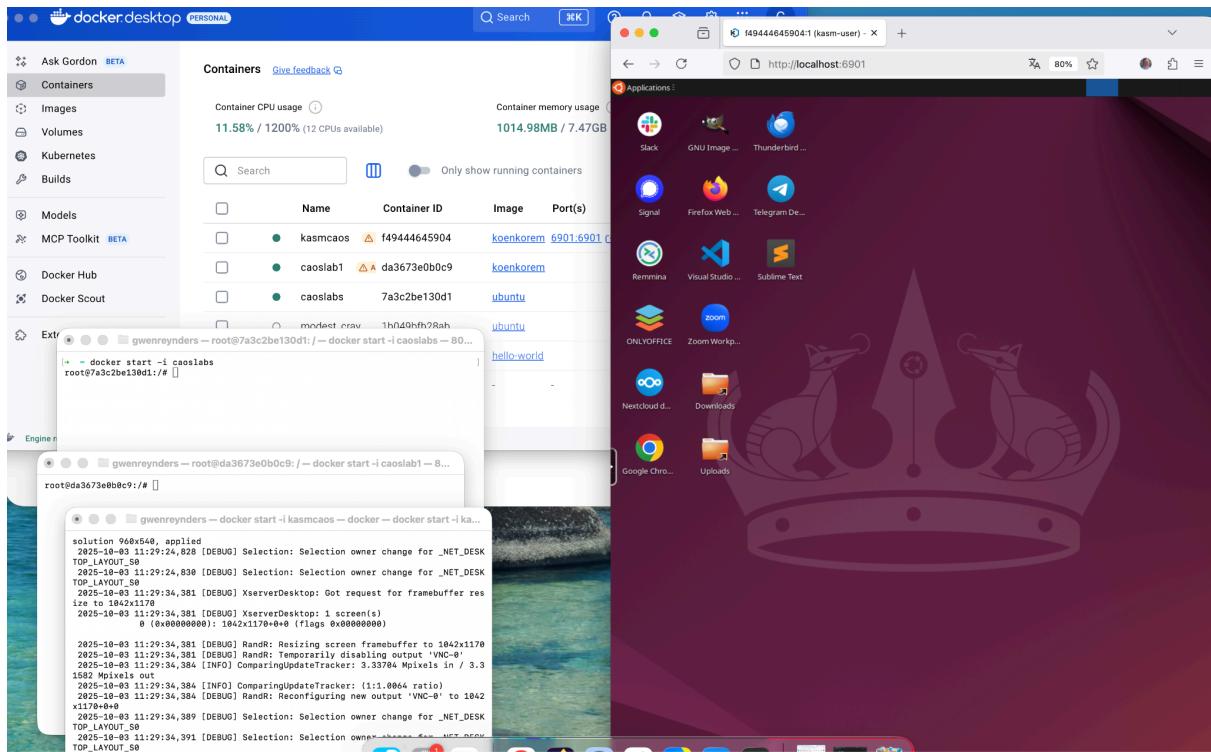
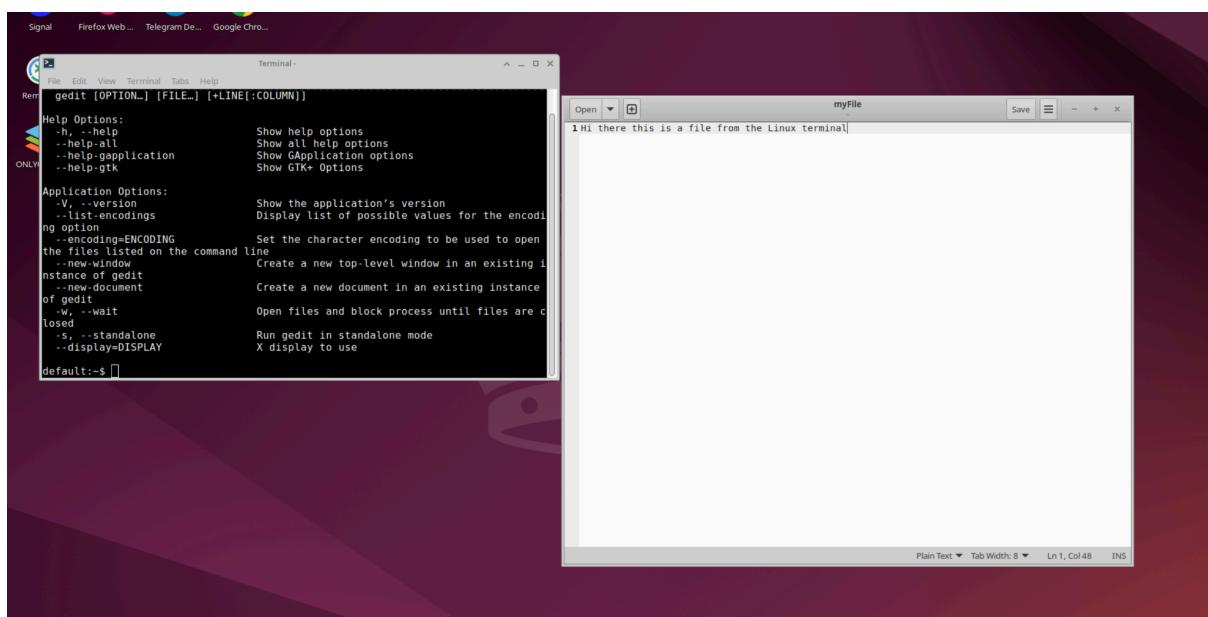
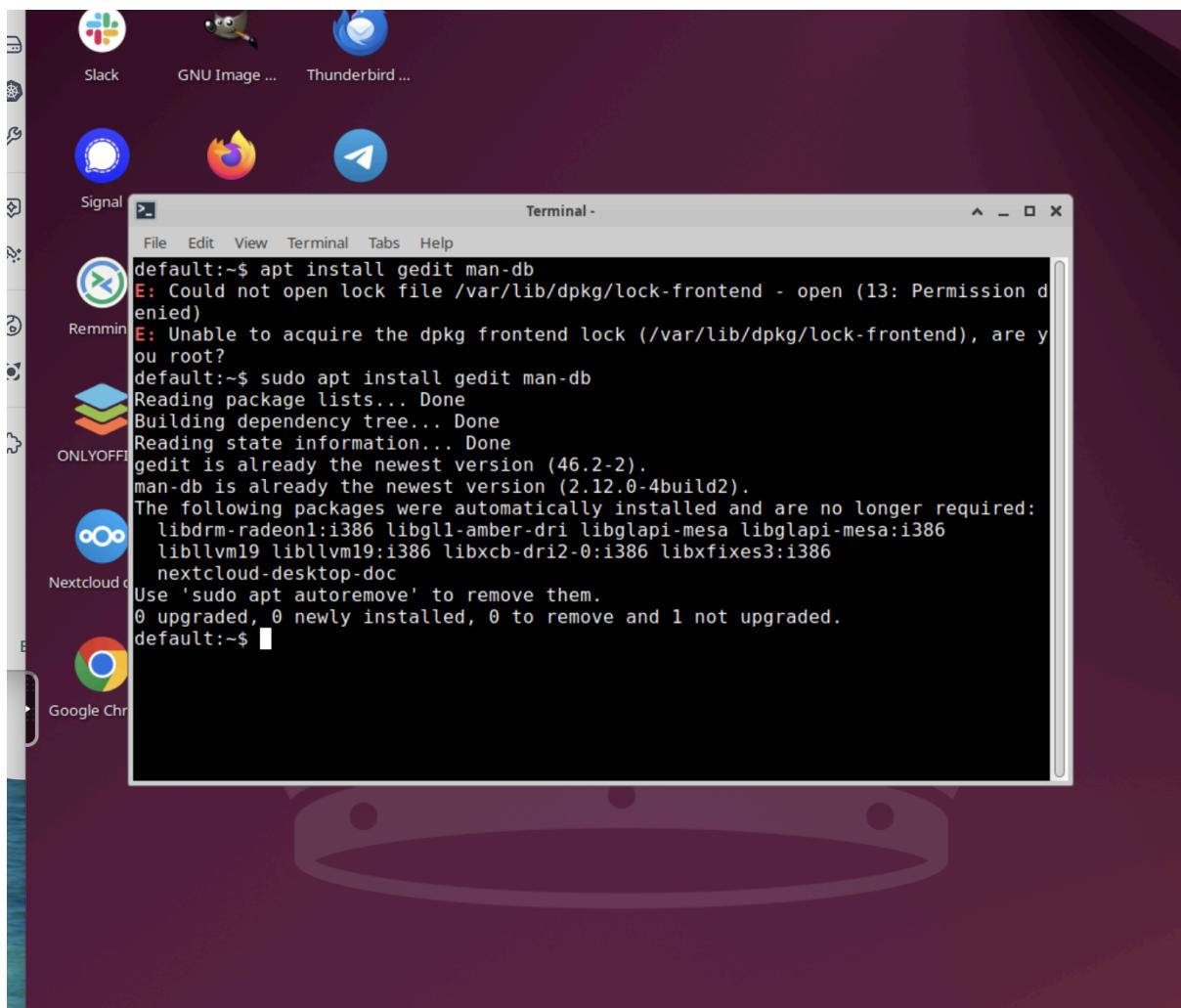


Lab 1.2 Linux





```
1. Create a file on the desktop and find it back with the terminal using this command echo 'my new file' > ~/mynewfile
```

```
[root@7a3c2be130d1:~# ls
mynewfile
[root@7a3c2be130d1:~# cat mynewfile
my new file
root@7a3c2be130d1:~# ]
```

```
1. Show all files and folders in the /etc directory
```

```
[→ ~ docker start -i caoslabs
root@7a3c2be130d1:/# sudo echo 'my new file' > ~/mynewfile
[bash: sudo: command not found
[root@7a3c2be130d1:/# echo 'my new file' > ~/mynewfile
root@7a3c2be130d1:/# ls
[bin dev home media opt root sbin sys usr
[boot etc lib mnt proc run srv tmp var
root@7a3c2be130d1:/# pwd
/
[root@7a3c2be130d1:/# cd ..
root@7a3c2be130d1:/# ls
[bin dev home media opt root sbin sys usr
[boot etc lib mnt proc run srv tmp var
root@7a3c2be130d1:/# cd etc
root@7a3c2be130d1:/etc# ls
[alternatives gnutls legal passwd- shadow-
[apt group libaudit.conf profile shadow-
bash.bashrc group- login.defs profile.d shells
bindresvport.blacklist gshadow logrotate.d rc0.d skel
cloud gshadow- lsb-release rc1.d subgid
cron.d host.conf machine-id rc2.d subgid-
cron.daily hostname mke2fs.conf rc3.d subuid
debconf.conf hosts mtab rc4.d subuid-
debian_version init.d networks rc5.d sysctl.conf
default issue nsswitch.conf rc6.d sysctl.d
dpkg issue.net opt rcS.d systemd
e2scrub.conf kernel os-release resolv.conf terminfo
environment ld.so.cache pam.conf rmt update-motd.d
fstab ld.so.conf pam.d security xattr.conf
gai.conf ld.so.conf.d passwd selinux
root@7a3c2be130d1:/etc# clear]
```

```
1. Use a command to clear the screen
```

Zie hierboven !!

clear

```
1. Find in the manual all apt possibilities, for example apt install
```

```
[root@7a3c2be130d1:~# apt install man-db
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  bsdxtrautils groff-base libgdbm6t64 libpipeline1 libuchardet0
Suggested packages:
  groff gdm-110n apparmor less www-browser
The following NEW packages will be installed:
  bsdxtrautils groff-base libgdbm6t64 libpipeline1 libuchardet0 man-db
0 upgraded, 6 newly installed, 0 to remove and 0 not upgraded.
Need to get 0 B/2430 KB of archives.
After this operation, 8425 kB of additional disk space will be used.
[Do you want to continue? [Y/n] Y
debconf: delaying package configuration, since apt-utils is not installed
Selecting previously unselected package bsdxtrautils.
(Reading database ... 4374 files and directories currently installed.)
Preparing to unpack .../0-bsdxtrautils_2.39.3-9ubuntu6.3_arm64.deb ...
Unpacking bsdxtrautils (2.39.3-9ubuntu6.3) ...
Selecting previously unselected package libuchardet0:arm64.
Preparing to unpack .../1-libuchardet0_0.0.8-1build1_arm64.deb ...
Unpacking libuchardet0:arm64 (0.0.8-1build1) ...
Selecting previously unselected package groff-base.
Preparing to unpack .../2-groff-base_1.23.0-3build2_arm64.deb ...
Unpacking groff-base (1.23.0-3build2) ...
Selecting previously unselected package libgdbm6t64:arm64.
Preparing to unpack .../3-libgdbm6t64_1.23-5.1build1_arm64.deb ...
Unpacking libgdbm6t64:arm64 (1.23-5.1build1) ...
Selecting previously unselected package libpipeline1:arm64.
Preparing to unpack .../4-libpipeline1_1.5.7-2_arm64.deb ...
Unpacking libpipeline1:arm64 (1.5.7-2) ...
Selecting previously unselected package man-db.
Preparing to unpack .../5-man-db_2.12.0-4build2_arm64.deb ...
Unpacking man-db (2.12.0-4build2) ...
Setting up libpipeline1:arm64 (1.5.7-2) ...
Setting up libgdbm6t64:arm64 (1.23-5.1build1) ...
Setting up bsdxtrautils (2.39.3-9ubuntu6.3) ...
Setting up libuchardet0:arm64 (0.0.8-1build1) ...
Setting up groff-base (1.23.0-3build2) ...
Setting up man-db (2.12.0-4build2) ...
debconf: unable to initialize frontend: Dialog
debconf: (No usable dialog-like program is installed, so the dialog based frontend cannot be used. at /usr/share/perl5/Debconf/FrontEnd/Dialog.pm l
debconf: falling back to frontend: Readline
debconf: unable to initialize frontend: Readline
debconf: (Can't locate Term/ReadLine.pm in @INC (you may need to install the Term::ReadLine module) (@INC entries checked: /etc/perl /usr/local/lib
e.pm line 8.)
debconf: falling back to frontend: Teletype
Building database of manual pages ...
Processing triggers for libc-bin (2.39-0ubuntu8.6) ...
root@7a3c2be130d1:~# man apt
APT(8)                                     APT(8)
APT(8)
```

NAME

apt - command-line interface

SYNOPSIS

```
apt [-h] [-o=config_string] [-c=config_file] [-t=
target_release] [-aarchitecture] {list | search
  | show | update | install pkg [{=pkg_version_number} | /target_release]}...
  | remove pkg...
  | upgrade | full-upgrade | edit-sources | {-v | --version} | {-h | --help}}
```

DESCRIPTION

apt provides a high-level commandline interface for the package management system. It is intended as an end user interface and enables some options better suited for interactive usage by default compared to more specialized APT tools like **apt-get(8)** and **apt-cache(8)**.

Much like **apt** itself, its manpage is intended as an end user interface and as such only mentions the most used commands and options partly to not duplicate information in multiple places and partly to avoid overwhelming readers with a cornucopia of options and details.

update (apt-get(8))
update is used to download package information from all configured sources. Other commands operate on this data to e.g. perform package upgrades or search in and display details about all packages available for installation.

upgrade (apt-get(8))
upgrade is used to install available upgrades of all packages currently installed on the system from the sources configured via **sources.list(5)**. New packages will be installed if required to satisfy dependencies, but existing packages will never be removed. If an upgrade for a package requires the removal of an installed package the upgrade for this package isn't performed.

When a package is supplied as an argument, the package will be installed prior to the upgrade action.

full-upgrade (apt-get(8))
full-upgrade performs the function of **upgrade** but will remove currently installed packages if this is needed to upgrade the system as a whole.

When a package is supplied as an argument, the package will be installed prior to the upgrade action.

install, reinstall, remove, purge (apt-get(8))
Performs the requested action on one or more packages specified via regex(7), glob (7) or exact match. The requested action can be overridden for specific packages by appending a plus (+) to the package name to install this package or a minus (-) to remove it.

A specific version of a package can be selected for installation by following the package name with an equals (=) and the version of the package to select. Alternatively the version from a specific release can be selected by following the package name with a forward slash (/) and codename (bookworm, trixie, sid ...) or suite name (stable, testing, unstable). This will also select versions from this release for dependencies of this package if needed to satisfy the request.

Removing a package removes all packaged data, but leaves usually small (modified) user

1. Find all commands with *date*

```
root@7a3c2be130d1:~# man date
DATE(1)                                         User Commands
E(1)

NAME
    date - print or set the system date and time

SYNOPSIS
    date [OPTION]... [+FORMAT]
    date [-u|--utc|--universal] [MMDDhhmm[[CC]YY][.ss]]

DESCRIPTION
    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 i

--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:E

-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)
```

1. How can you repeat that command without typing it again?

Als je met de pijltjes naar boven gaat dan komt het laatste ingetypte terug. als je 2 keer clickt dan komt hetgeen daarvoor ingetypt is tevoorschijn. ja kan dan met de pijltjes op en neer gaan. (boven en onder)

other way to go to the next page

1. other way to go back to the previous page
2. search in the man page
3. go to the next search result
4. go to the previous result

Most commands optionally preceded by integer argument k. Defaults in brackets.
Star (*) indicates argument becomes new default.

<space>	Display next k lines of text [current screen size]
z	Display next k lines of text [current screen size]*
<return>	Display next k lines of text [1]*

```

d or ctrl-D      Scroll k lines [current scroll size, initially 11]*
q or Q or <interrupt>  Exit from more
s              Skip forward k lines of text [1]
f              Skip forward k screenfuls of text [1]
b or ctrl-B    Skip backwards k screenfuls of text [1]
'              Go to place where previous search started
=              Display current line number
/<regular expression>  Search for kth occurrence of regular expression [1]
n              Search for kth occurrence of last r.e [1]
!<cmd> or !:<cmd>  Execute <cmd> in a subshell
v              Start up '/usr/bin/vi' at current line
ctrl-L         Redraw screen
:n             Go to kth next file [1]
:p             Go to kth previous file [1]
:f             Display current file name and line number
.              Repeat previous command

```

1. Show the systemtime in the format 14:00:00
2. Show the date and time in the following format Monday 16/11/2020 14:00
3. Show the current logged in user
4. Combine the answer of 9 & 10 the result should be

```

[      %P      like %p, but lower case
[

[root@7a3c2be130d1:~#
[root@7a3c2be130d1:~# date +"%H:%M:%S"
18:06:36
[root@7a3c2be130d1:~# date +"%A %d/%m/%Y %H:%M"
Friday 03/10/2025 18:07
root@7a3c2be130d1:~# 
```

Case John - in Ubuntu container

John wants to implement the date functionality in his Shell script. The script is searching for bad OS configuration on specific dates & times.

It's your task to find out how to *show the date and time* as output in the CLI, figure out if it's possible in the following format *thursday 25 sept 2025 09:15* with underneath the week number.

Congratulations John is 1 step further in his script.

The next question is that it only needs to run when there are *processes running with in the commandname bash* do this in full format listing. John will provide the if statement, so don't worry about that.

Note: use the `ps` command.

```

[root@7a3c2be130d1:~# date +"%A %d %b %Y %H:%M"; date +"Week: %V"; ps -ely | grep bash
Friday 03 Oct 2025 18:54
Week: 40
S     0      1      0     80     0   3340  1074 do_wai pts/0    00:00:00 bash
root@7a3c2be130d1:~# 
```

Editors - HOST computer

Install Visual Studio Code on the host computer.

In Visual Studio code install extension "Markdown All in One".

Create a Markdown file with the following contents.

Header 1: Lab 1 Linux

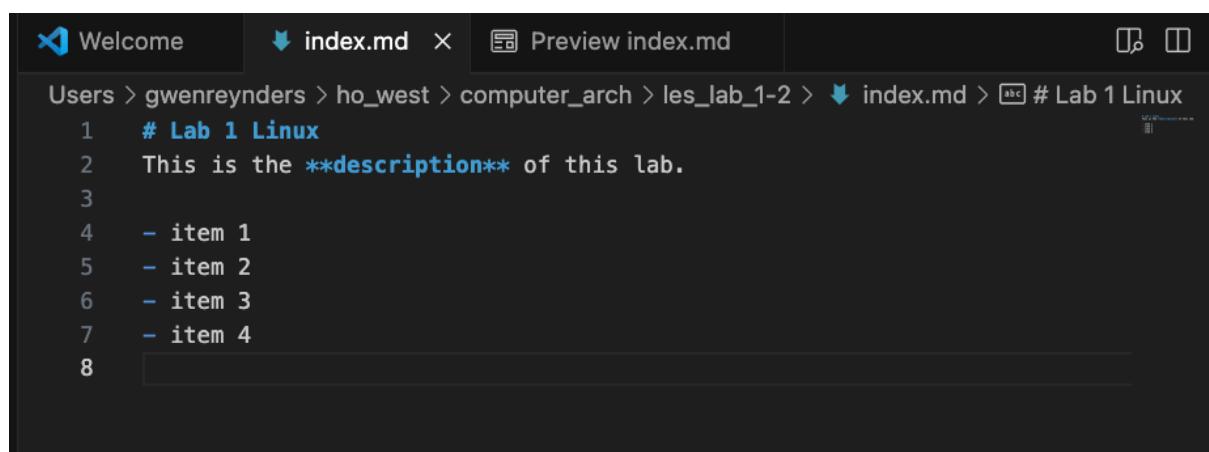
Text: this is the description of this lab.

Set the word description in bold.

Create an unsorted list with the following items: item1, item2, item3, item4

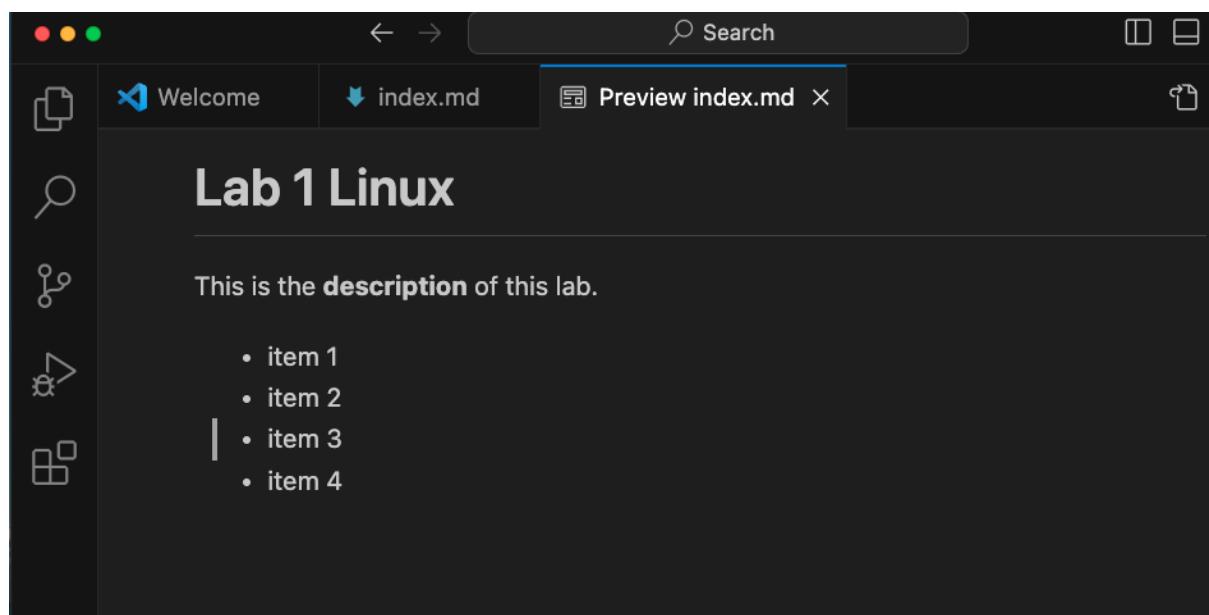
Create a screenshot of the running Linux Container) and insert the saved image in the file.

Copy this screenshot in the Word document



The screenshot shows the Visual Studio Code interface with the file `index.md` open. The content of the file is:

```
1 # Lab 1 Linux
2 This is the **description** of this lab.
3
4 - item 1
5 - item 2
6 - item 3
7 - item 4
8
```



The screenshot shows a browser window displaying the preview of the `index.md` file. The title of the page is `Lab 1 Linux`. The content is:

Lab 1 Linux

This is the **description** of this lab.

- item 1
- item 2
- item 3
- item 4

Create a screenshot of the running Linux Container) and insert the saved image in the file.

This is the **description** of this lab.

- item 1
- item 2
- item 3
- item 4

```
1 # Lab 1 Linux
2 This is the **description** of this lab.
3
4 - item 1
5 - item 2
6 - item 3
7 - item 4
8
```

Users > gwenreynders > ho_west > computer_arch > les_lab_1-2 > index.md > # Lab 1 Linux

● ● ●

← → 🔍 Search

Lab 1 Linux

This is the **description** of this lab.

- item 1
- item 2
- item 3
- item 4

The screenshot shows a dark-themed code editor interface. On the left is a vertical toolbar with icons for file operations (New, Open, Save, Find, etc.). The main area has a header bar with tabs: 'Welcome' (highlighted), 'index.md' (active tab), and 'Preview index.md'. Below the header is a breadcrumb navigation path: 'Users > gwenreynders > ho_west > computer_arch > les_lab_1-2 > index.md > # Lab 1 Linux'. The main content area contains the following text:

```
1  # Lab 1 Linux
2  This is the **description** of this lab.
3
4  - item 1
5  - item 2
6  - item 3
7  - item 4
8
9  ![Linux Container Screenshot](foto1.png)
10 ![Linux Container Screenshot](foto2.png)
```