

Lab 3 | Installing software and navigating the file system | Answers

Assignment description [here](#)

Question 1

1. Which command did you use to search for the themes and to install them? apt search theme

`sudo apt install yuyu-gtk-theme`

2. Which commands did you use to find and install the web browser? apt search browser sudo apt install brave-browser

3. 3.1. What is the name of the package? brave-browser

3.2. What dependencies are needed in order to install the package? (you can either take a screenshot of the terminal or copy and paste from the terminal)

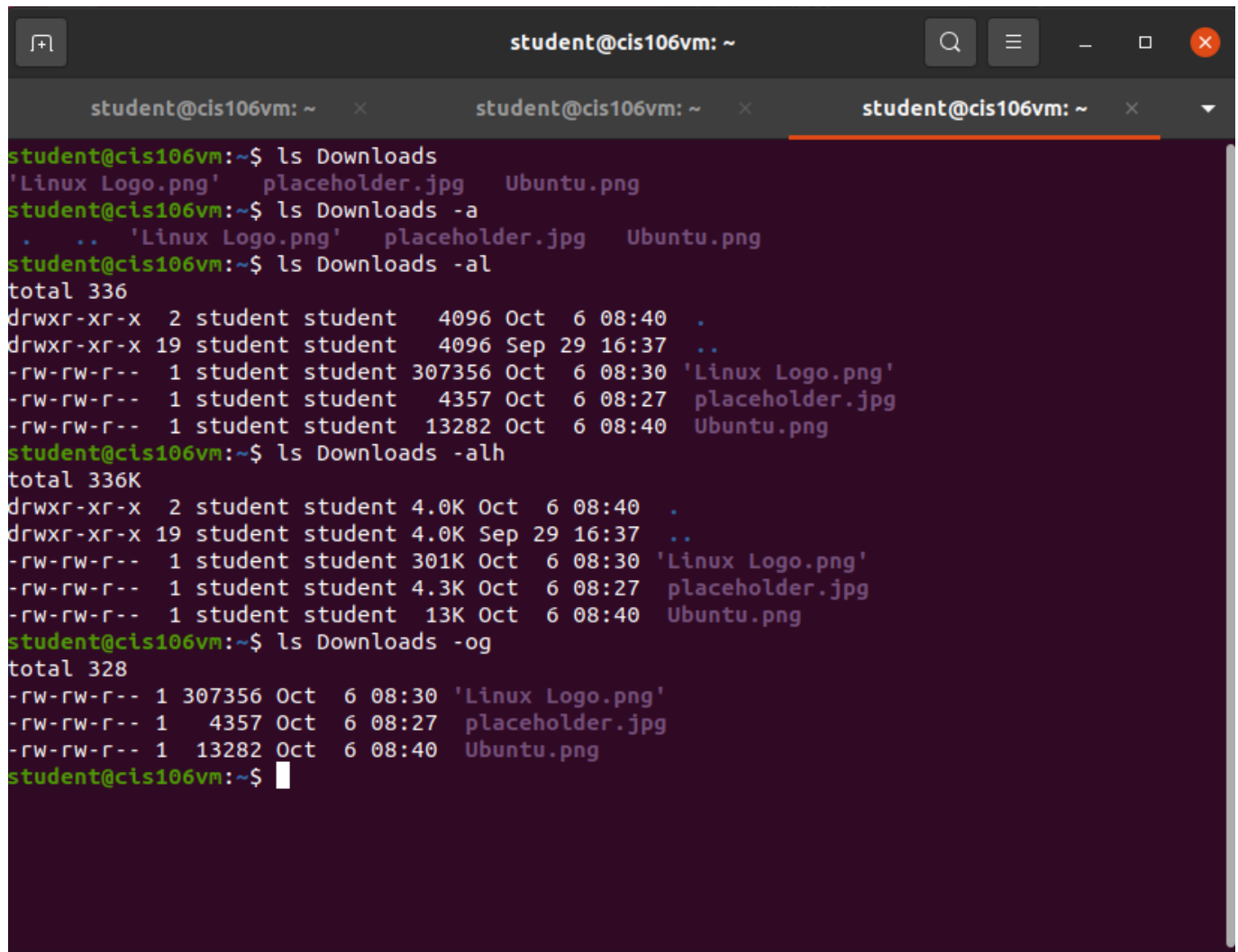
The following additional packages will be installed: brave-keyring The following NEW packages will be installed: brave-browser brave-keyring 3.3. How much disk space will the package utilize after installation? 291 MB of disk space will be used by the package.

Question 2

```
student@cis106vm: /etc/firefox/pref
student@cis106vm:/etc/firefox/pref$ pwd
/etc/firefox/pref
student@cis106vm:/etc/firefox/pref$ cd /usr/share/themes
student@cis106vm:/usr/share/themes$ pwd
/usr/share/themes
student@cis106vm:/usr/share/themes$ cd
student@cis106vm:~$ cd /etc/firefox/pref
student@cis106vm:/etc/firefox/pref$
```

```
student@cis106vm: ~/Documents
student@cis106vm:~/Documents$ cd ~
student@cis106vm:~$ cd Downloads
student@cis106vm:~/Downloads$ cd --
student@cis106vm:~$ pwd
/home/student
student@cis106vm:~$ cd Documents
student@cis106vm:~/Documents$
```

Question 3



```
student@cis106vm: ~  
student@cis106vm:~$ ls Downloads  
'Linux Logo.png' placeholder.jpg Ubuntu.png  
student@cis106vm:~$ ls Downloads -a  
. .. 'Linux Logo.png' placeholder.jpg Ubuntu.png  
student@cis106vm:~$ ls Downloads -al  
total 336  
drwxr-xr-x  2 student student 4096 Oct  6 08:40 .  
drwxr-xr-x 19 student student 4096 Sep 29 16:37 ..  
-rw-rw-r--  1 student student 307356 Oct  6 08:30 'Linux Logo.png'  
-rw-rw-r--  1 student student  4357 Oct  6 08:27 placeholder.jpg  
-rw-rw-r--  1 student student  13282 Oct  6 08:40 Ubuntu.png  
student@cis106vm:~$ ls Downloads -alh  
total 336K  
drwxr-xr-x  2 student student 4.0K Oct  6 08:40 .  
drwxr-xr-x 19 student student 4.0K Sep 29 16:37 ..  
-rw-rw-r--  1 student student 301K Oct  6 08:30 'Linux Logo.png'  
-rw-rw-r--  1 student student  4.3K Oct  6 08:27 placeholder.jpg  
-rw-rw-r--  1 student student  13K Oct  6 08:40 Ubuntu.png  
student@cis106vm:~$ ls Downloads -og  
total 328  
-rw-rw-r--  1 307356 Oct  6 08:30 'Linux Logo.png'  
-rw-rw-r--  1  4357 Oct  6 08:27 placeholder.jpg  
-rw-rw-r--  1  13282 Oct  6 08:40 Ubuntu.png  
student@cis106vm:~$
```

Question 4

```

student@cis106vm: ~
student@cis106vm: ~
student@cis106vm: ~

student@cis106vm:~$ tree ~/Downloads/
/home/student/Downloads/
├── Linux Logo.png
├── placeholder.jpg
└── Ubuntu.png

0 directories, 3 files
student@cis106vm:~$ tree ~/Downloads/ -pugh
/home/student/Downloads/
├── [-rw-rw-r-- student student 300K] Linux Logo.png
├── [-rw-rw-r-- student student 4.3K] placeholder.jpg
└── [-rw-rw-r-- student student 13K] Ubuntu.png

0 directories, 3 files
student@cis106vm:~$ tree ~/Downloads/ -Dt
/home/student/Downloads/
├── [Oct 6 08:27] placeholder.jpg
├── [Oct 6 08:30] Linux Logo.png
└── [Oct 6 08:40] Ubuntu.png

0 directories, 3 files
student@cis106vm:~$ tree -H Downloads/
<!DOCTYPE html>
<html>
<head>
  <meta http-equiv="Content-Type" content="text/html; charset=UTF-8">
  <meta name="Author" content="Made by 'tree'">
  <meta name="GENERATOR" content="$Version: $ tree v1.8.0 (c) 1996 - 2018 by Steve Baker, T
  homas Moore, Francesc Rocher, Florian Sesser, Kyosuke Tokoro $">
  <title>Directory Tree</title>

```

```

student@cis106vm: ~
student@cis106vm: ~
student@cis106vm: ~

png</a><br>
  <a href="Downloads//Public/">Public</a><br>
  <a href="Downloads//snap/">snap</a><br>
    <a href="Downloads//snap/code/">code</a><br>
      <a href="Downloads//snap/code/74/">74</a><br>
      <a href="Downloads//snap/code/75/">75</a><br>
      <a href="Downloads//snap/code/common/">common</a><br>
      <a href="Downloads//snap/code/current/">current</a><br>
    <a href="Downloads//Templates/">Templates</a><br>
    <a href="Downloads//udo_root">udo_root</a><br>
    <a href="Downloads//Videos/">Videos</a><br>
  <br><br>
</p>
<p>
18 directories, 31 files
  <br><br>
</p>
<hr>
<p class="VERSION">
  tree v1.8.0 © 1996 - 2018 by Steve Baker and Thomas Moore <br>
  HTML output hacked and copyleft © 1998 by Francesc Rocher <br>
  JSON output hacked and copyleft © 2014 by Florian Sesser <br>
  Charsets / OS/2 support © 2001 by Kyosuke Tokoro
</p>
</body>
</html>
student@cis106vm:~$ tree -H Downloads/ lab3.html

```

```
student@cls106vm:~$ tree -H -d --no-dereference --files-without-matches lab3.html
student@cls106vm:~$
```

Question 5

```

student@cis106vm: ~
student@cis106vm: ~
student@cis106vm: ~

student@cis106vm:~$ wget http://archive.ubuntu.com/ubuntu/pool/universe/r/rust-exa/exa_0.9.0-4_amd64.deb
--2021-10-06 09:17:56-- http://archive.ubuntu.com/ubuntu/pool/universe/r/rust-exa/exa_0.9.0-4_amd64.deb
Resolving archive.ubuntu.com (archive.ubuntu.com)... 91.189.88.142, 91.189.88.152, 2001:67c:1360:8001::24, ...
Connecting to archive.ubuntu.com (archive.ubuntu.com)|91.189.88.142|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 301592 (295K) [application/x-debian-package]
Saving to: 'exa_0.9.0-4_amd64.deb'

exa_0.9.0-4_amd64.deb  100%[=====] 294.52K  654KB/s  in 0.5s

2021-10-06 09:17:56 (654 KB/s) - 'exa_0.9.0-4_amd64.deb' saved [301592/301592]

student@cis106vm:~$ sudo apt install ./exa_0.9.0-4_amd64.deb
[sudo] password for student:
Reading package lists... Done
Building dependency tree
Reading state information... Done
Note, selecting 'exa' instead of './exa_0.9.0-4_amd64.deb'
The following packages were automatically installed and are no longer required:
  apport-symptoms guile-2.2-libs libevent-2.1-7 libgc1c2 libgnome-games-support-1-3
  libgnome-games-support-common libnatpmp1 libqqwing2v5 python3-systemd
Use 'sudo apt autoremove' to remove them.
The following NEW packages will be installed:
  exa
0 upgraded, 1 newly installed, 0 to remove and 28 not upgraded.
Need to get 0 B/302 kB of archives.
After this operation, 890 kB of additional disk space will be used.

```

```

student@cis106vm: ~
student@cis106vm: ~
student@cis106vm: ~

student@cis106vm:~$ rm exa_0.9.0-4_amd64.deb
student@cis106vm:~$ exa --help
Usage:
  exa [options] [files...]

  -?, --help          show list of command-line options
  -v, --version        show version of exa

DISPLAY OPTIONS
  -1, --online        display one entry per line
  -l, --long          display extended file metadata as a table
  -G, --grid          display entries as a grid (default)
  -x, --across        sort the grid across, rather than downwards
  -R, --recurse       recurse into directories
  -T, --tree          recurse into directories as a tree
  -F, --classify      display type indicator by file names
  --colo[u]r=WHEN    when to use terminal colours (always, auto, never)
  --colo[u]r-scale    highlight levels of file sizes distinctly

FILTERING AND SORTING OPTIONS
  -a, --all           show hidden and 'dot' files
  -d, --list-dirs     list directories like regular files
  -L, --level DEPTH  limit the depth of recursion
  -r, --reverse       reverse the sort order
  -s, --sort SORT_FIELD which field to sort by
  --group-directories-first list directories before other files
  -D, --only-dirs     list only directories
  -I, --ignore-glob GLOBS glob patterns (pipe-separated) of files to ignore
  --git-ignore        Ignore files mentioned in '.gitignore'

```

```
Valid sort fields: name, Name, extension, Extension, size, type,

student@cis106vm: ~
student@cis106vm: ~ x student@cis106vm: ~ x student@cis106vm: ~ x
student@cis106vm:~$ exa Downloads/ -l
.rw-rw-r-- 307k student 6 Oct 8:30 Linux Logo.png
.rw-rw-r-- 4.4k student 6 Oct 8:27 placeholder.jpg
.rw-rw-r-- 13k student 6 Oct 8:40 Ubuntu.png
student@cis106vm:~$ exa Downloads/ -lhm
Permissions Size User Date Modified Name
.rw-rw-r-- 307k student 6 Oct 8:30 Linux Logo.png
.rw-rw-r-- 4.4k student 6 Oct 8:27 placeholder.jpg
.rw-rw-r-- 13k student 6 Oct 8:40 Ubuntu.png
student@cis106vm:~$
```

```
student@cis106vm: ~  
student@cis106vm: ~ x student@cis106vm: ~ x student@cis106vm: ~ x  
student@cis106vm:~$ tree --help  
usage: tree [-acdfghilnpqrstuvxACDFJQNSUX] [-H baseHREF] [-T title ]  
        [-L level [-R]] [-P pattern] [-I pattern] [-o filename] [--version]  
        [--help] [--inodes] [--device] [--noreport] [--nolinks] [--dirsfirst]  
        [--charset charset] [--filelimit[=]#] [--si] [--timefmt[=]<f>]  
        [--sort[=]<name>] [--matchdirs] [--ignore-case] [--fromfile] [--]  
        [<directory list>]  
----- Listing options -----  
-a          All files are listed.  
-d          List directories only.  
-l          Follow symbolic links like directories.  
-f          Print the full path prefix for each file.  
-x          Stay on current filesystem only.  
-L level    Descend only level directories deep.  
-R          Rerun tree when max dir level reached.  
-P pattern  List only those files that match the pattern given.  
-I pattern  Do not list files that match the given pattern.  
--ignore-case Ignore case when pattern matching.  
--matchdirs Include directory names in -P pattern matching.  
--noreport  Turn off file/directory count at end of tree listing.  
--charset X Use charset X for terminal/HTML and indentation line output.  
--filelimit # Do not descend dirs with more than # files in them.  
--timefmt <f> Print and format time according to the format <f>.  
-o filename Output to file instead of stdout.  
----- File options -----  
-q          Print non-printable characters as '?'.  
-N          Print non-printable characters as is.  
-Q          Quote filenames with double quotes.  
-p          Print the protections for each file.  
-u          Displays file owner or UID number.
```



```
student@cis106vm: ~  
student@cis106vm: ~ x student@cis106vm: ~ x student@cis106vm: ~ x  
student@cis106vm:~$ tree ~ -ug  
/home/student  
├── [student student ] Desktop  
│   └── [student student ] org.gnome.Terminal.desktop  
├── [student student ] Documents  
│   └── [student student ] CIS-106  
│       ├── [student student ] HannahMontanaLinux1.png  
│       ├── [student student ] HannahMontanaLinux2.png  
│       ├── [student student ] imgs  
│       │   ├── [student student ] lab3Q2 1-5.png  
│       │   ├── [student student ] lab3Q2 6-10.png  
│       │   ├── [student student ] lab3Q3.png  
│       │   ├── [student student ] lab3Q4-1.png  
│       │   ├── [student student ] lab3Q4-2.png  
│       │   ├── [student student ] lab3Q5-1.png  
│       │   ├── [student student ] lab3Q5-2.png  
│       │   ├── [student student ] lab3Q5-3.png  
│       │   └── [student student ] lab3Q5-4.png  
│       ├── [student student ] lab1.md  
│       ├── [student student ] lab1.pdf  
│       ├── [student student ] lab2.md  
│       ├── [student student ] labs  
│       │   ├── [student student ] lab3.html  
│       │   ├── [student student ] lab3.md  
│       │   └── [student student ] lab3.pdf  
│       ├── [student student ] LICENSE  
│       ├── [student student ] newDesktop.png  
│       ├── [student student ] README.md  
│       ├── [student student ] rebootWindow.png  
│       └── [student student ] RunningVS.png
```

```
student@cis106vm: ~  
student@cis106vm: ~ x student@cis106vm: ~ x student@cis106vm: ~ x  
student@cis106vm:~$ tree ~ -h  
/home/student  
├── [4.0K] Desktop  
│   └── [ 549] org.gnome.Terminal.desktop  
├── [4.0K] Documents  
│   └── [4.0K] CIS-106  
│       ├── [138K] HannahMontanaLinux1.png  
│       ├── [ 63K] HannahMontanaLinux2.png  
│       ├── [4.0K] imgs  
│       │   ├── [ 40K] lab3Q2 1-5.png  
│       │   ├── [ 42K] lab3Q2 6-10.png  
│       │   ├── [106K] lab3Q3.png  
│       │   ├── [100K] lab3Q4-1.png  
│       │   ├── [101K] lab3Q4-2.png  
│       │   ├── [119K] lab3Q5-1.png  
│       │   ├── [ 92K] lab3Q5-2.png  
│       │   ├── [ 60K] lab3Q5-3.png  
│       │   ├── [103K] lab3Q5-4.png  
│       │   └── [ 93K] lab3Q5-5.png  
│       ├── [5.9K] lab1.md  
│       ├── [272K] lab1.pdf  
│       ├── [ 497] lab2.md  
│       ├── [4.0K] labs  
│       │   ├── [8.3K] lab3.html  
│       │   ├── [1.2K] lab3.md  
│       │   └── [ 25K] lab3.pdf  
│       ├── [ 34K] LICENSE  
│       ├── [1.2M] newDesktop.png  
│       ├── [  39] README.md  
│       └── [406K] rebootWindow.png
```