is compact and more ef-
ficient to parse but
hard for most users to
read. This flag adds
indentation for read-
ability.

-echo Request the kernel to
send the applied config-
uration back.

**IP - COMMAND SYNTAX
OBJECT**

man page ip(8) line 220 (press h for help or q to quit)

The screenshot shows two terminal windows side-by-side. The left window (Tilix: miguel@miguel: ~) displays command-line output:

```
miguel@miguel:~$ uname -srvmo
Linux 6.12.69+deb13-amd64 #1 SMP PREEMPT_DYNAMIC Debian 6
.12.69-1 (2026-02-08) x86_64 GNU/Linux
miguel@miguel:~$ date --rfc-3339=seconds
2026-02-22 03:09:27-05:00
miguel@miguel:~$
```

The right window (Tilix: miguel@miguel: ~) displays the man page for the `man` command, specifically the section on the `-r` option:

```
-r prompt, --prompt=prompt
    If a recent version of less is used as the
    pager, man will attempt to set its prompt
    and some sensible options. The default
    prompt looks like
        Manual page name(sec) line x
where name denotes the manual page name,
sec denotes the section it was found under
and x the current line number. This is
achieved by using the $LESS environment
variable.

Supplying -r with a string will override
this default. The string may contain the
text $MAN_PN which will be expanded to the
name of the current manual page and its
section name surrounded by "(" and ")".
The string used to produce the default
could be expressed as
    \ Manual\ page\ \"$MAN_PN\ ?lt-
    line\ %lt?L/%L.:.
                                byte\ %bB?s/%s..?\ (END):?pB\ %pB\\%..
e man(1) line 538/939 60% (press h for help or q to quit)
```