



Faculty of Engineering and Technology
Electrical and Computer Engineering Department
ENCS3130 LINUX LABORATORY

Project 1

Generate Linux/Unix Command Manual

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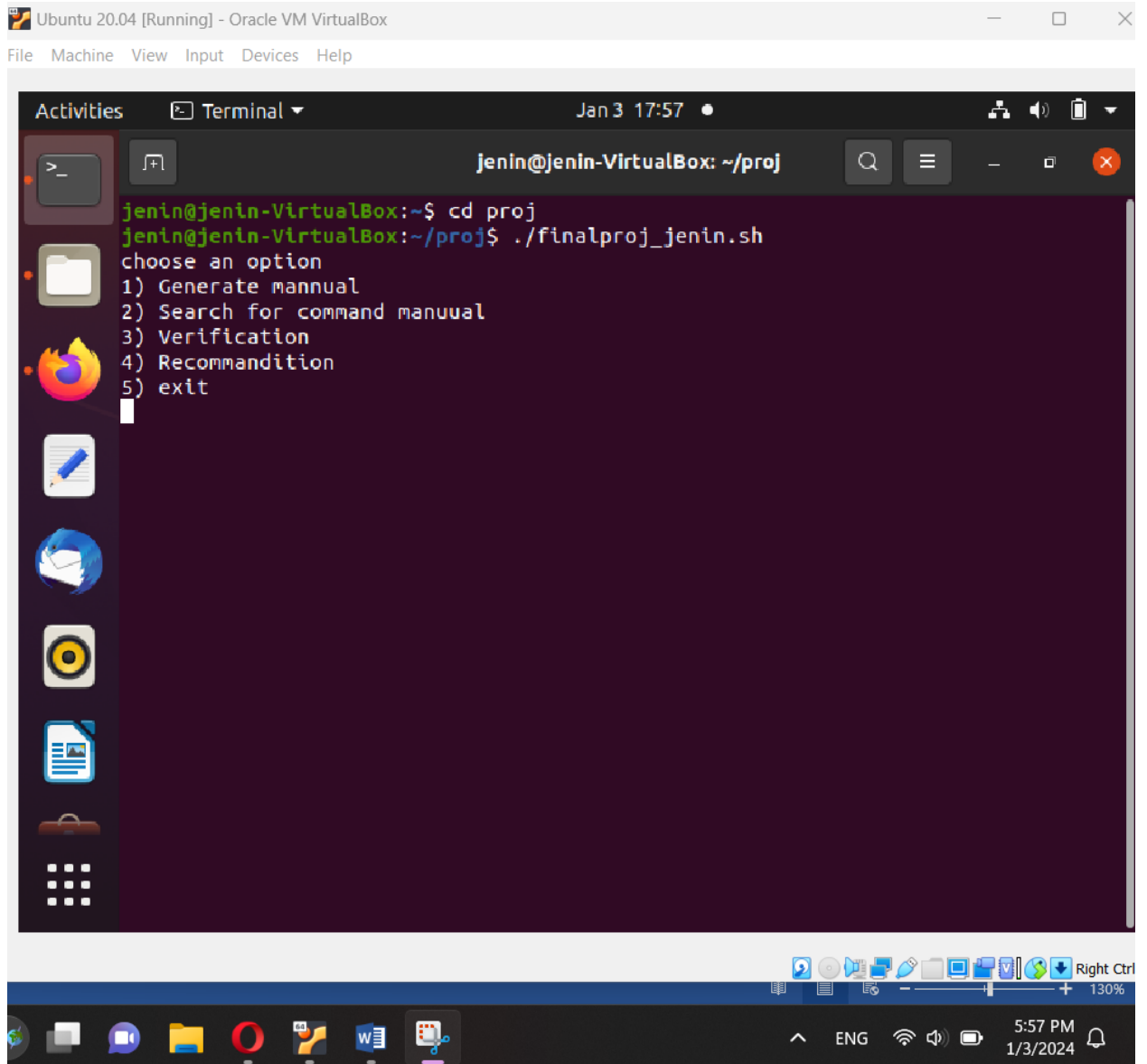
Section 3

BIRZEIT

December – 2023

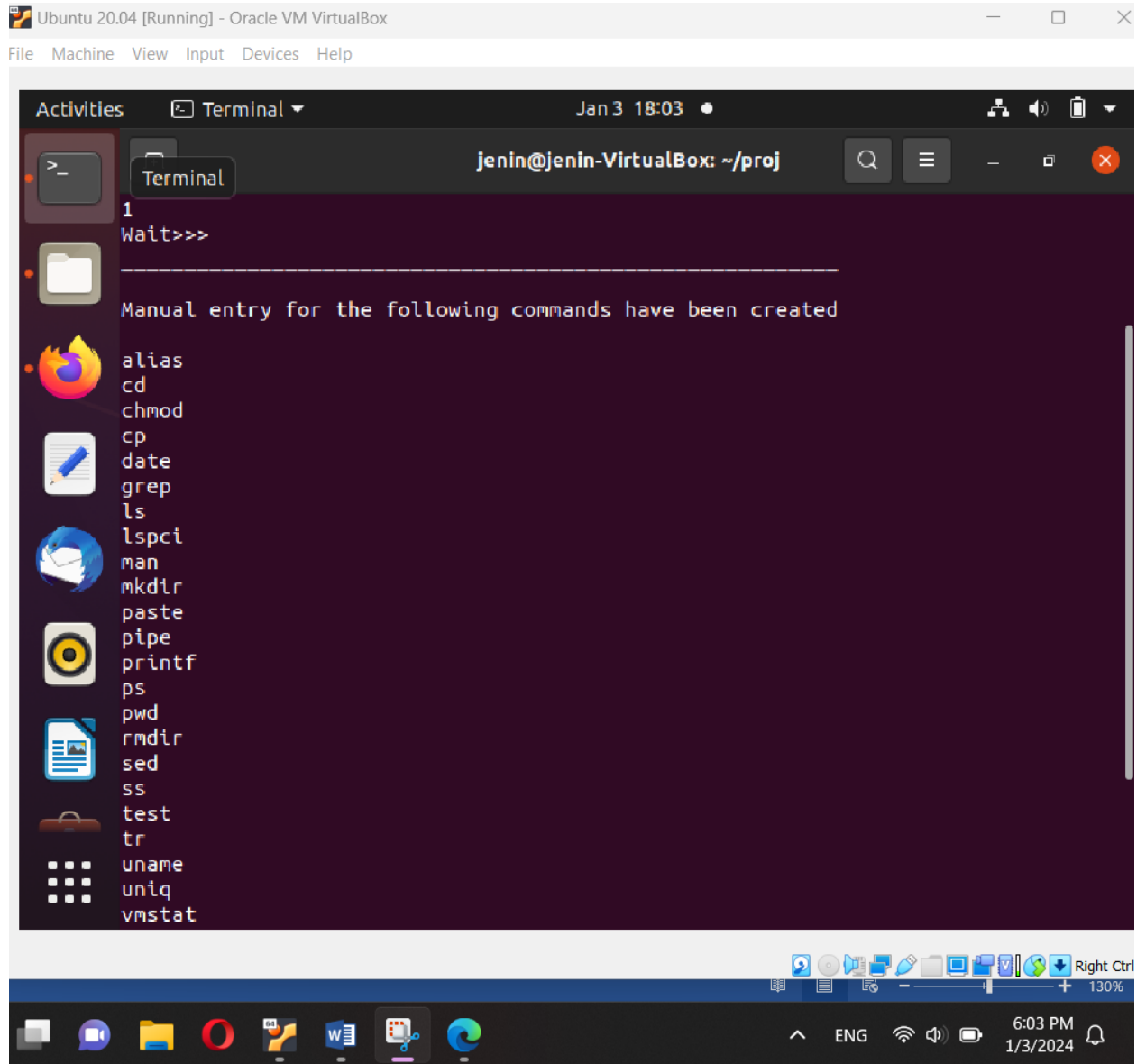
Screenshots:

Starting menu to choose between options.



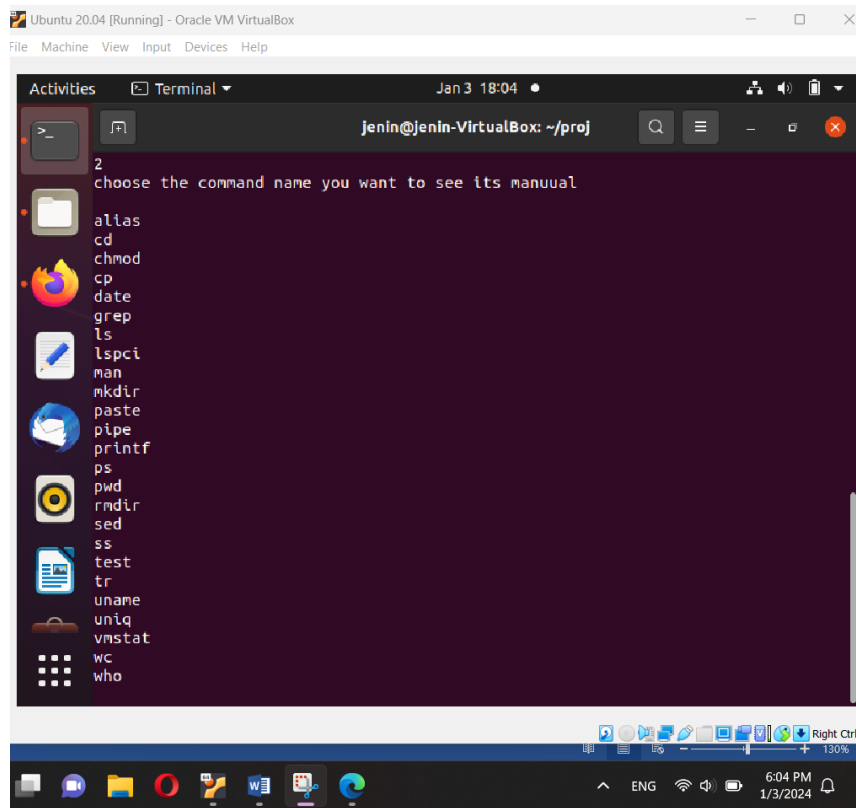
1- Generate manual

25 manual entry have been created.

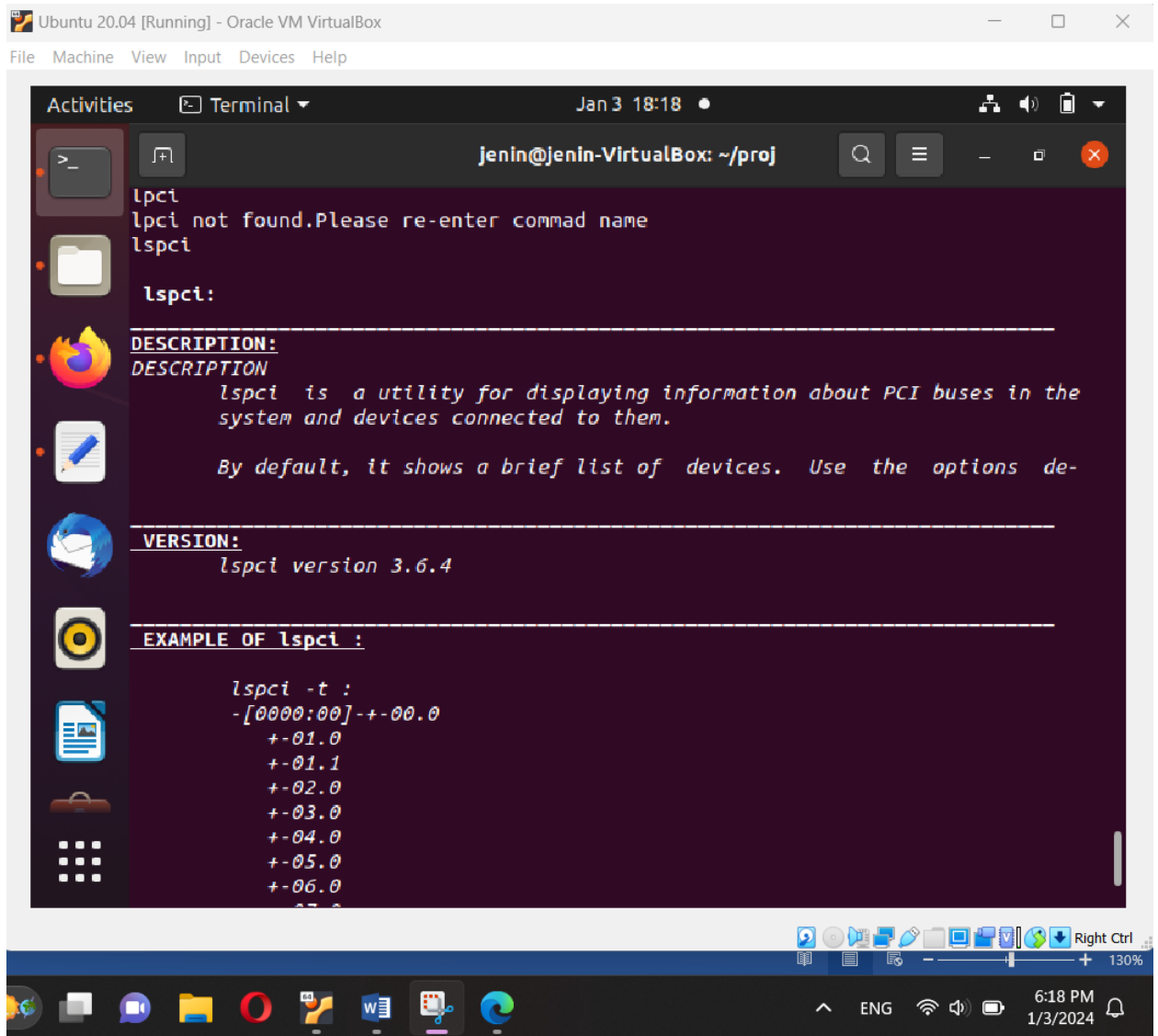


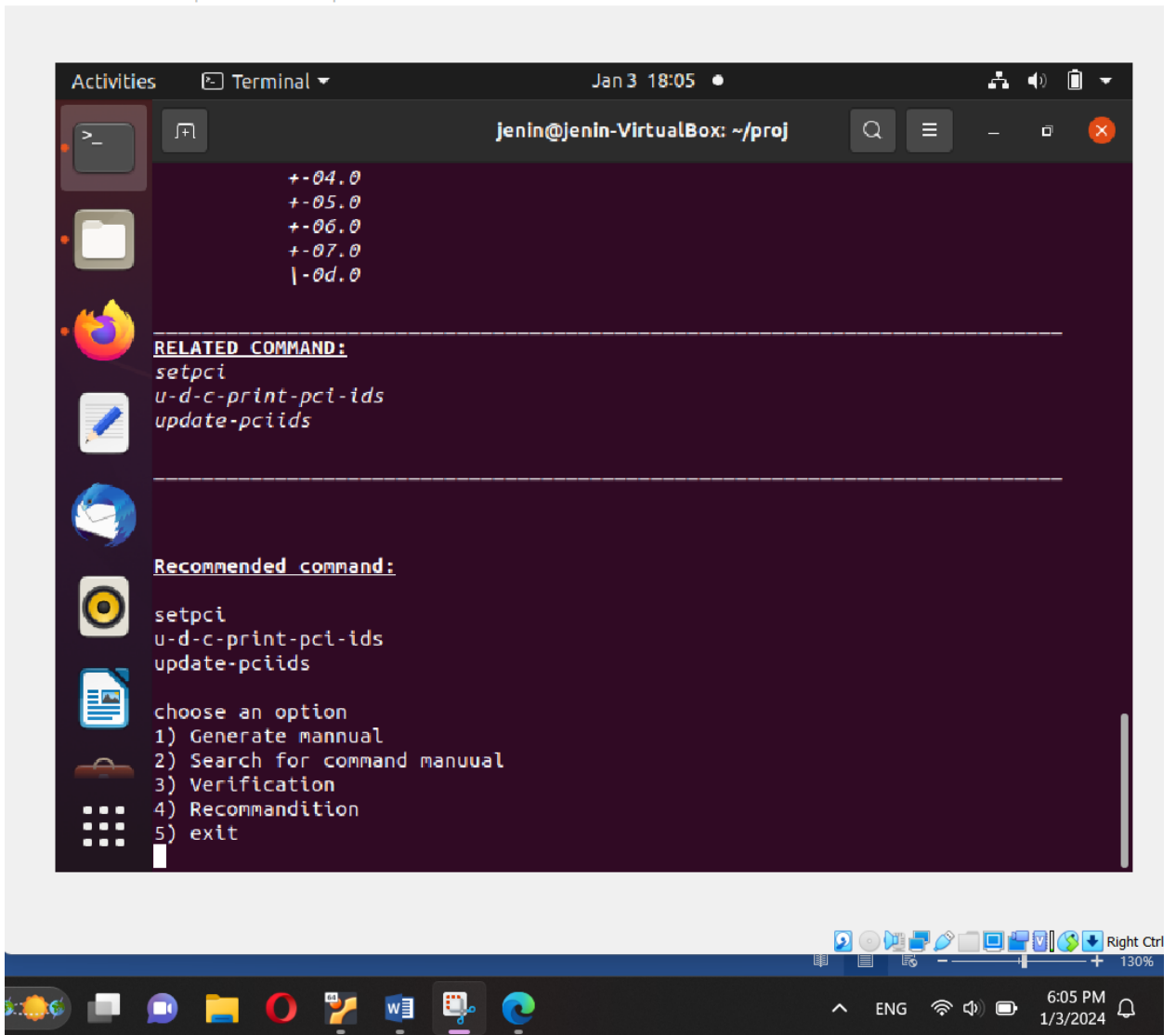
2- Search for specific manual

First the user choose the command he want to see, **Then Command Recommendation** is generated after.

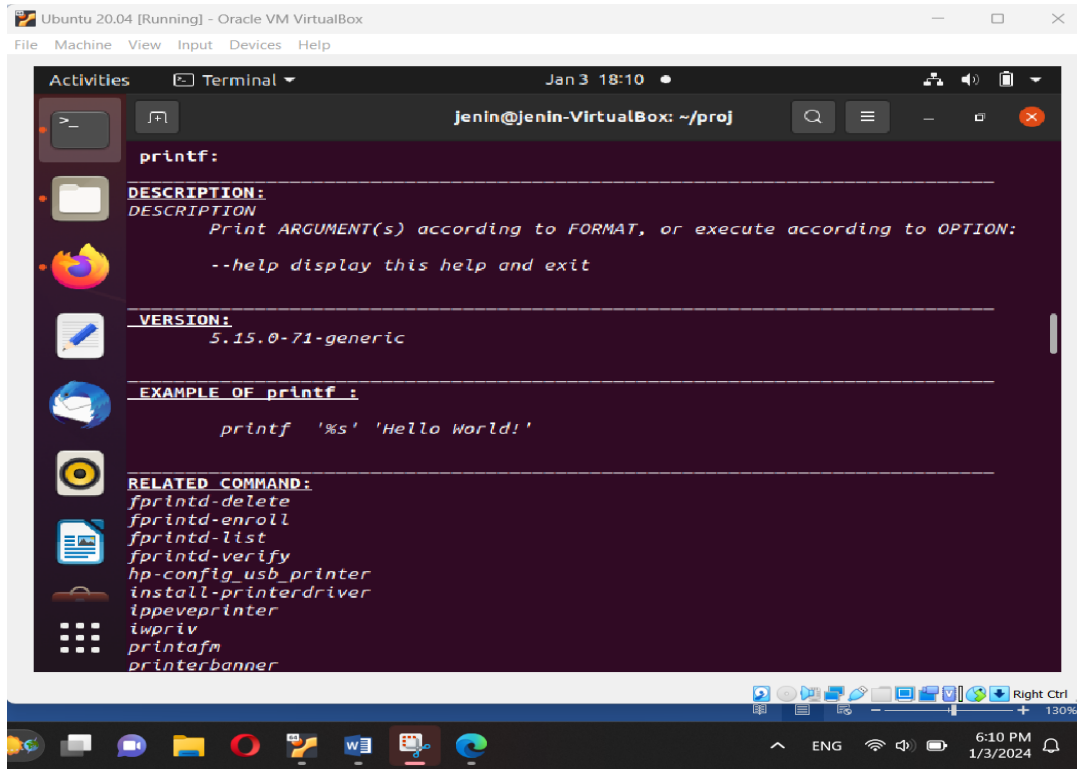


1-lspci





2-printf



Ubuntu 20.04 [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Jan 3 18:10

jenin@jenin-VirtualBox: ~/proj

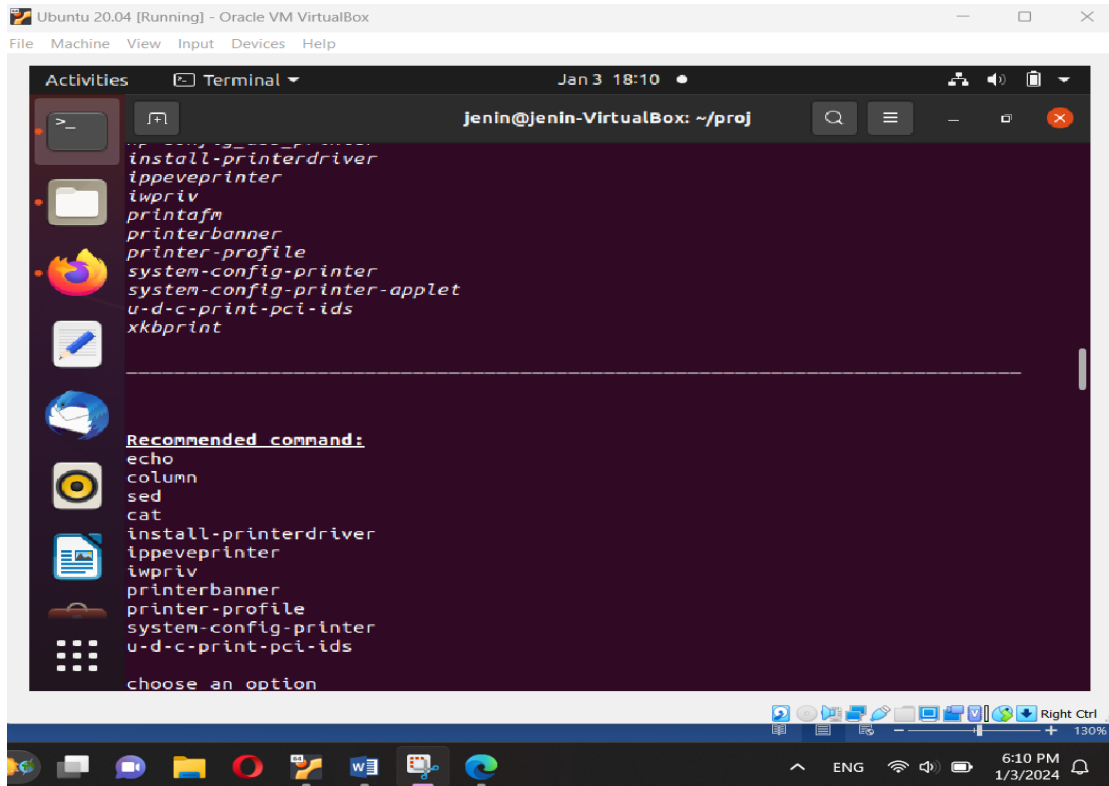
```
printf:
DESCRIPTION:
DESCRIPTION
Print ARGUMENT(s) according to FORMAT, or execute according to OPTION:
--help display this help and exit

VERSION:
5.15.0-71-generic

EXAMPLE OF printf :
printf '%s' 'Hello World!'

RELATED COMMAND:
fprindt-delete
fprindt-enroll
fprindt-list
fprindt-verify
hp-config_usb_printer
install-printerdriver
ippeveprinter
iwpriv
printafm
printerbanner
```

6:10 PM 1/3/2024



Ubuntu 20.04 [Running] - Oracle VM VirtualBox

File Machine View Input Devices Help

Activities Terminal Jan 3 18:10

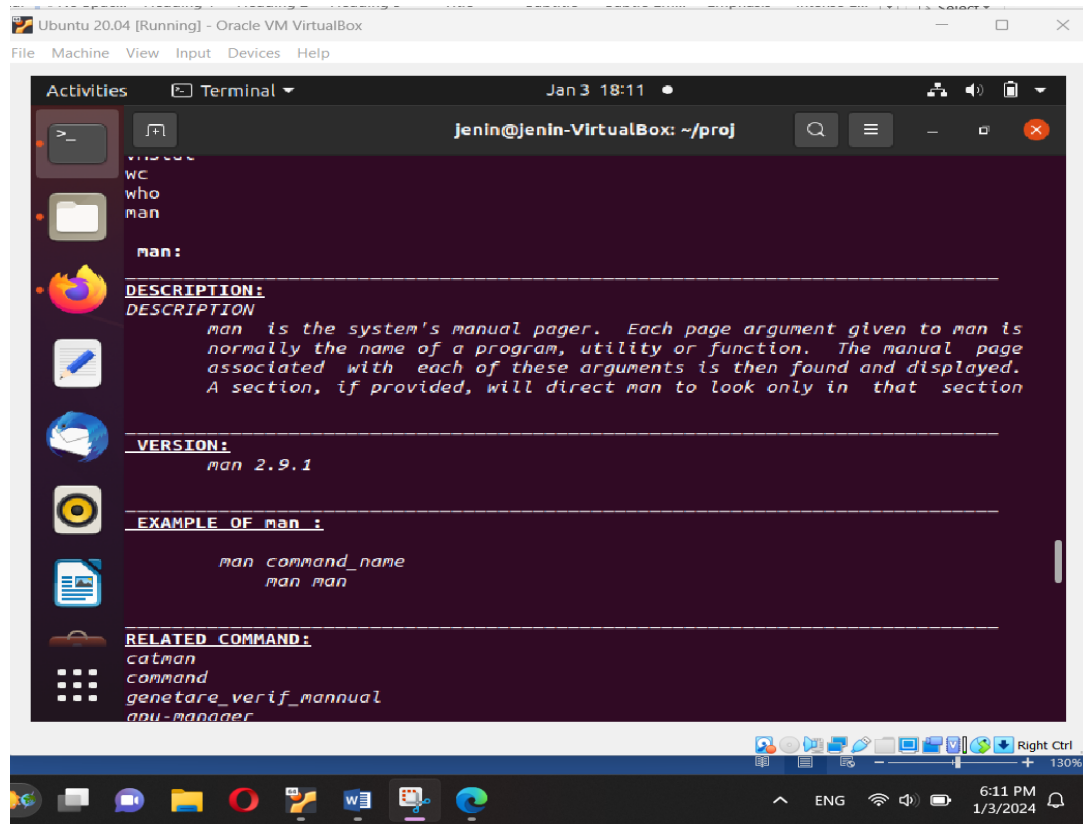
jenin@jenin-VirtualBox: ~/proj

```
install-printerdriver
ippeveprinter
iwpriv
printafm
printerbanner
printer-profile
system-config-printer
system-config-printer-applet
u-d-c-print-pci-ids
xkbprint

Recommended command:
echo
column
sed
cat
install-printerdriver
ippeveprinter
iwpriv
printerbanner
printer-profile
system-config-printer
u-d-c-print-pci-ids
choose an option
```

6:10 PM 1/3/2024

3-man



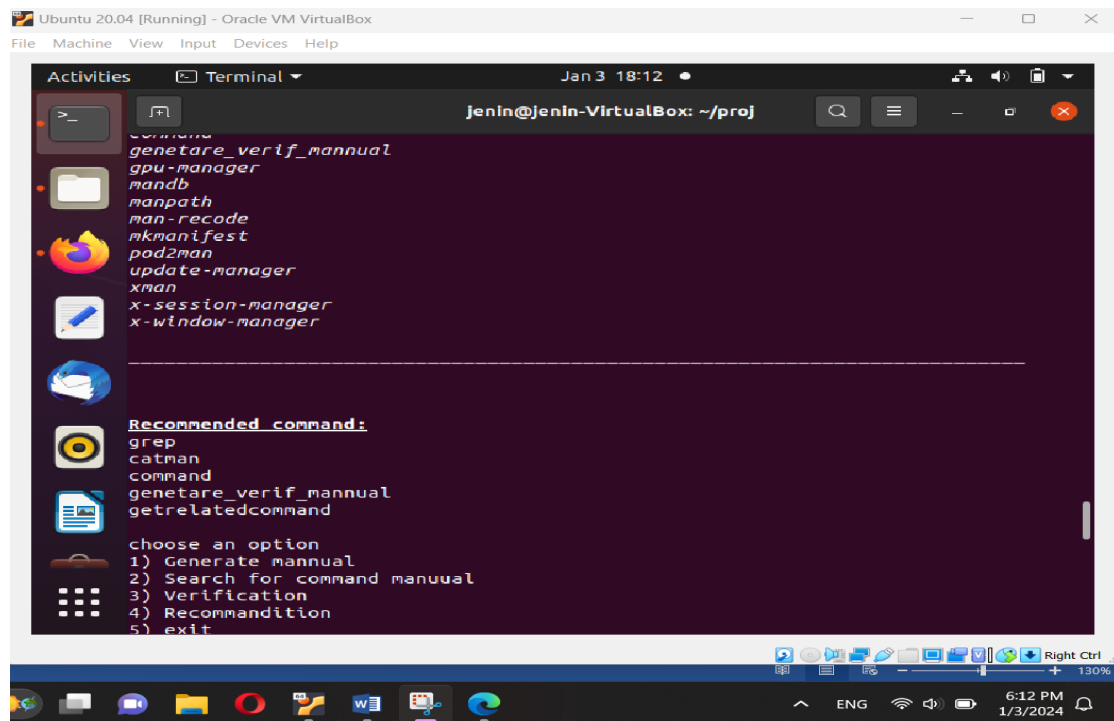
The screenshot shows a terminal window titled "jenin@jenin-VirtualBox: ~/proj". The user has entered the command `man`, and the terminal displays the manual page for the `man` command. The output includes sections for **DESCRIPTION:**, **VERSION:**, **EXAMPLE OF man :**, and **RELATED COMMAND:**.

```
jenin@jenin-VirtualBox: ~/proj
man
man:
DESCRIPTION:
man is the system's manual pager. Each page argument given to man is
normally the name of a program, utility or function. The manual page
associated with each of these arguments is then found and displayed.
A section, if provided, will direct man to look only in that section

VERSION:
man 2.9.1

EXAMPLE OF man :
man command_name
man man

RELATED COMMAND:
catman
command
genetare_verif_mannual
gpu-manager
```



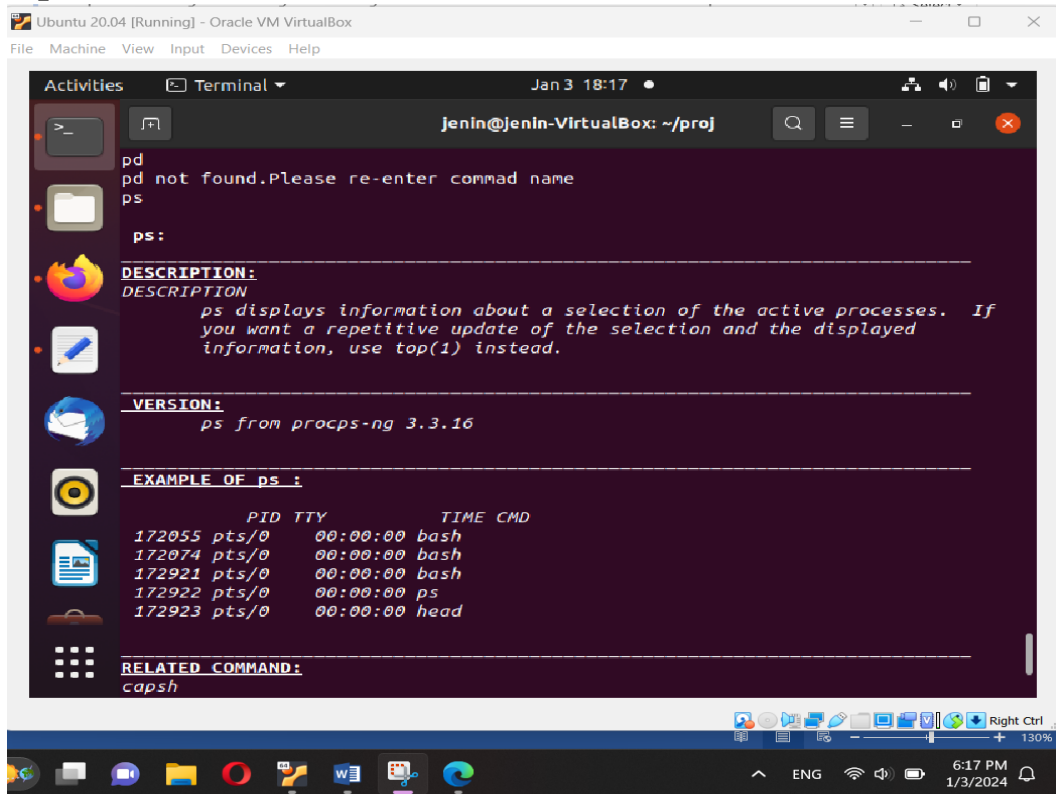
The screenshot shows a terminal window titled "jenin@jenin-VirtualBox: ~/proj". The user has entered the command `3-man`, and the terminal displays a list of commands and a menu of options. The list of commands includes `genetare_verif_mannual`, `gpu-manager`, `mandb`, `manpath`, `man-recode`, `mkmanifest`, `pod2man`, `update-manager`, `xman`, `x-session-manager`, and `x-window-manager`. The menu of options includes `grep`, `catman`, `command`, `genetare_verif_mannual`, `getrelatedcommand`, `choose an option`, `1) Generate mannual`, `2) Search for command manuual`, `3) Verification`, `4) Recommendation`, and `5) exit`.

```
jenin@jenin-VirtualBox: ~/proj
3-man
genetare_verif_mannual
gpu-manager
mandb
manpath
man-recode
mkmanifest
pod2man
update-manager
xman
x-session-manager
x-window-manager

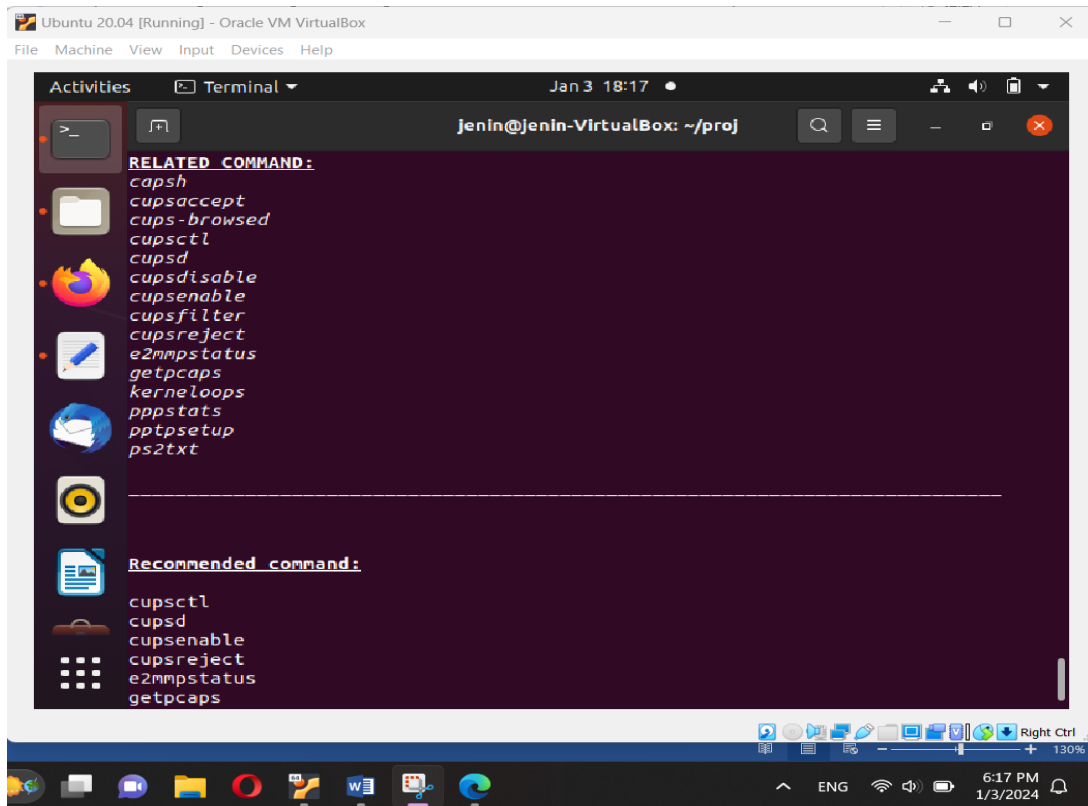
Recommended command:
grep
catman
command
genetare_verif_mannual
getrelatedcommand

choose an option
1) Generate mannual
2) Search for command manuual
3) Verification
4) Recommendation
5) exit
```


4-ps



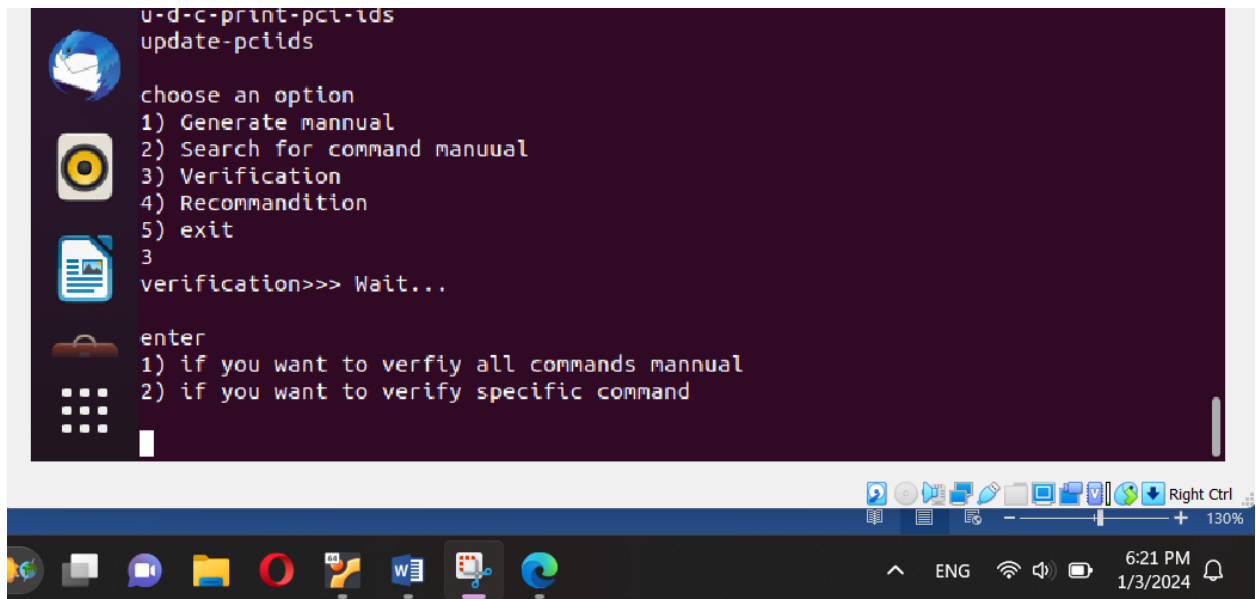
```
jenin@jenin-VirtualBox: ~/proj
pd
pd not found.Please re-enter commad name
ps
ps:
DESCRIPTION:
ps displays information about a selection of the active processes. If
you want a repetitive update of the selection and the displayed
information, use top(1) instead.
VERSION:
ps from procps-ng 3.3.16
EXAMPLE OF ps:
      PID TTY          TIME CMD
 172055 pts/0    00:00:00 bash
 172074 pts/0    00:00:00 bash
 172921 pts/0    00:00:00 bash
 172922 pts/0    00:00:00 ps
 172923 pts/0    00:00:00 head
RELATED COMMAND:
capsh
```



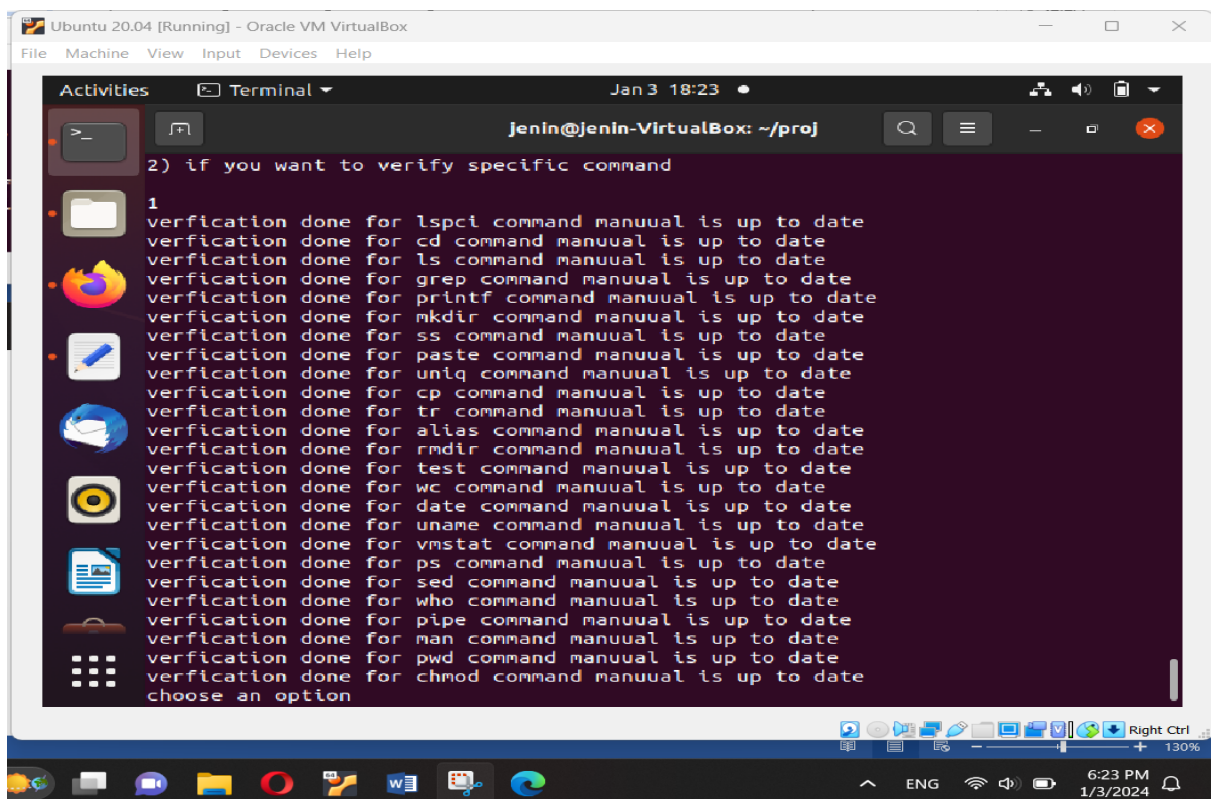
```
jenin@jenin-VirtualBox: ~/proj
ps
RELATED COMMAND:
capsh
cupsaccept
cups-browsed
cupscctl
cupsd
cupsdisable
cupsenable
cupsfilter
cupsreject
e2mmpstatus
getpcaps
kerneloops
pppstats
pptpsetup
ps2txt
Recommended command:
cupscctl
cupsd
cupsenable
cupsreject
e2mmpstatus
getpcaps
```

3-Verification:

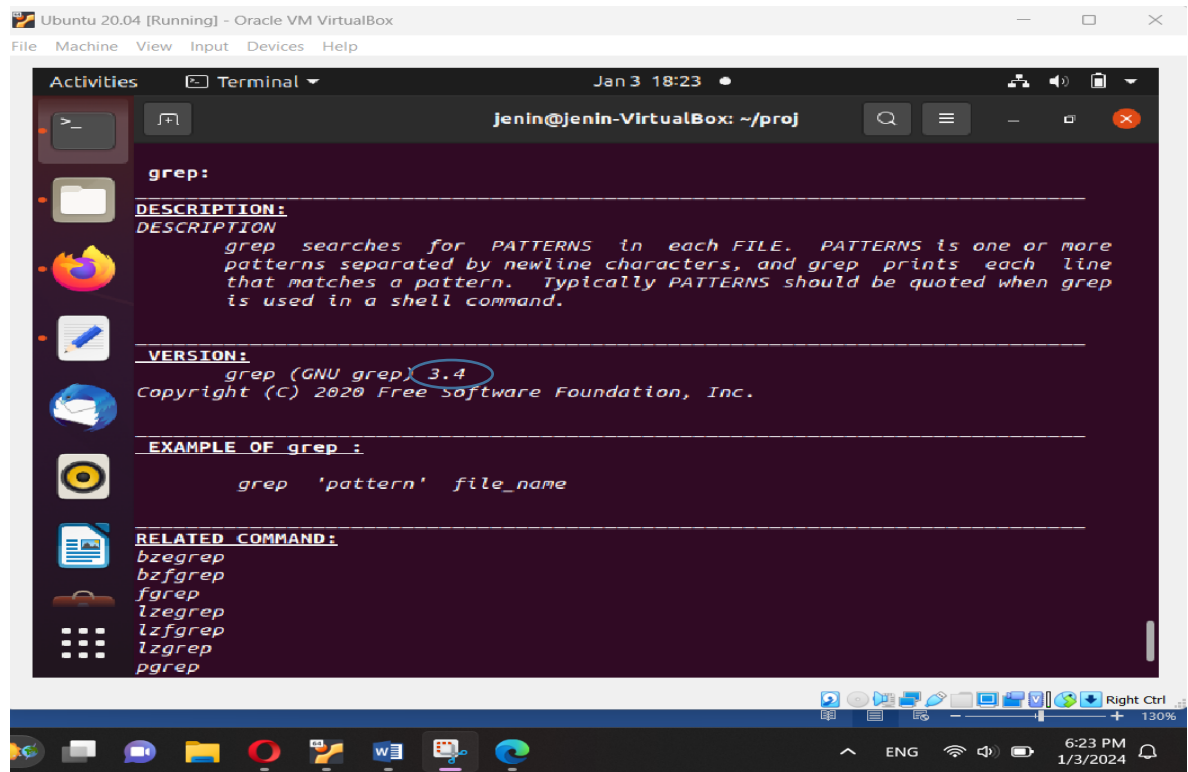
We can choose to have all command verified at once or separately



At once




This is 'grep' manual before changing the (version)



The screenshot shows a terminal window titled 'Ubuntu 20.04 [Running] - Oracle VM VirtualBox'. The terminal displays the 'grep' manual page. The version is 3.4, which is circled in blue. The manual page includes sections for DESCRIPTION, VERSION, EXAMPLE OF grep, and RELATED COMMANDS.

```
grep:
-----
DESCRIPTION:
grep searches for PATTERNS in each FILE. PATTERNS is one or more
patterns separated by newline characters, and grep prints each line
that matches a pattern. Typically PATTERNS should be quoted when grep
is used in a shell command.
-----
VERSION:
grep (GNU grep) 3.4
Copyright (C) 2020 Free Software Foundation, Inc.
-----
EXAMPLE OF grep :
grep 'pattern' file_name
-----
RELATED COMMAND:
bzegrep
bzfgrep
fgrep
lzegrep
lzfgrep
lzgrep
pgrep
```

Now I changed the version to 3.5

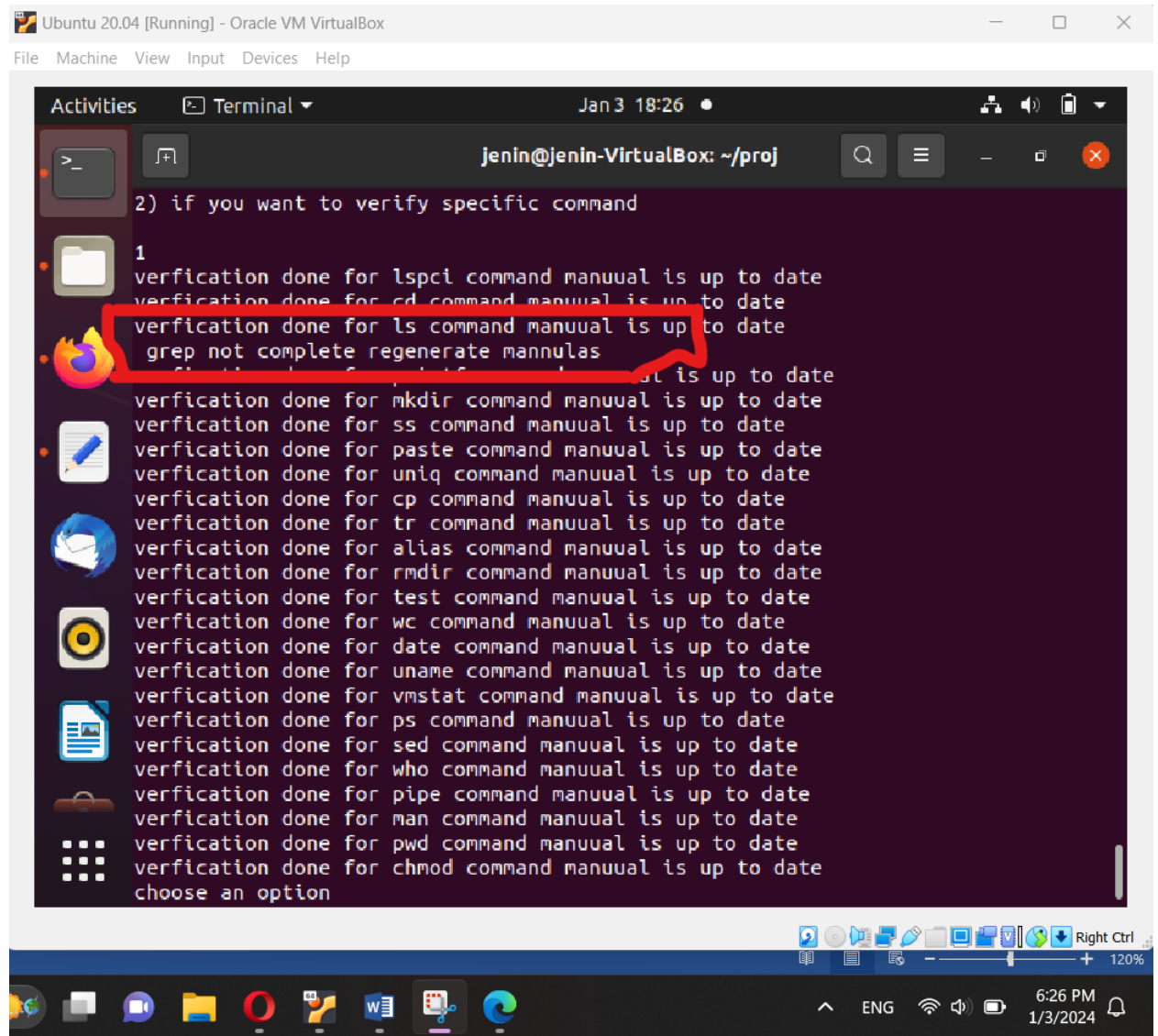


The screenshot shows a terminal window titled 'Ubuntu 20.04 [Running] - Oracle VM VirtualBox'. The terminal displays the 'grep' manual page. The version is 3.5, which is circled in blue. The manual page includes sections for DESCRIPTION, VERSION, EXAMPLE OF grep, and RELATED COMMANDS.

```
wc
who
grep

grep:
-----
DESCRIPTION:
grep searches for PATTERNS in each FILE. PATTERNS is one or more
patterns separated by newline characters, and grep prints each line
that matches a pattern. Typically PATTERNS should be quoted when grep
is used in a shell command.
-----
VERSION:
grep (GNU grep) 3.5
Copyright (C) 2020 Free Software Foundation, Inc.
-----
EXAMPLE OF grep :
grep 'pattern' file_name
-----
RELATED COMMAND:
bzegrep
bzfgrep
fgrep
lzegrep
```

Now test the verification:

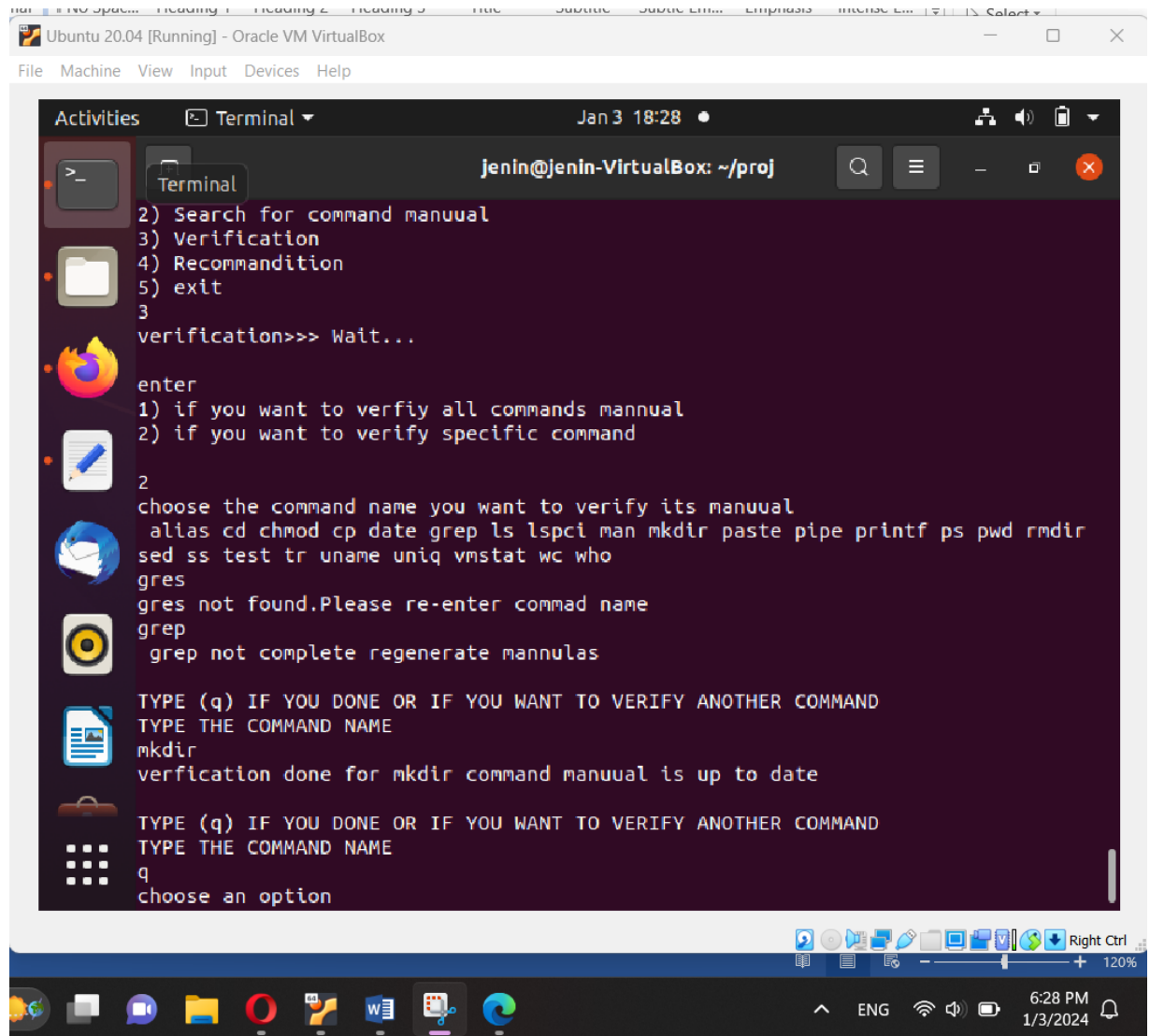


The screenshot shows a terminal window titled "Ubuntu 20.04 [Running] - Oracle VM VirtualBox". The terminal output displays a list of commands being verified, with the following text:

```
2) if you want to verify specific command  
1  
verification done for lspci command manual is up to date  
verification done for cd command manual is up to date  
verification done for ls command manual is up to date  
grep not complete regenerate manulas  
verification done for find command manual is up to date  
verification done for mkdir command manual is up to date  
verification done for ss command manual is up to date  
verification done for paste command manual is up to date  
verification done for uniq command manual is up to date  
verification done for cp command manual is up to date  
verification done for tr command manual is up to date  
verification done for alias command manual is up to date  
verification done for rmdir command manual is up to date  
verification done for test command manual is up to date  
verification done for wc command manual is up to date  
verification done for date command manual is up to date  
verification done for uname command manual is up to date  
verification done for vmstat command manual is up to date  
verification done for ps command manual is up to date  
verification done for sed command manual is up to date  
verification done for who command manual is up to date  
verification done for pipe command manual is up to date  
verification done for man command manual is up to date  
verification done for pwd command manual is up to date  
verification done for chmod command manual is up to date  
choose an option
```

A red box highlights the line "verification done for ls command manual is up to date".

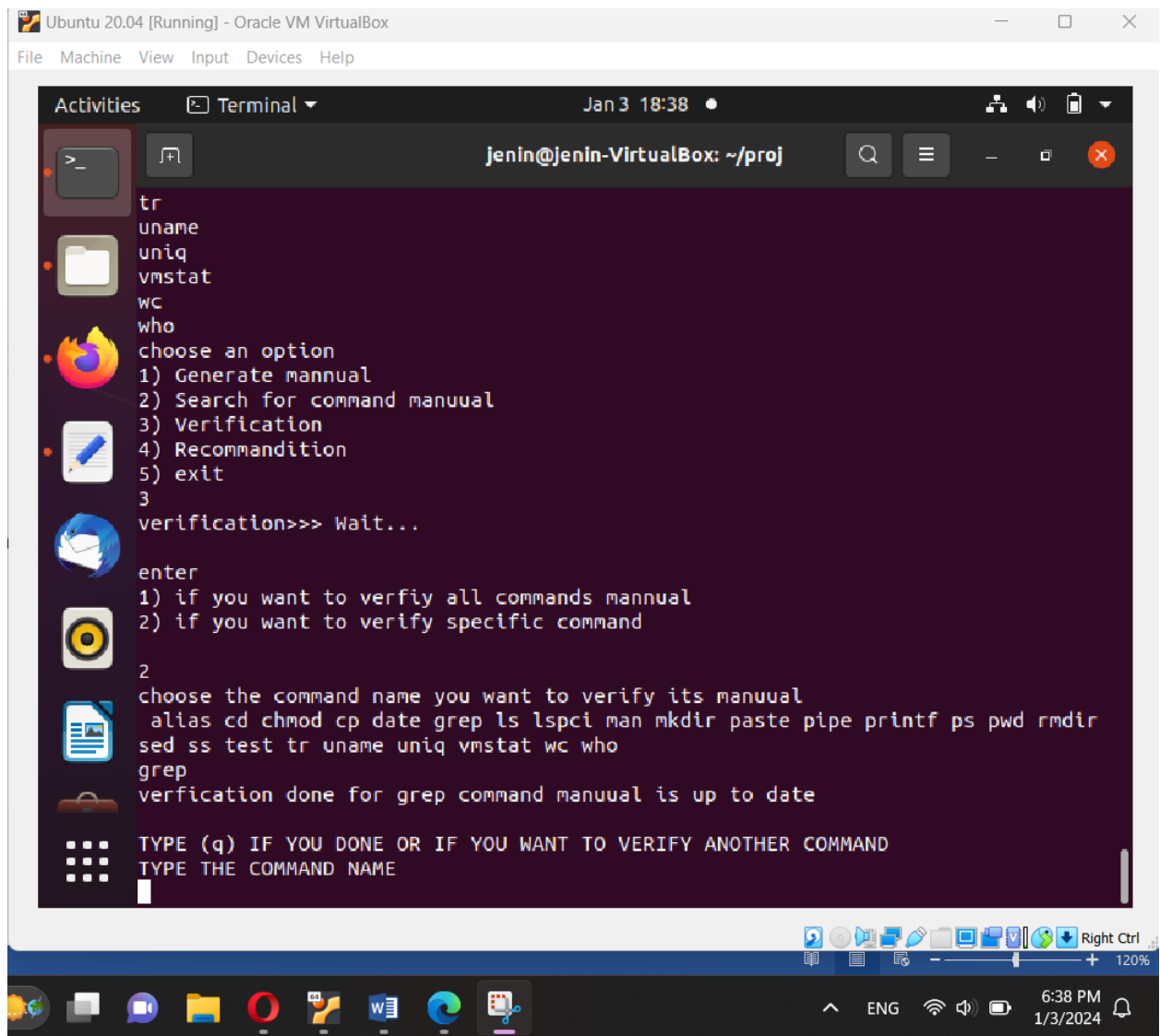
Check 'grep' separately and mkdir command.



The screenshot shows a terminal window titled "jenin@jenin-VirtualBox: ~/proj" with a dark purple background. The terminal displays a script that prompts the user to search for command manuals, verify them, and regenerate them if necessary. The script uses the 'grep' command to search for the command name in a list of available commands. The user has entered 'mkdir' and 'q' to exit the script.

```
jenin@jenin-VirtualBox: ~/proj
2) Search for command manual
3) Verification
4) Recommendation
5) exit
3
verification>>> Wait...
enter
1) if you want to verify all commands manual
2) if you want to verify specific command
2
choose the command name you want to verify its manual
alias cd chmod cp date grep ls lspci man mkdir paste pipe printf ps pwd rmdir
sed ss test tr uname uniq vmstat wc who
grep
grep not found.Please re-enter command name
grep
grep not complete regenerate manuals
TYPE (q) IF YOU DONE OR IF YOU WANT TO VERIFY ANOTHER COMMAND
TYPE THE COMMAND NAME
mkdir
verification done for mkdir command manual is up to date
TYPE (q) IF YOU DONE OR IF YOU WANT TO VERIFY ANOTHER COMMAND
TYPE THE COMMAND NAME
q
choose an option
```

Regenerate manual and check again



The screenshot shows a terminal window titled "Ubuntu 20.04 [Running] - Oracle VM VirtualBox". The terminal output is as follows:

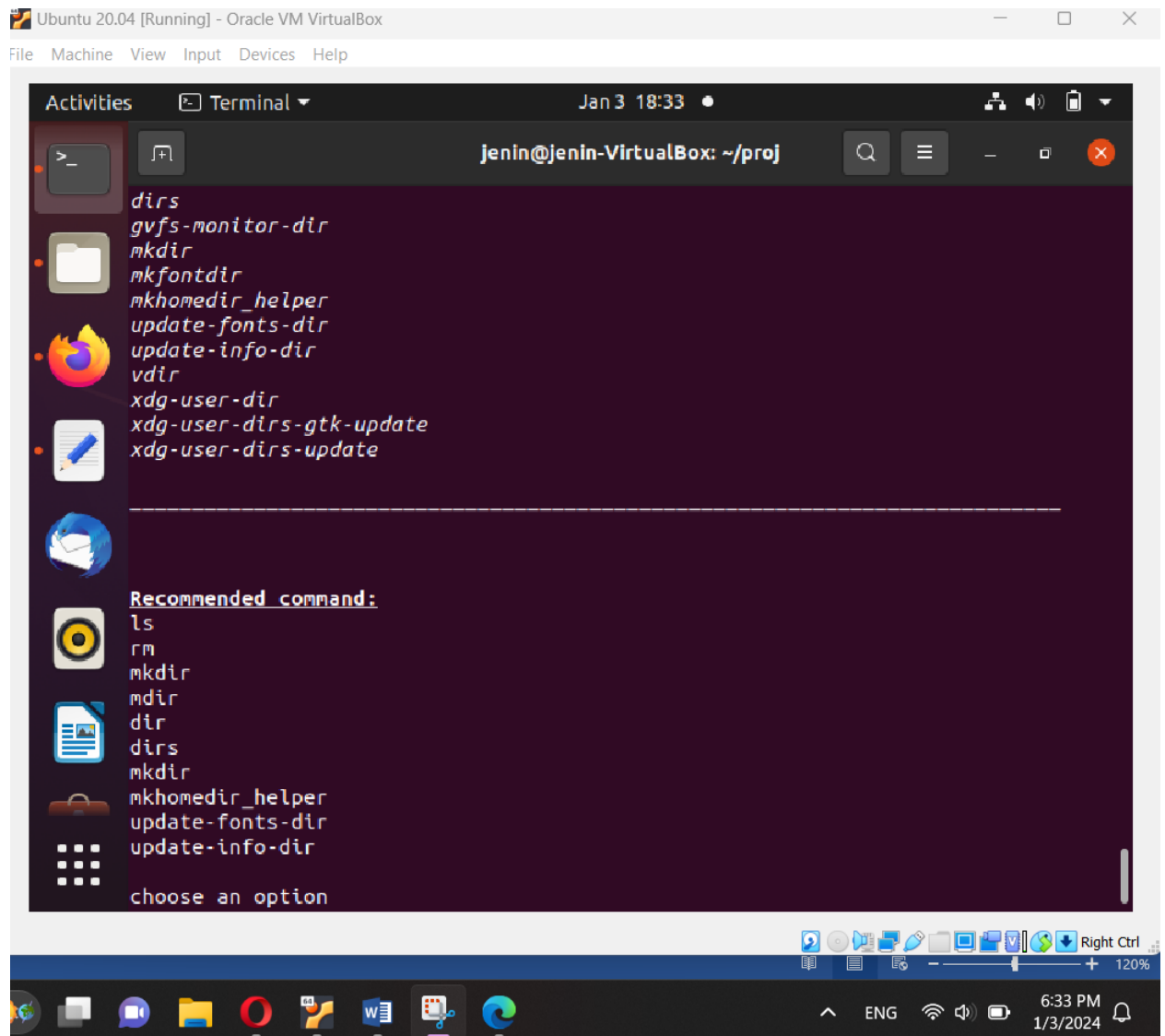
```
jenin@jenin-VirtualBox: ~/proj
tr
uname
uniq
vmstat
wc
who
choose an option
1) Generate mannual
2) Search for command manual
3) Verification
4) Recommandition
5) exit
3
verification>>> Wait...
enter
1) if you want to verfiy all commands mannual
2) if you want to verify specific command
2
choose the command name you want to verify its manual
alias cd chmod cp date grep ls lspci man mkdir paste pipe printf ps pwd rmdir
sed ss test tr uname uniq vmstat wc who
grep
verification done for grep command manual is up to date
TYPE (q) IF YOU DONE OR IF YOU WANT TO VERIFY ANOTHER COMMAND
TYPE THE COMMAND NAME
```

The terminal window includes a sidebar with application icons (Terminal, Files, Firefox, LibreOffice Writer, LibreOffice Impress, LibreOffice Draw, LibreOffice Base, LibreOffice Calc, LibreOffice Impress, LibreOffice Draw, LibreOffice Base, LibreOffice Calc) and a top bar with the date and time "Jan 3 18:38". The bottom of the window shows a Windows taskbar with various application icons and system tray icons.

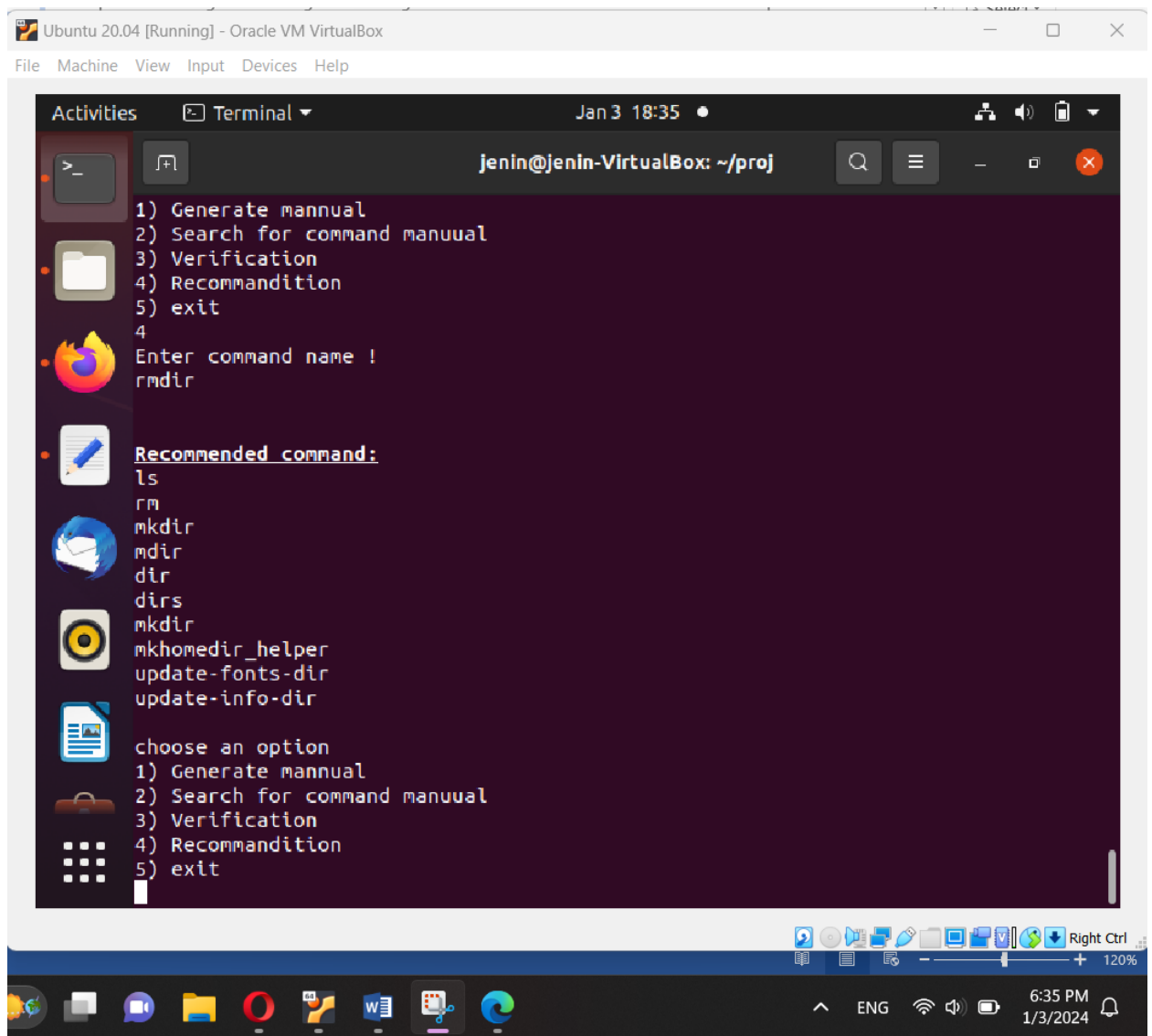
4-Command Recommendation

Commands are recommended after selecting each command, and I have also added a separate option to get Recommendation

Recommendation for “rmdir” command:



Separate function:



Exit.

