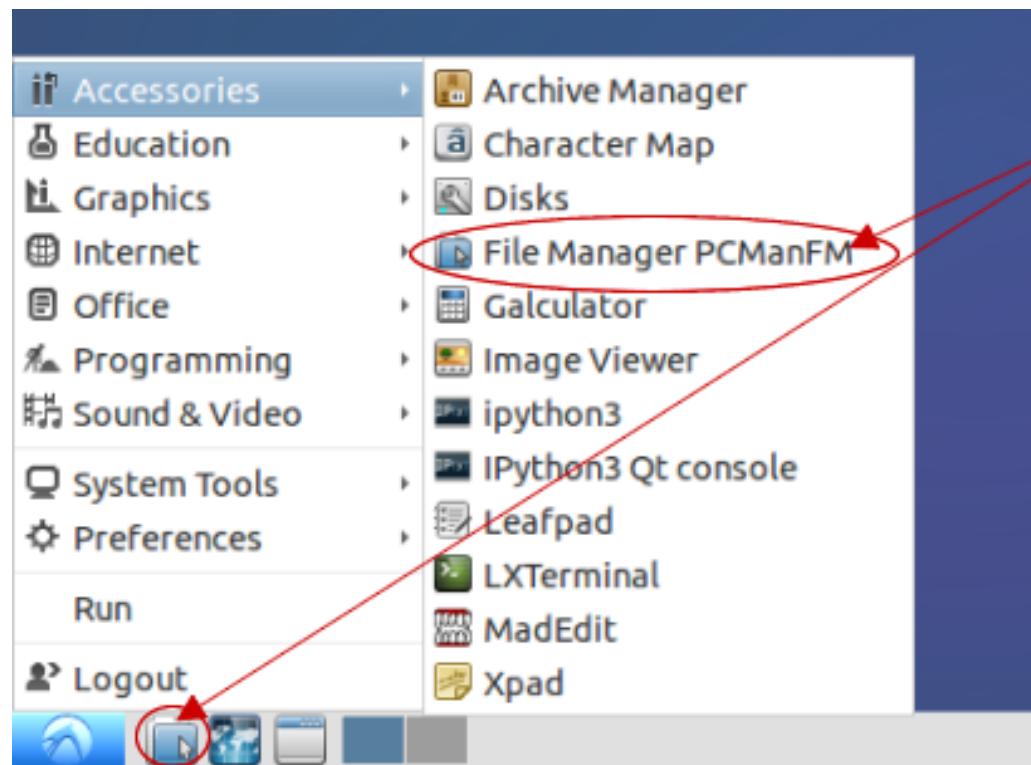


PCManFM

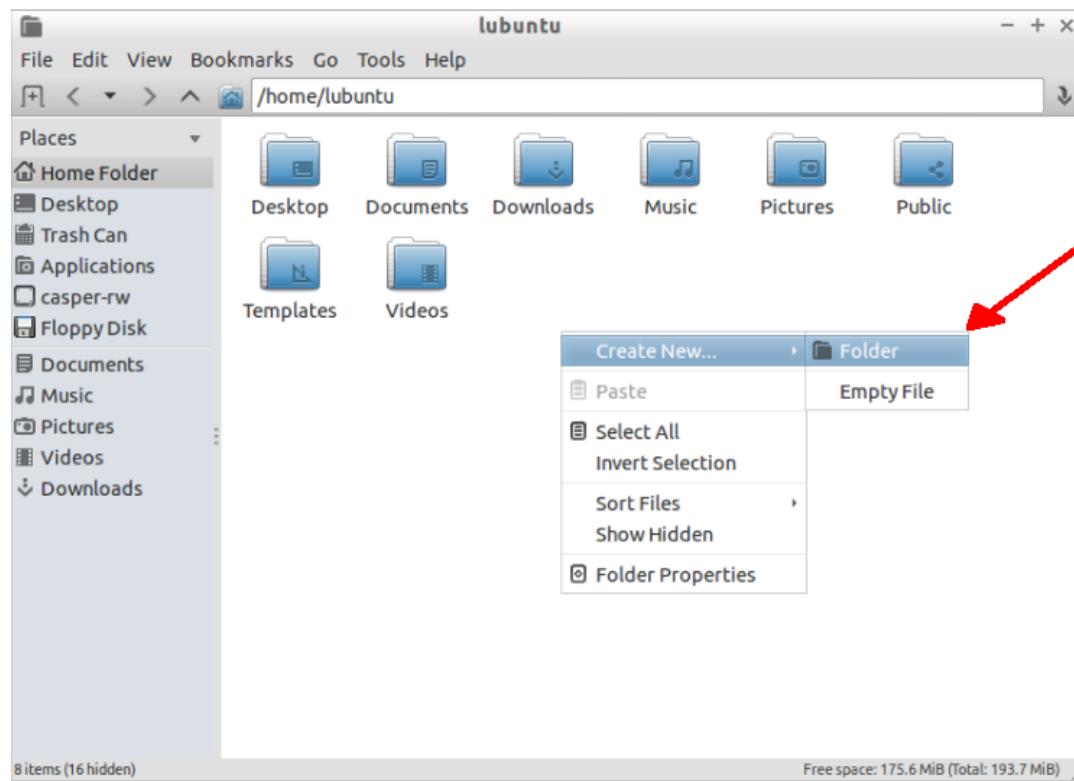
Creating a New Directory



1. Open PCManFM

PCManFM

Creating a New Directory - 2

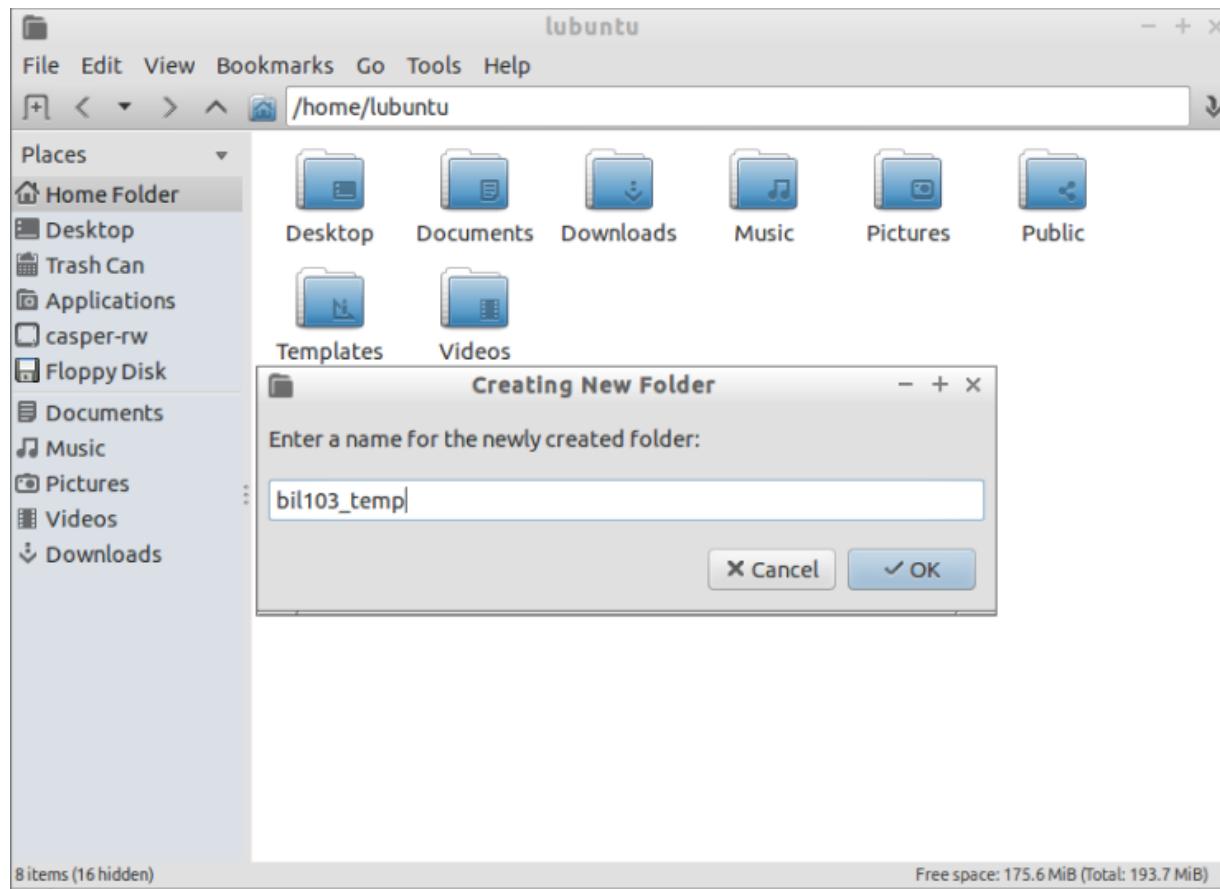


2. Right click on the PCManFM
3. Select Create New...
4. Select Folder

PCManFM

Creating a New Directory - 3

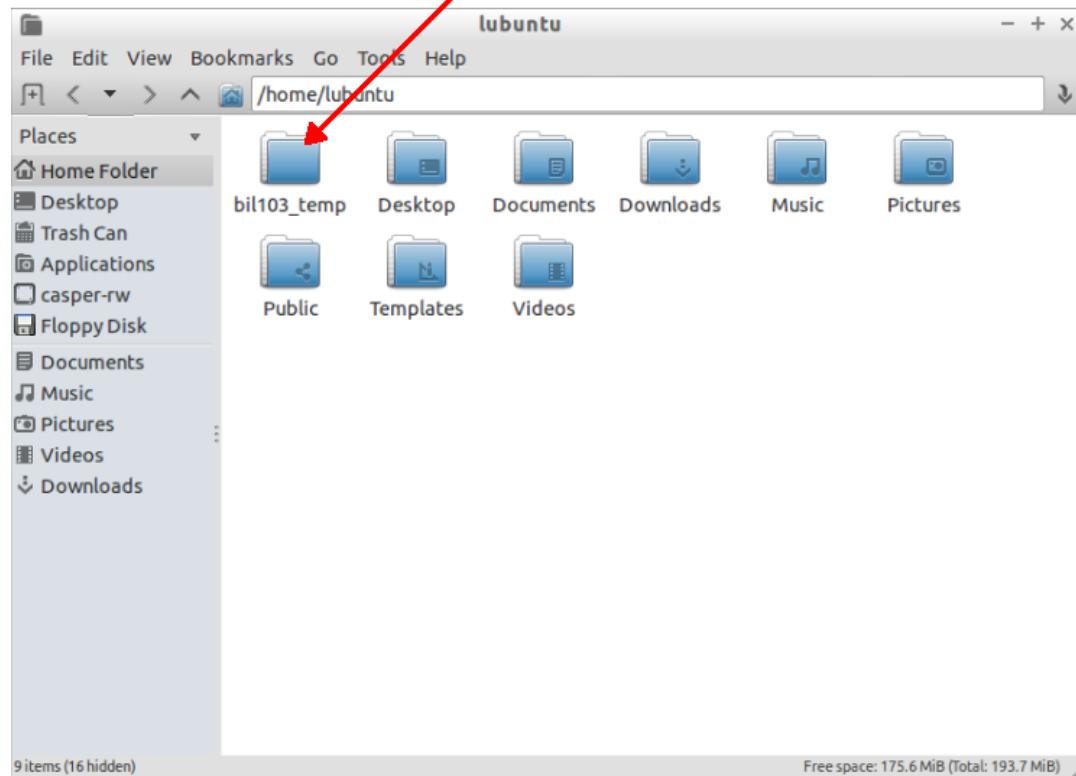
- Enter a name for the directory



PCManFM

Creating a New Directory - 4

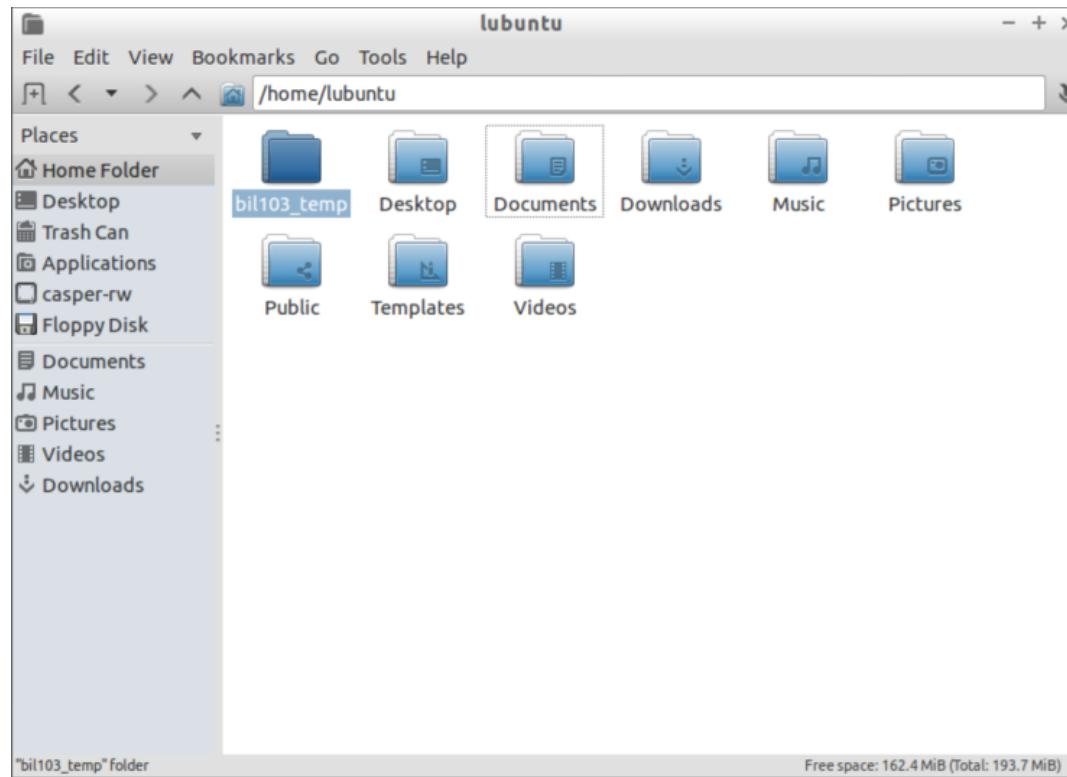
- Newly created directory is ready to use...



PCManFM

Drag&Drop

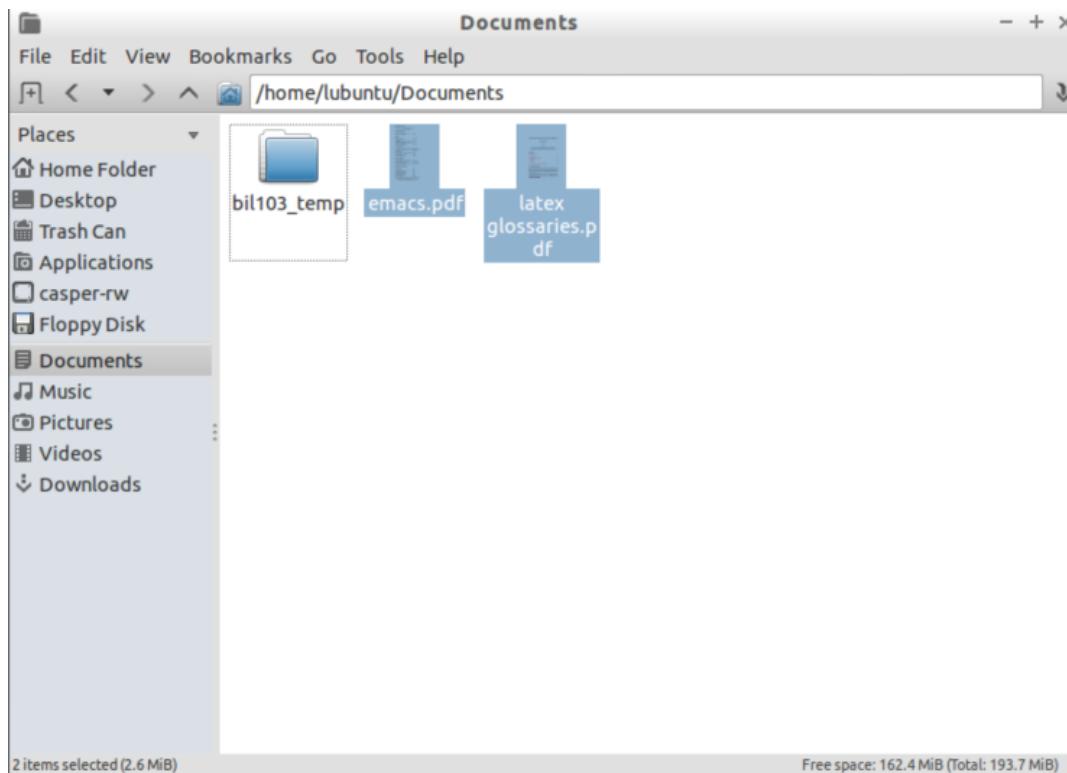
- Now you can even drag and drop your new directory into other directories
- Double click to change current directory



PCManFM

Drag&Drop - 2

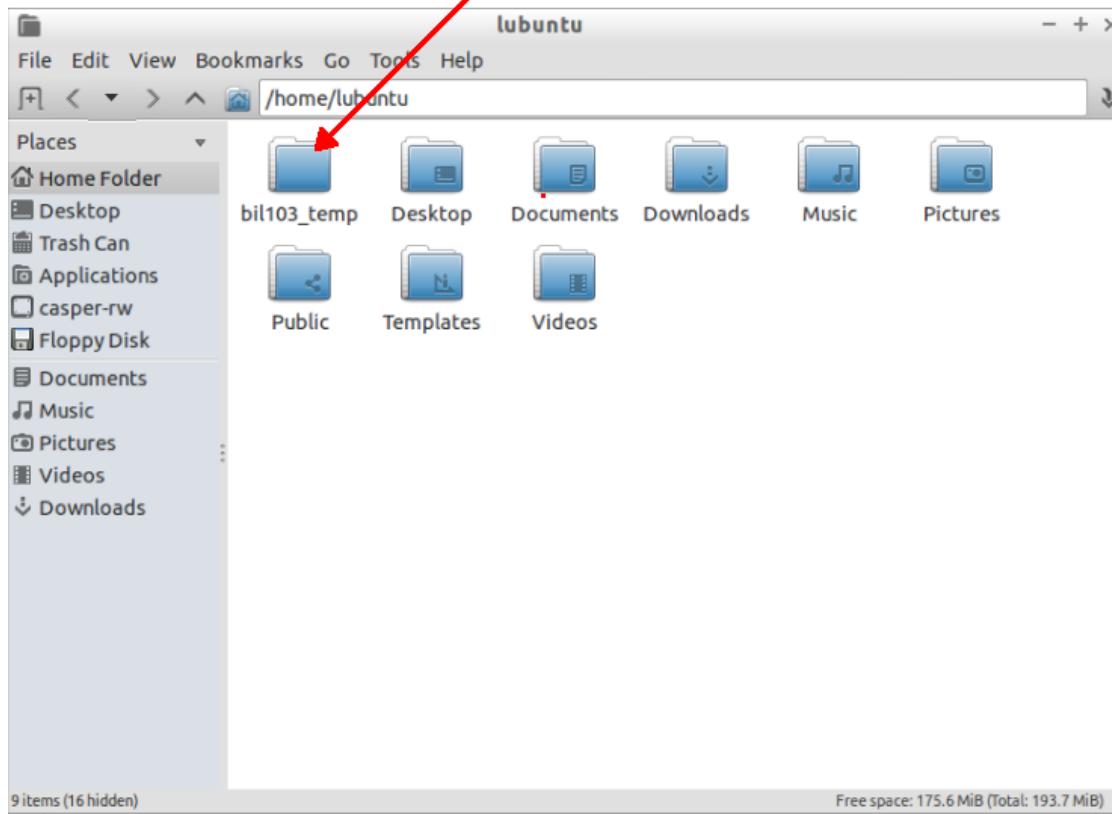
- You can select multiple files and use drag&drop to move them into another directory



PCManFM Compression

To compress a directory:

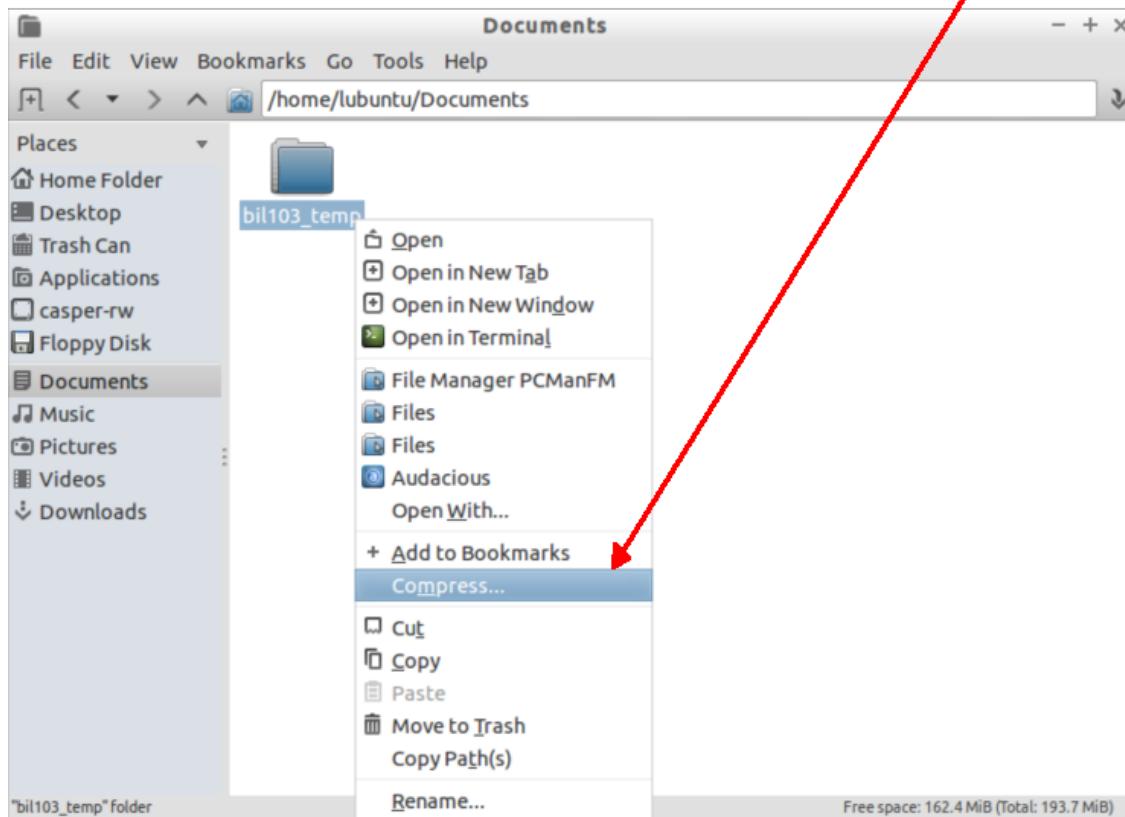
1 - Right click on the directory to be compressed



PCManFM

Compression - 2

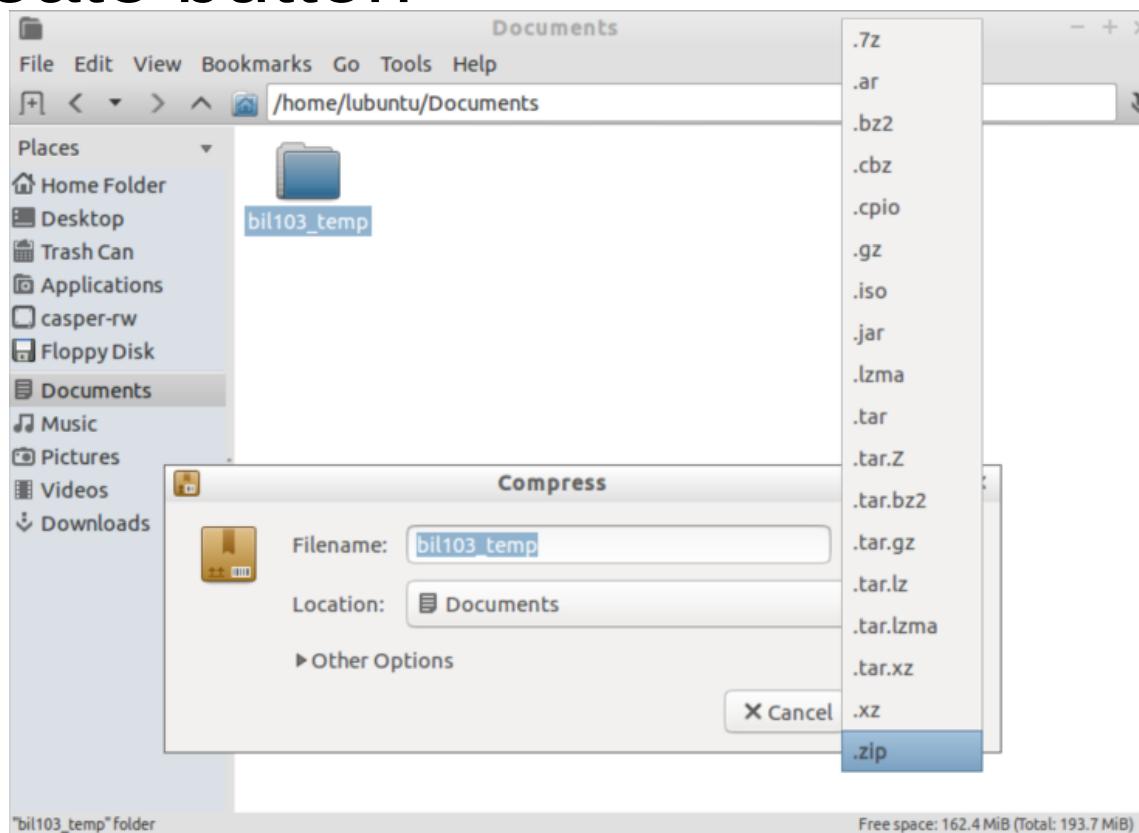
Click compress



PCManFM

Compression - 3

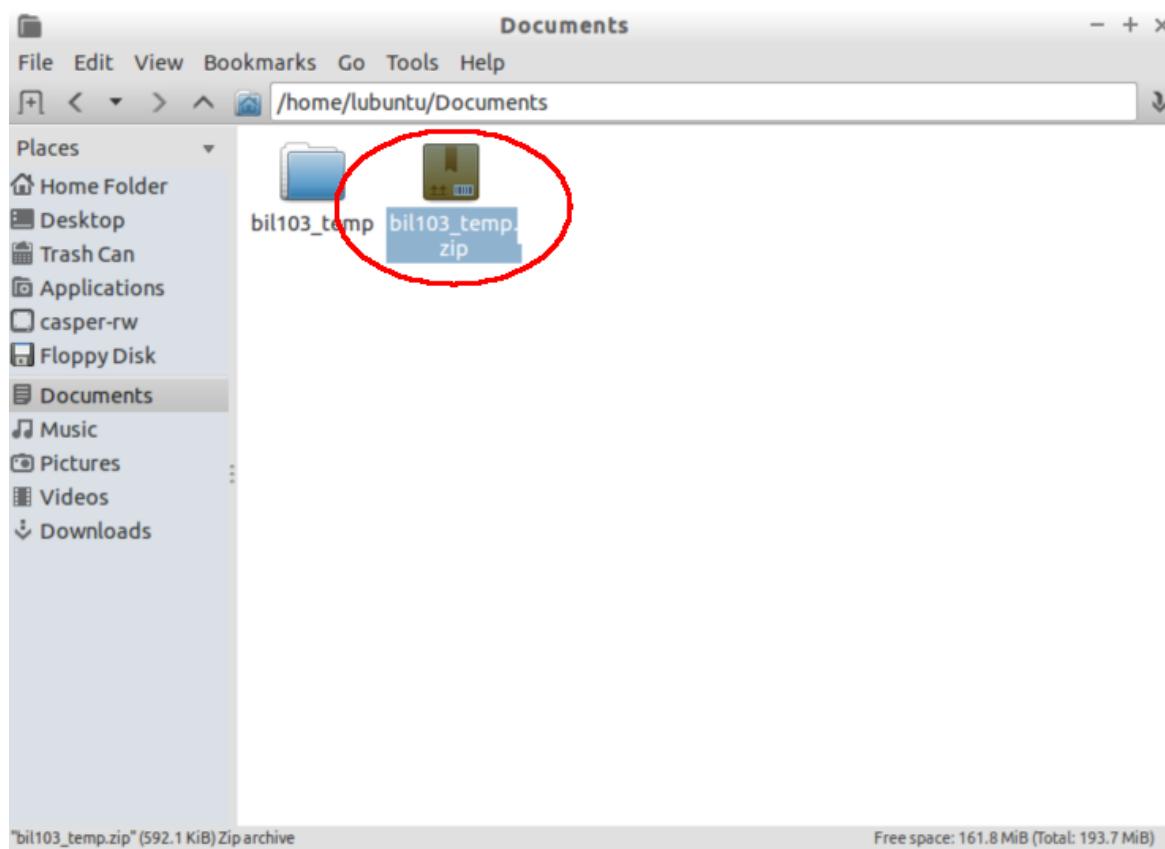
- Enter a name for the compressed file and select compression method.
- Click create button



PCManFM

Compression - 4

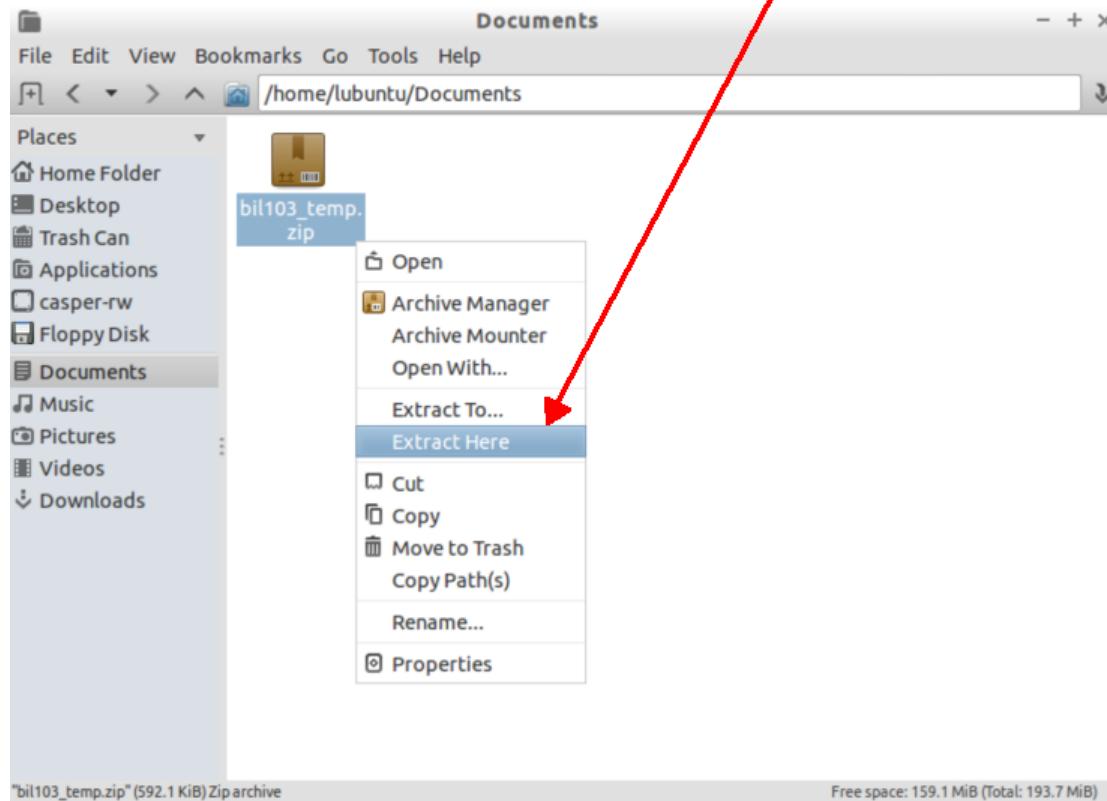
- You can find the newly compressed file in file browser.



PCManFM

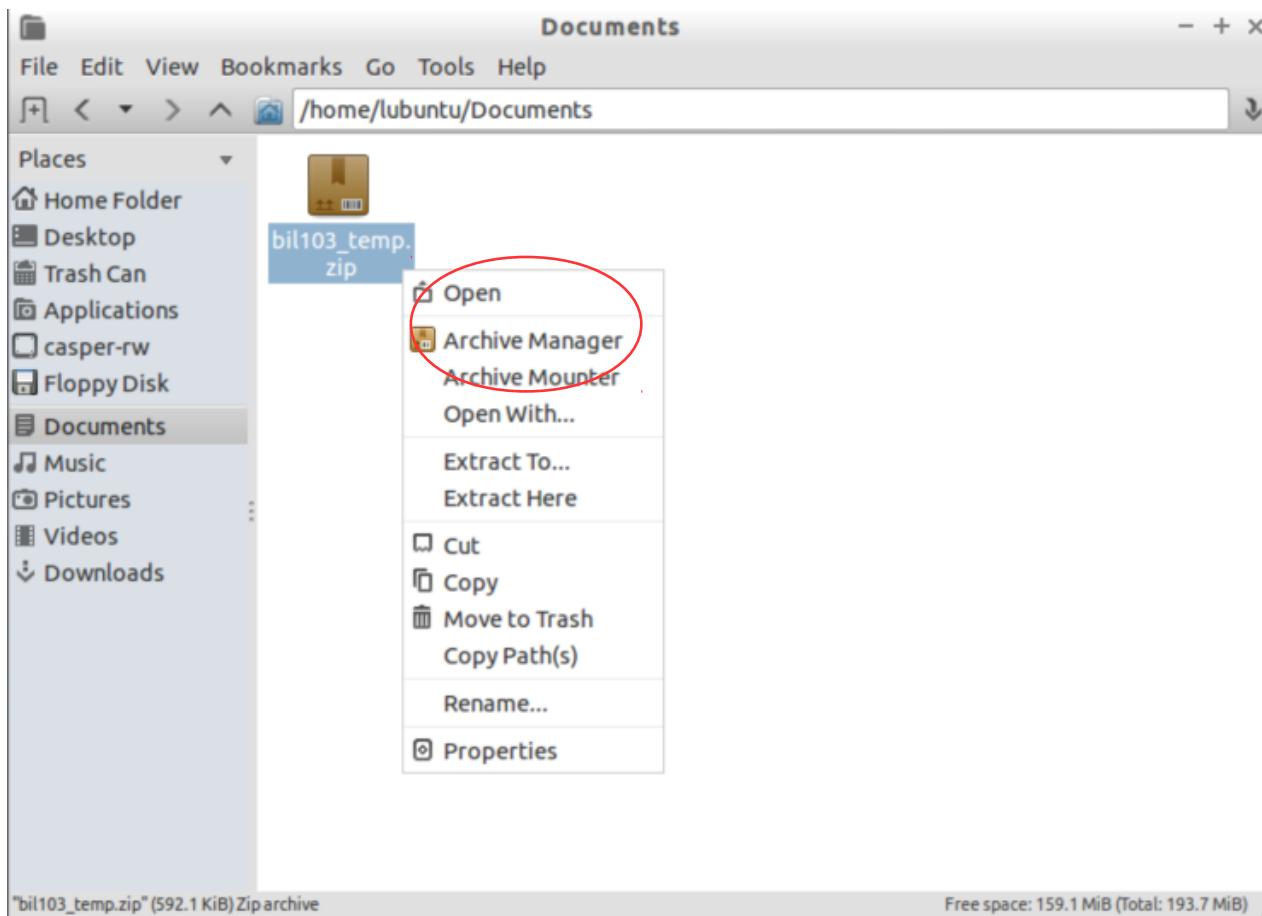
Uncompression

- Right click on the compressed file and select Extract Here



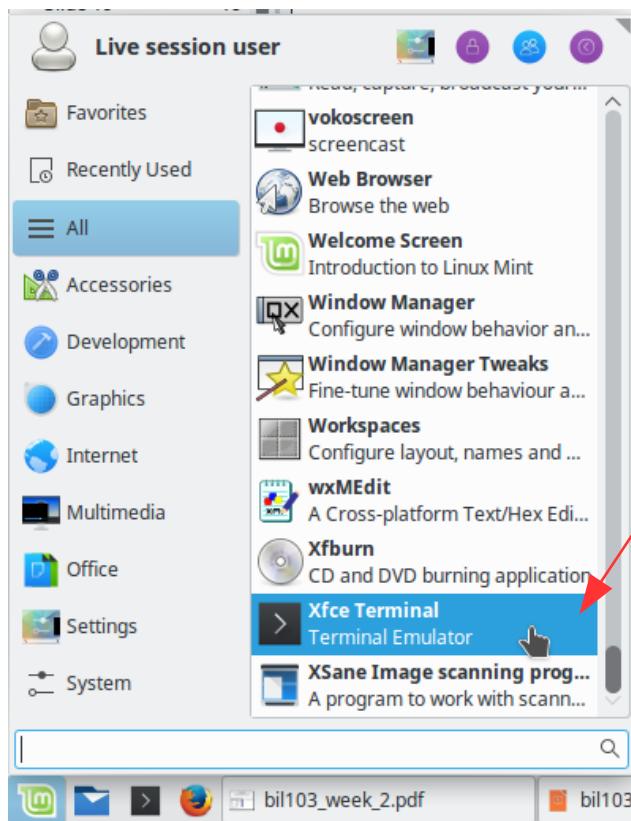
MIME Types - PCManFM

- Right click on the file to see associated programs with that file type.
- You can also associate other programs with that file type by using 'Open With...' option



Command Line

- Xfce Terminal is the default terminal emulator in Mint
- You can find and launch Xfce Terminal in Start Menu → All → Xfce Terminal



Command Line - 1

- `pwd` – print name of current/working directory

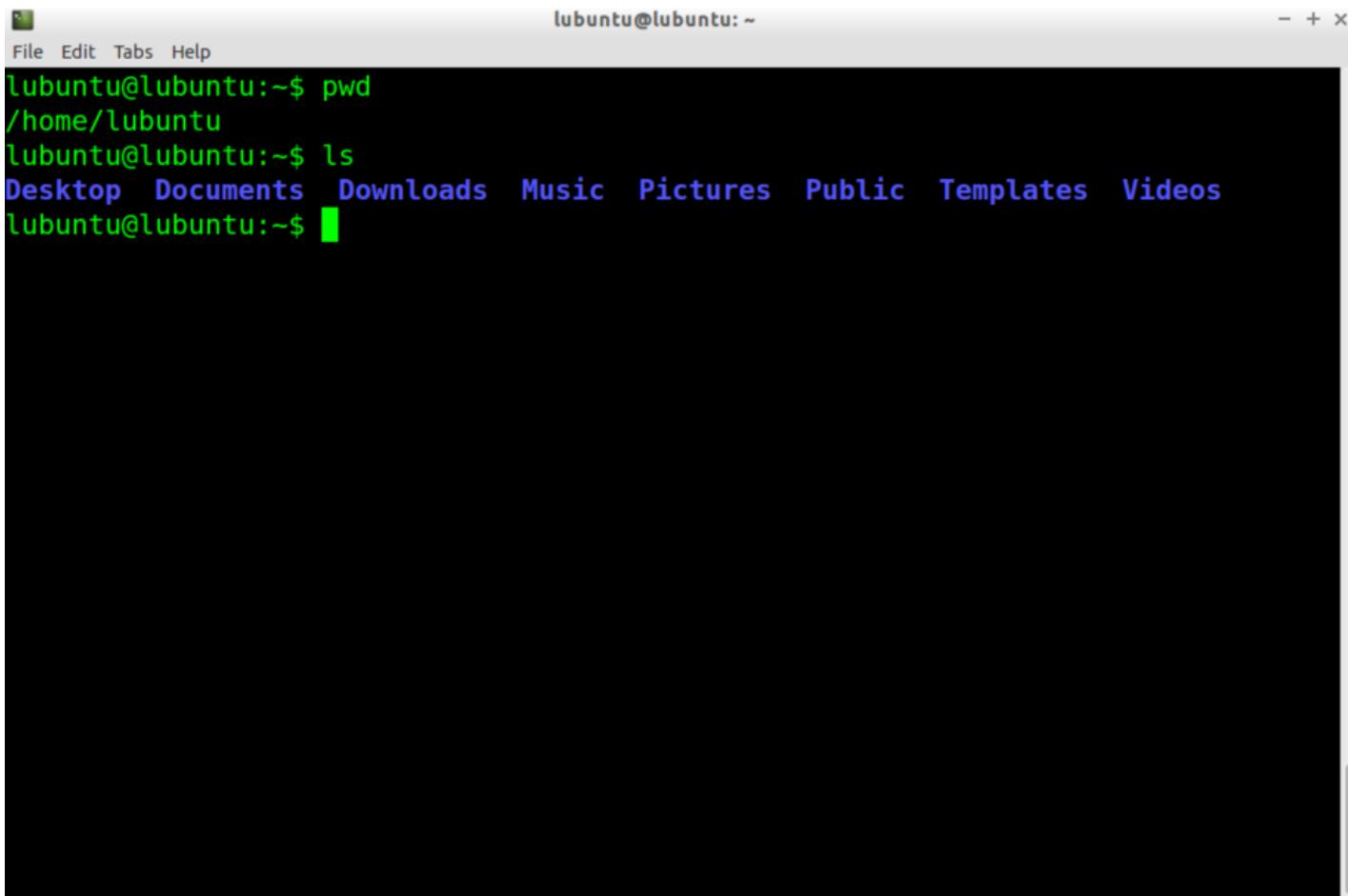


A screenshot of a terminal window titled "lubuntu@lubuntu: ~". The window has a menu bar with "File", "Edit", "Tabs", and "Help". The title bar shows the terminal title and the user's session information. The main area of the terminal displays the command `lubuntu@lubuntu:~$ wtf pwd`. The output of the command is shown in green text: `pwd: pwd (1) - print name of current/working directory`. The terminal window has a standard window frame with minimize, maximize, and close buttons.

```
lubuntu@lubuntu:~$ wtf pwd
pwd: pwd (1) - print name of current/working directory
lubuntu@lubuntu:~$
```

Command Line - 2

- ls – list directory contents

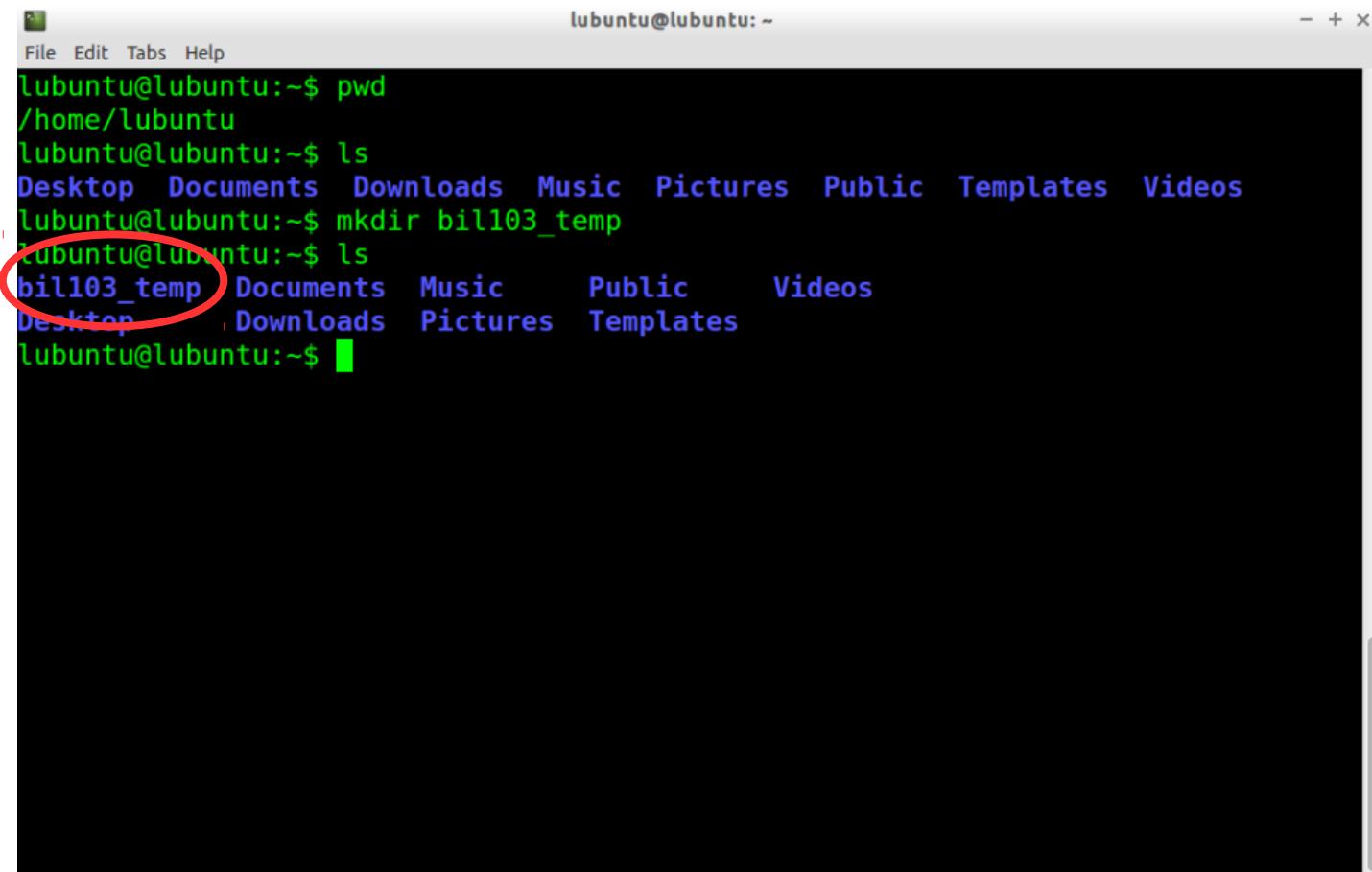


A screenshot of a terminal window titled "lubuntu@lubuntu:~". The window has a standard Linux desktop interface with a title bar and window controls. Inside the terminal, the user has run the command "ls" to list the contents of their home directory. The output shows several directories: Desktop, Documents, Downloads, Music, Pictures, Public, Templates, and Videos. The terminal window is set against a dark background.

```
lubuntu@lubuntu:~$ pwd  
/home/lubuntu  
lubuntu@lubuntu:~$ ls  
Desktop  Documents  Downloads  Music  Pictures  Public  Templates  Videos  
lubuntu@lubuntu:~$ █
```

Command Line - 3

- mkdir – create a directory



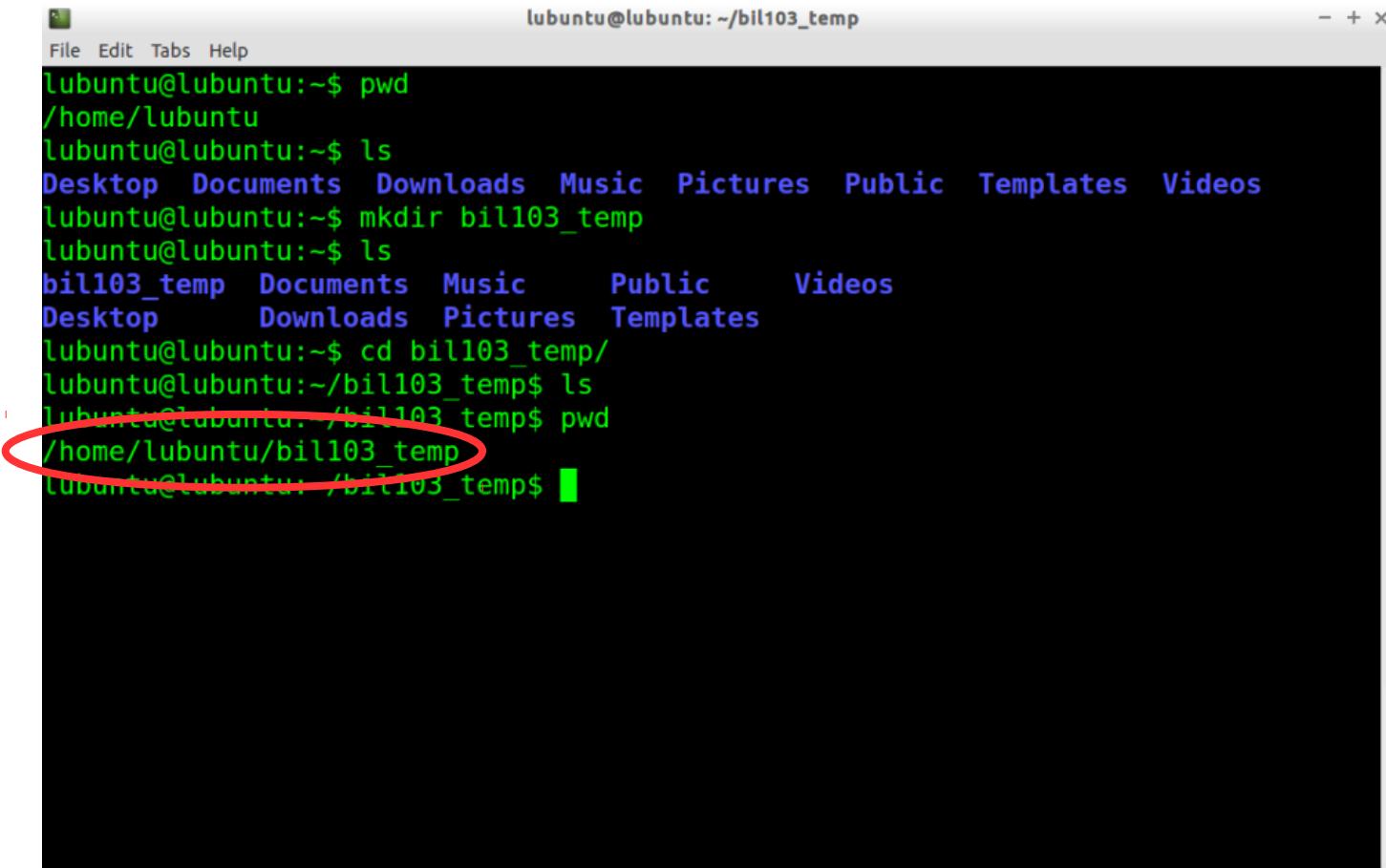
The screenshot shows a terminal window titled "lubuntu@lubuntu:~". The window contains the following text:

```
lubuntu@lubuntu:~$ pwd
/home/lubuntu
lubuntu@lubuntu:~$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
lubuntu@lubuntu:~$ mkdir bill103_temp
lubuntu@lubuntu:~$ ls
bill103_temp Desktop Documents Downloads Music Pictures Public Templates Videos
lubuntu@lubuntu:~$
```

A red circle highlights the directory name "bill103_temp" in the second-to-last line of the output.

Command Line - 4

- cd – change directory
- cd .. - to move to upper directory



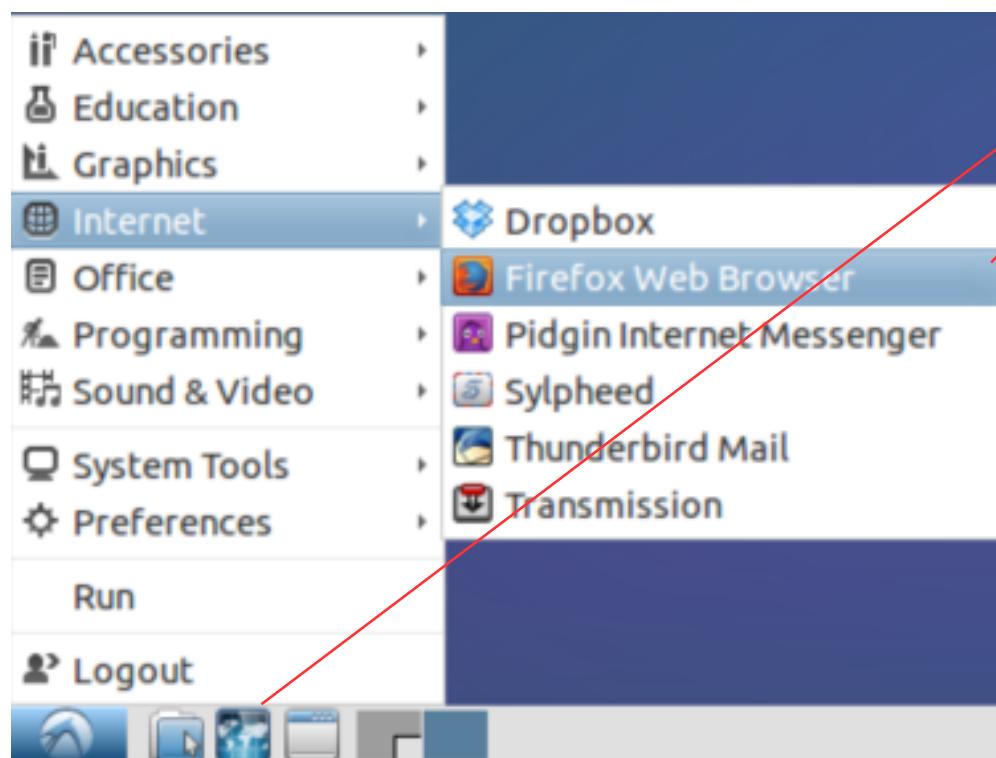
The screenshot shows a terminal window titled "lubuntu@lubuntu: ~/bill103_temp". The window has a standard title bar with icons for minimize, maximize, and close. The menu bar includes "File", "Edit", "Tabs", and "Help". The terminal content is as follows:

```
lubuntu@lubuntu:~$ pwd
/home/lubuntu
lubuntu@lubuntu:~$ ls
Desktop Documents Downloads Music Pictures Public Templates Videos
lubuntu@lubuntu:~$ mkdir bill103_temp
lubuntu@lubuntu:~$ ls
bill103_temp Documents Music Public Videos
Desktop Downloads Pictures Templates
lubuntu@lubuntu:~$ cd bill103_temp/
lubuntu@lubuntu:~/bill103_temp$ ls
lubuntu@lubuntu:~/bill103_temp$ pwd
/home/lubuntu/bill103_temp
lubuntu@lubuntu:~/bill103_temp$
```

A red oval highlights the path "/home/lubuntu/bill103_temp" in the final line of output.

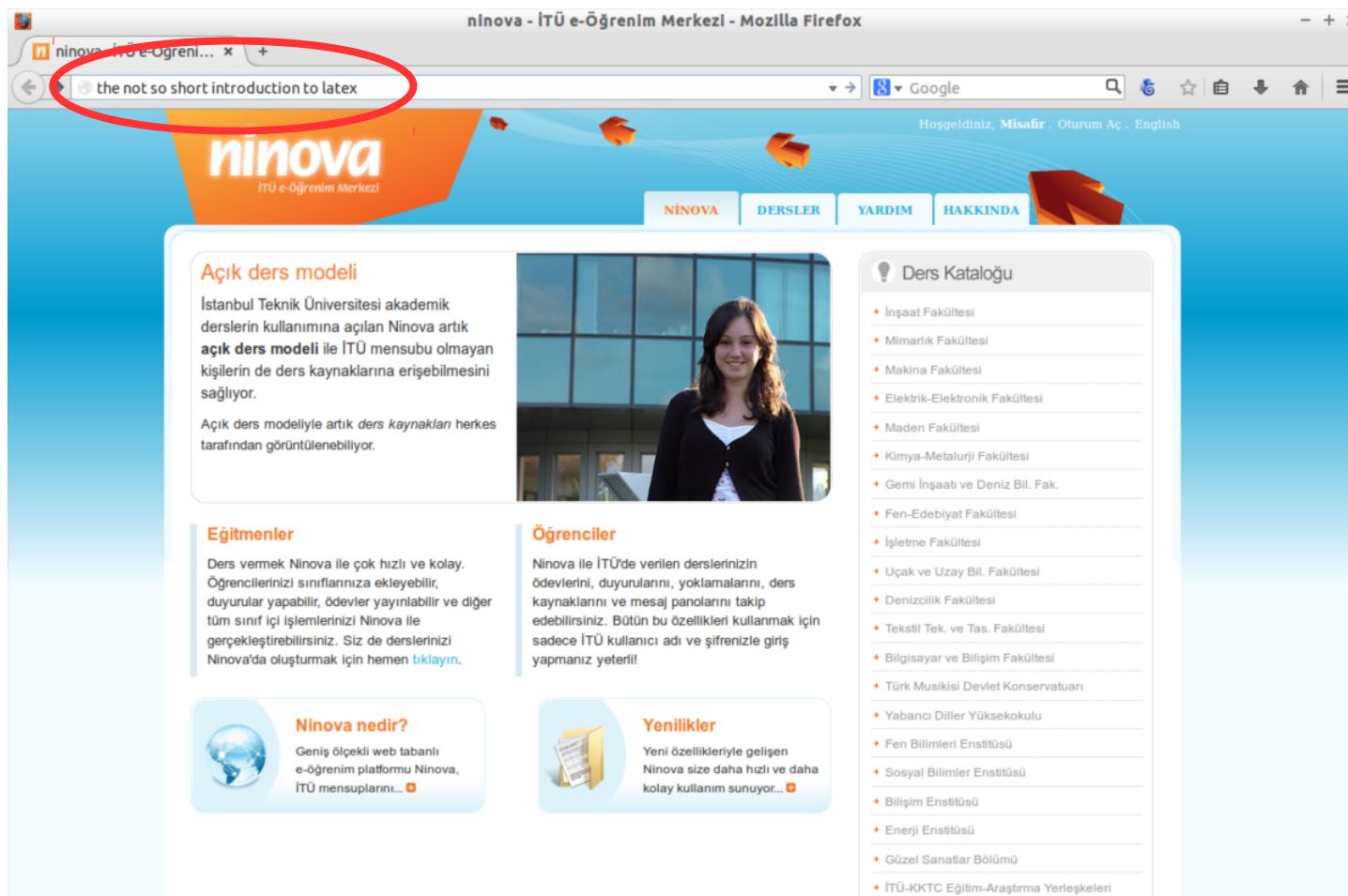
Downloading - Firefox

- Start Firefox



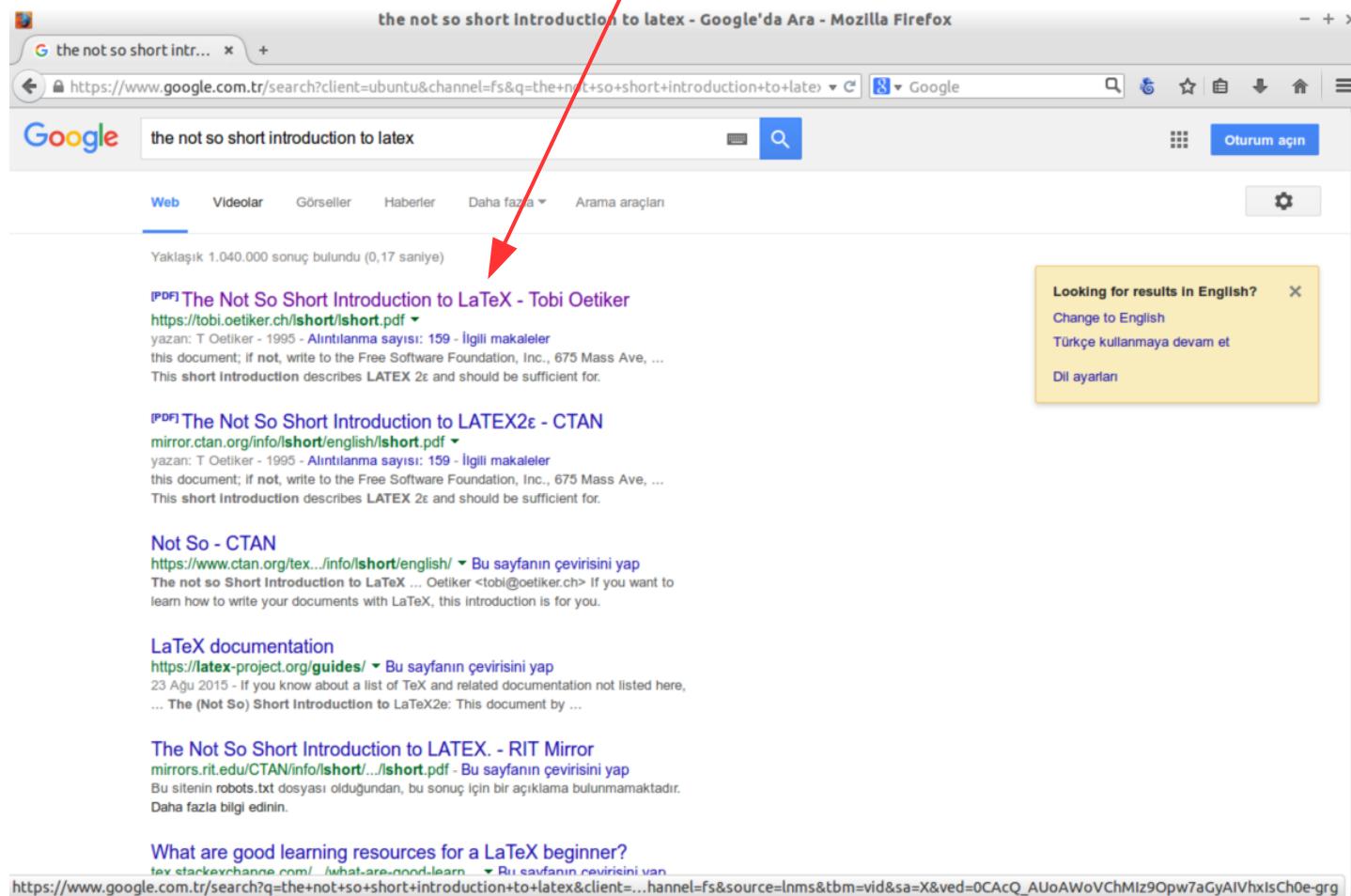
Downloading – Firefox - 2

- You can use the address bar to load a web site or to search the internet



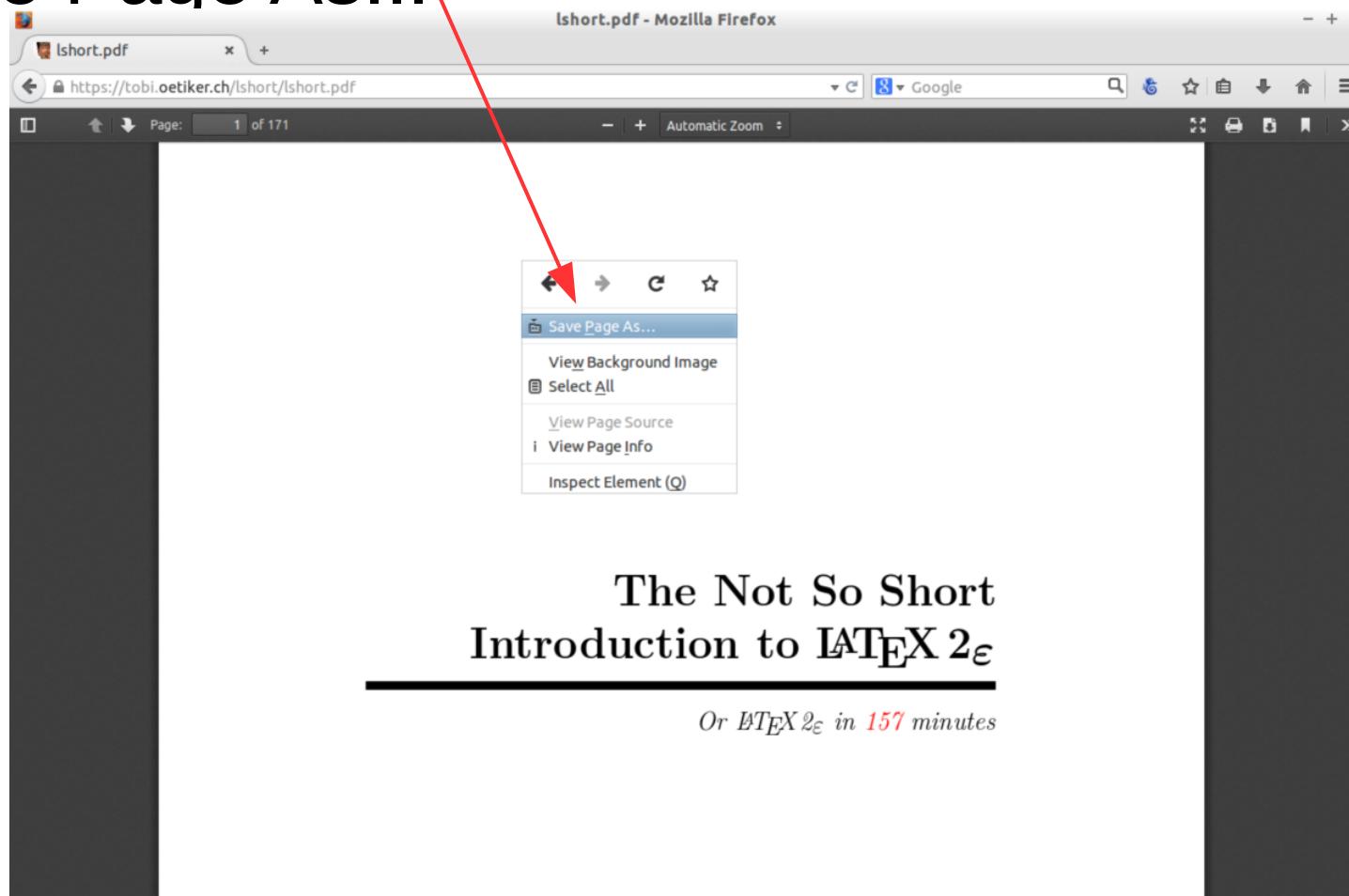
Downloading – Firefox - 3

- Find your search through results



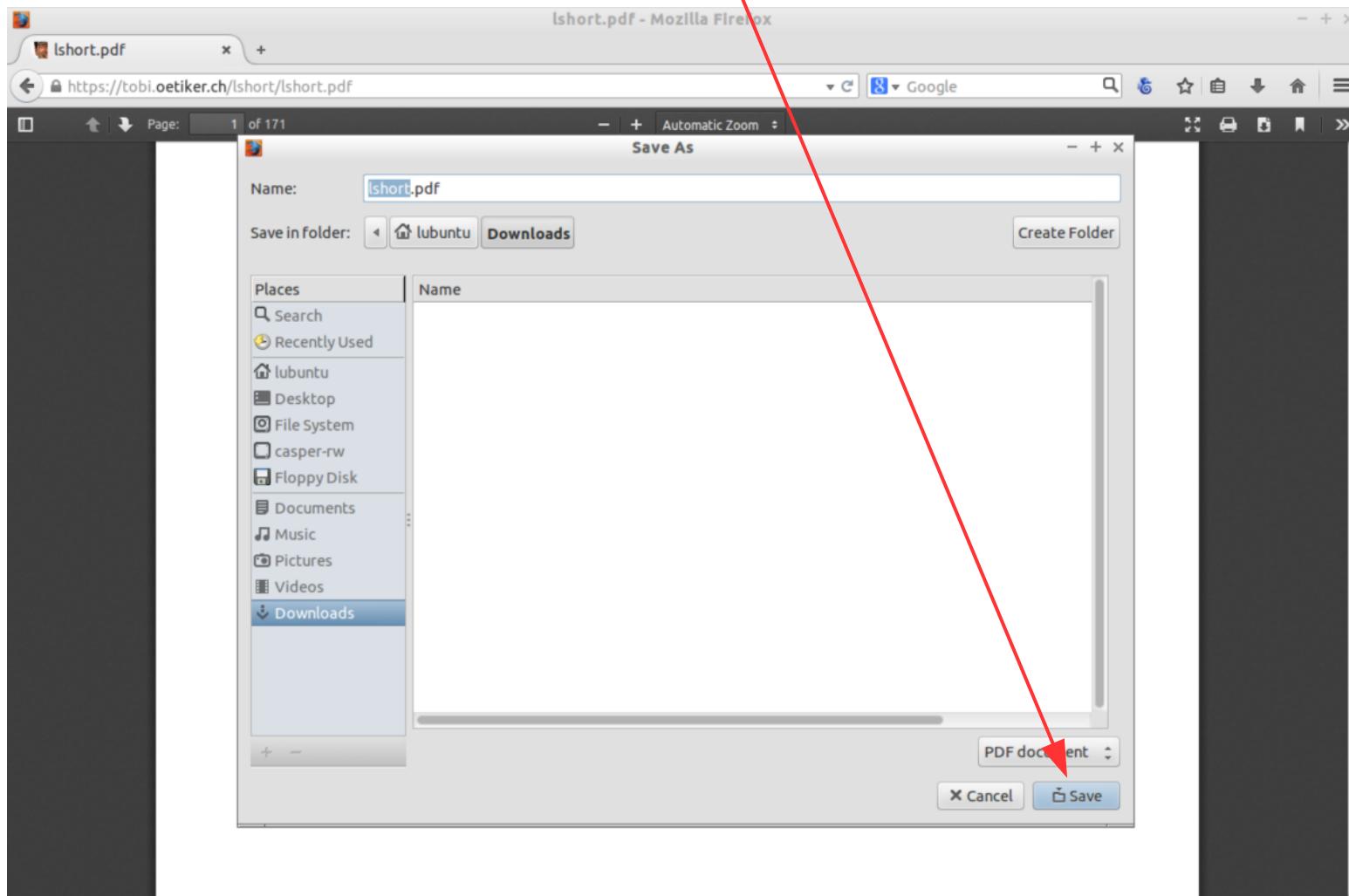
Downloading – Firefox - 4

- Right click on the page and select Save Page As...



Downloading – Firefox - 5

- Enter name and click Save



Downloading – Firefox - 6

- You can check downloaded files by clicking this



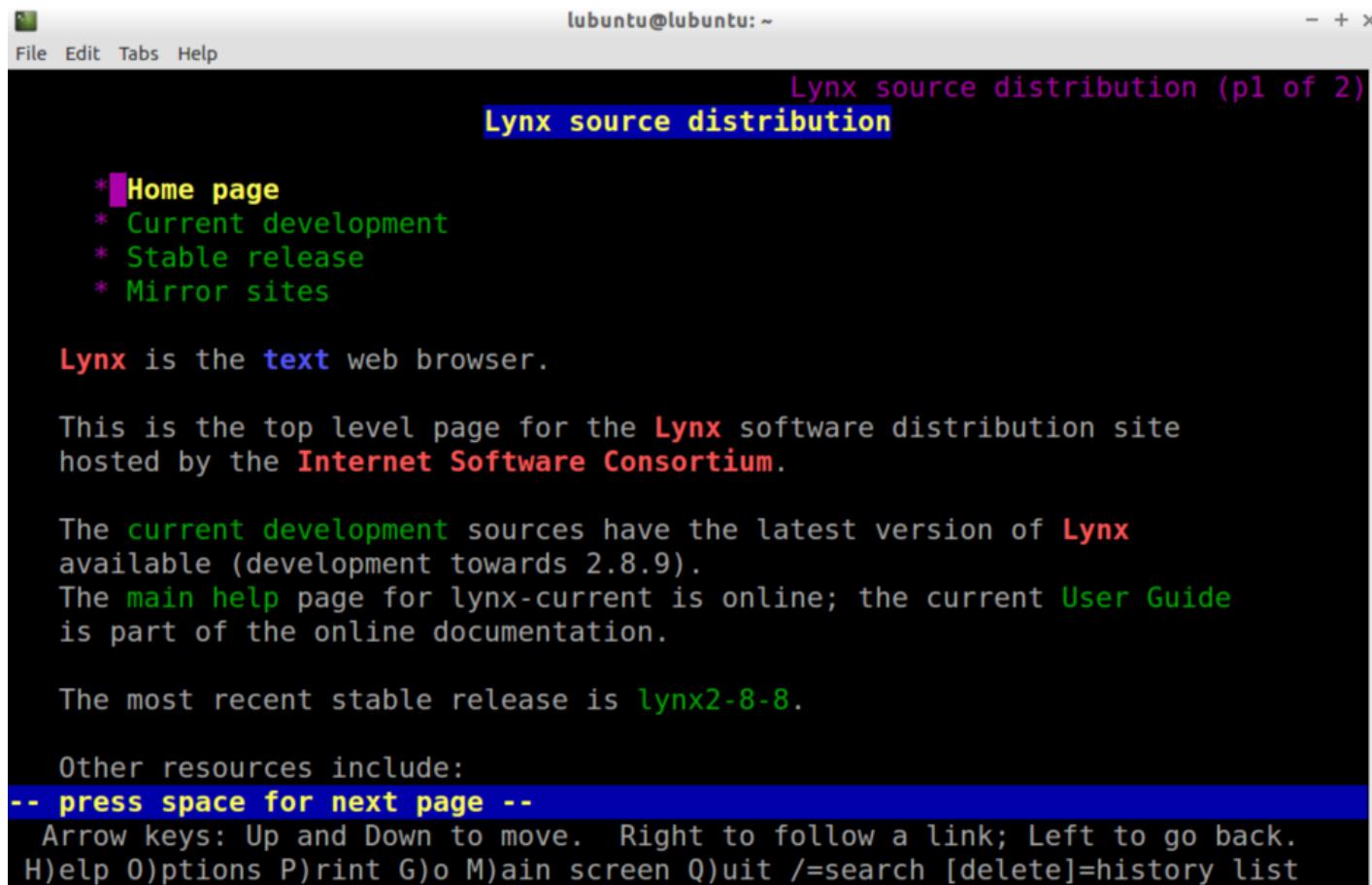
Downloading - Lynx

- Text based browser



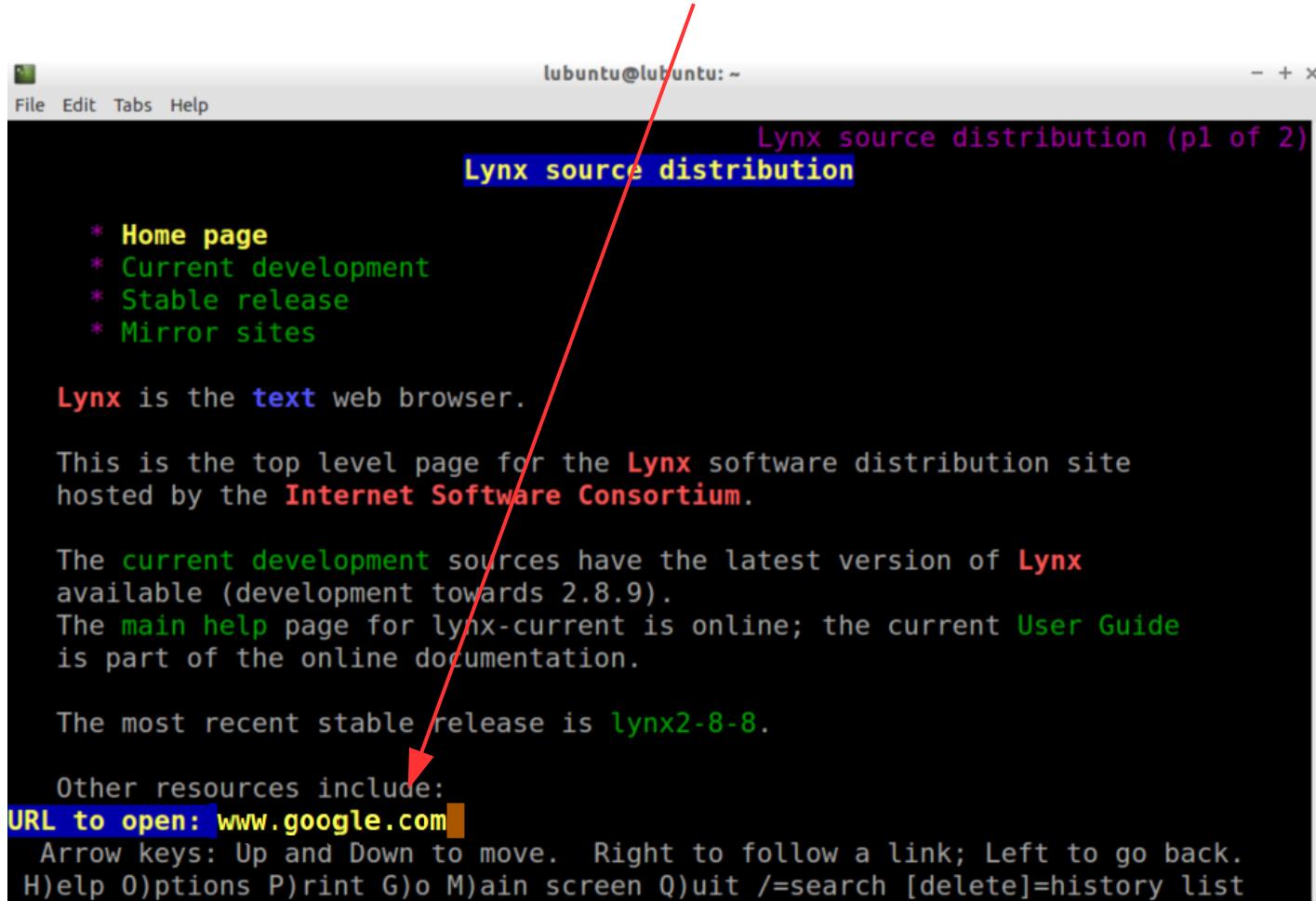
Downloading – Lynx - 2

- Text based menu at the bottom...



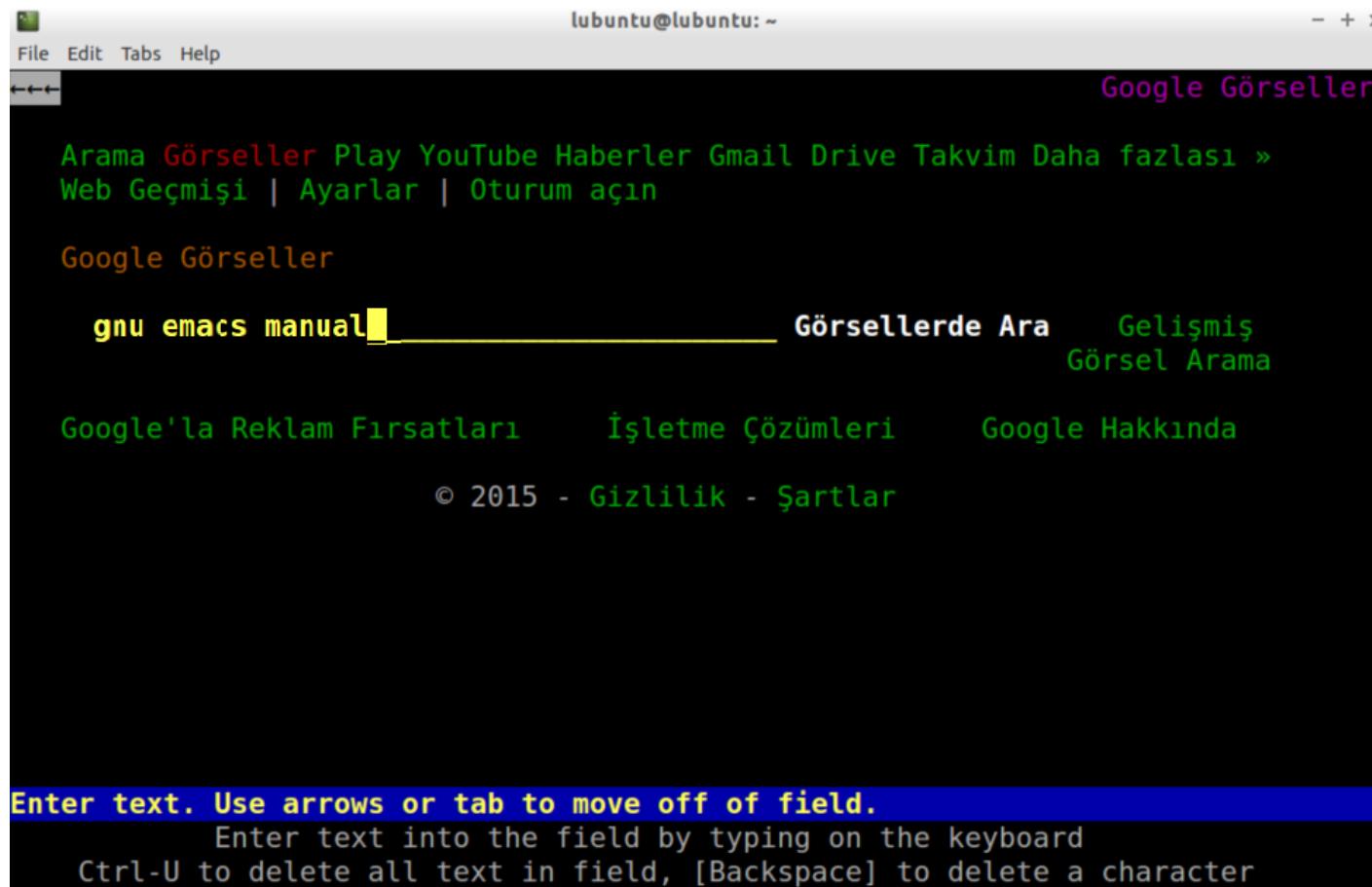
Downloading – Lynx - 3

- Press G and write the address



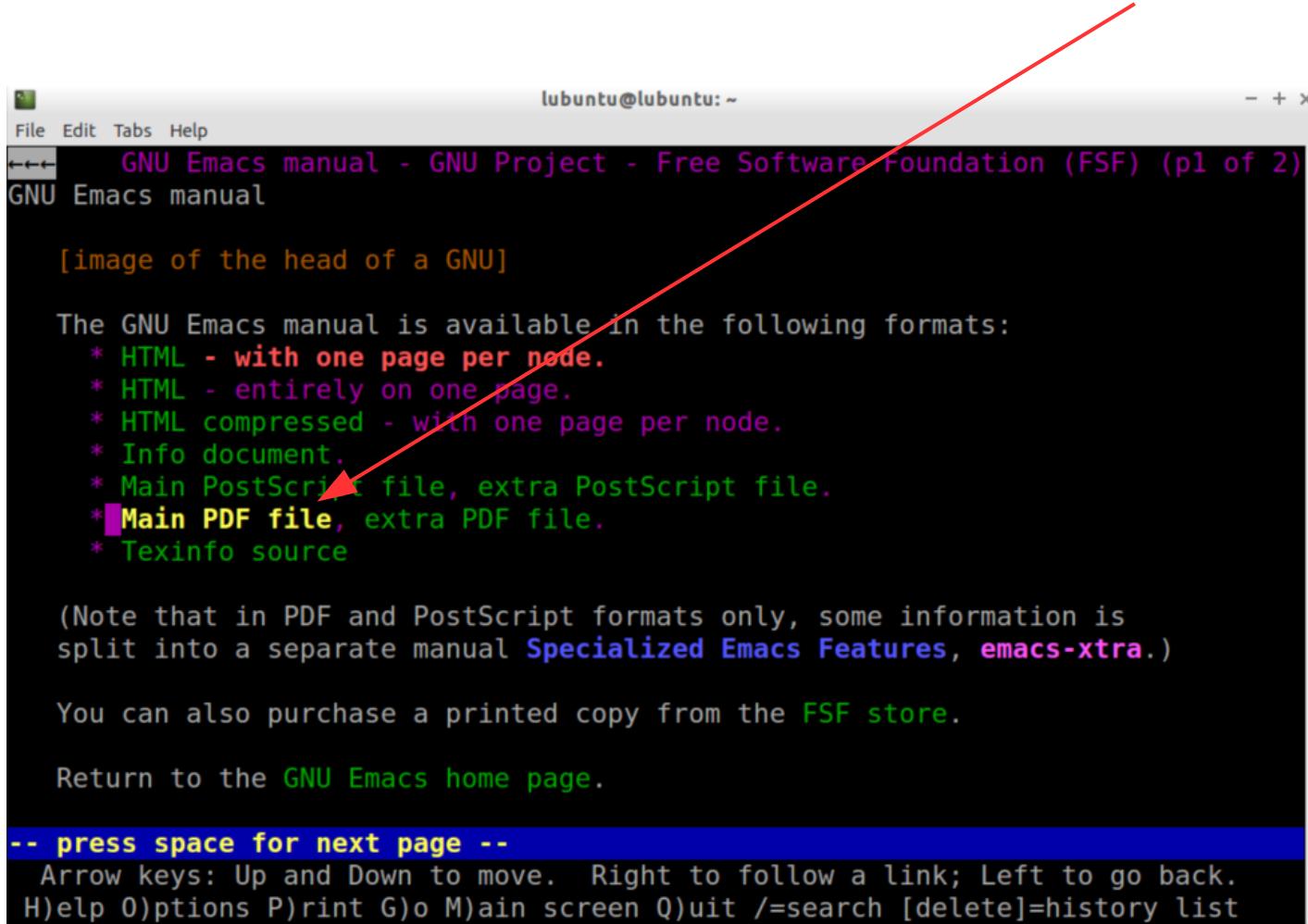
Downloading – Lynx - 4

- Use TAB and arrows to navigate



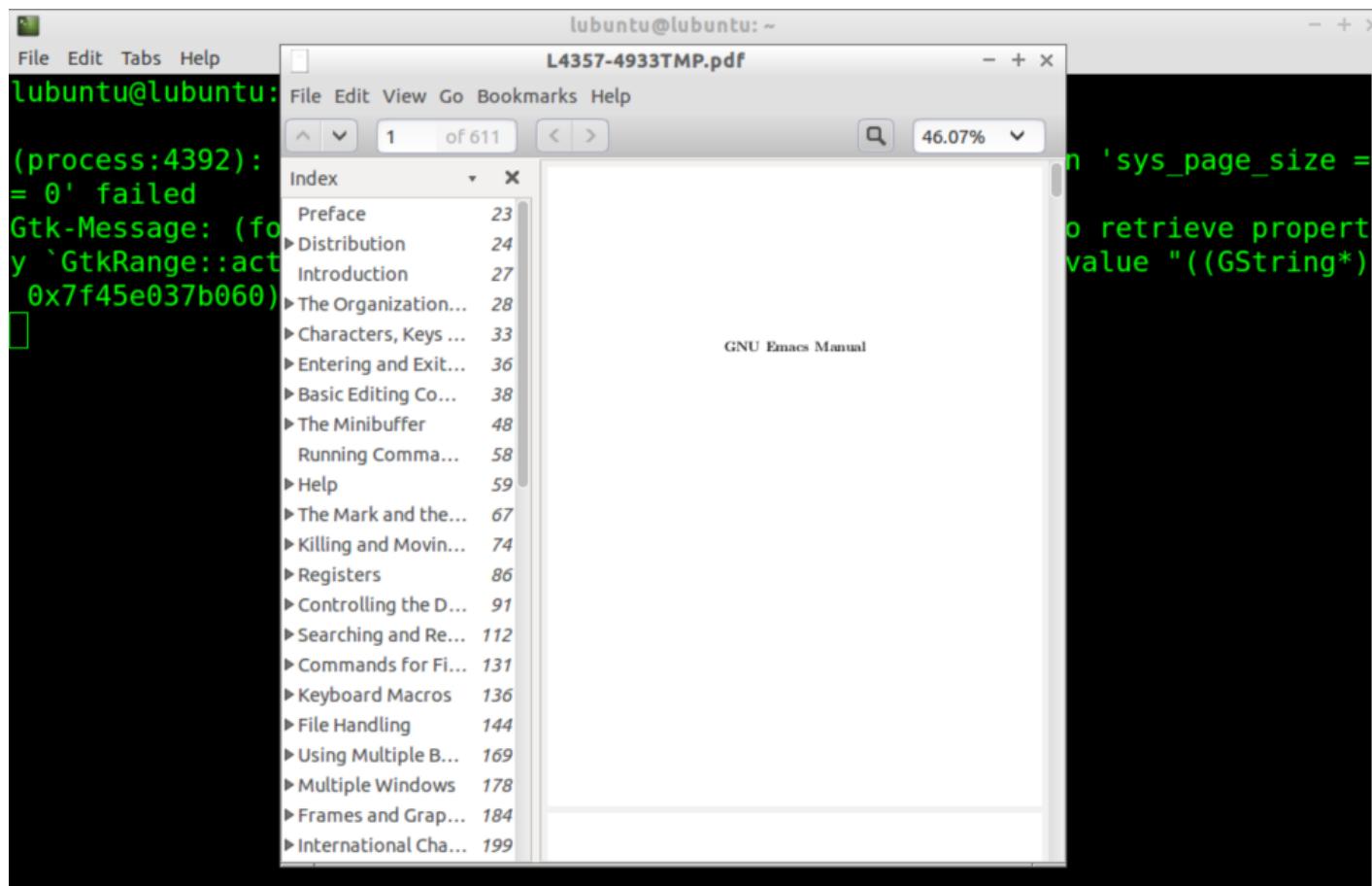
Downloading – Lynx - 5

- Navigate through searches and find the link



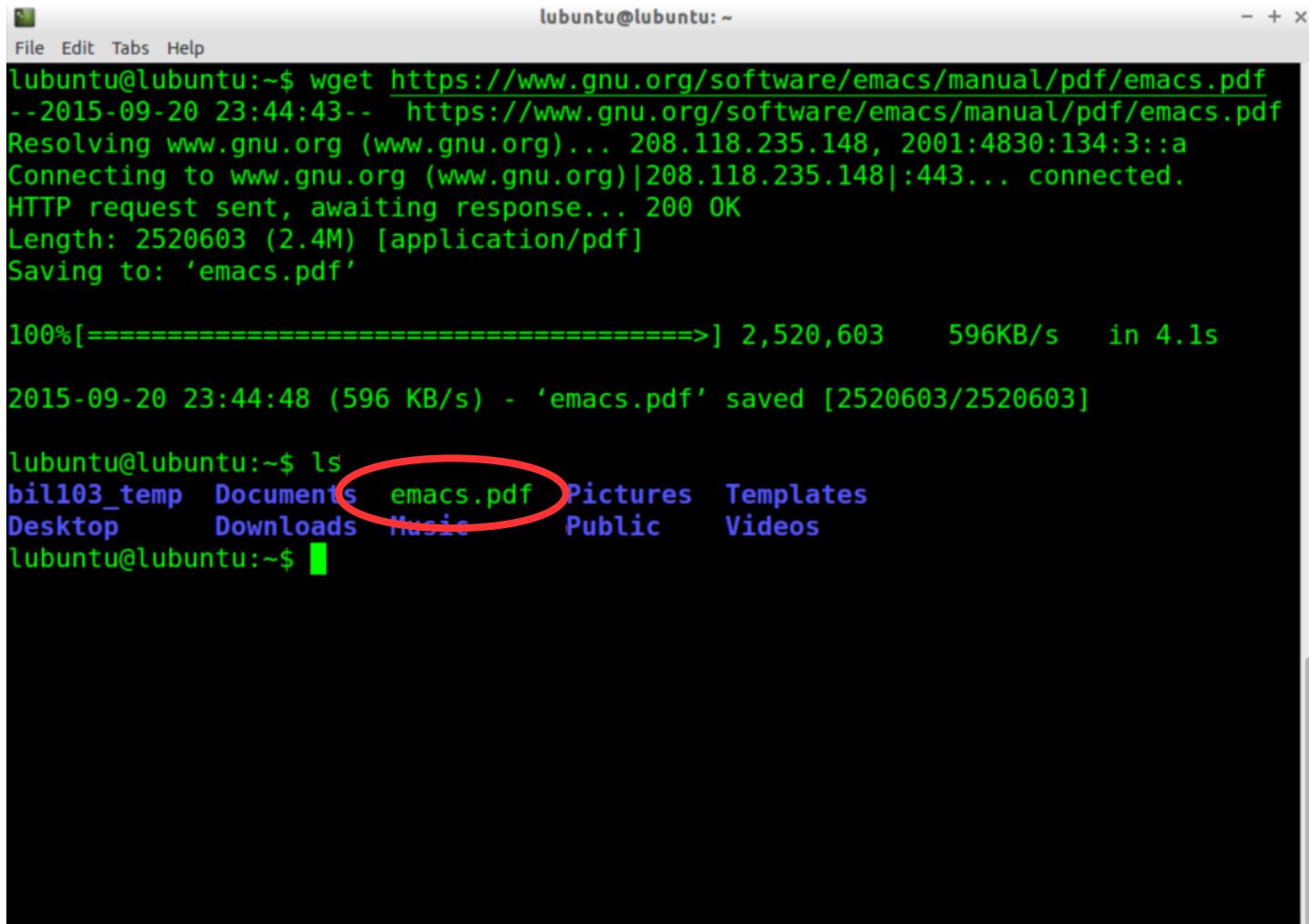
Downloading – Lynx - 6

- Lynx will download the file and open it with the associated application



Downloading - wget

- If you know the URL



The screenshot shows a terminal window with the following text:

```
lubuntu@lubuntu:~$ wget https://www.gnu.org/software/emacs/manual/pdf/emacs.pdf
--2015-09-20 23:44:43-- https://www.gnu.org/software/emacs/manual/pdf/emacs.pdf
Resolving www.gnu.org (www.gnu.org)... 208.118.235.148, 2001:4830:134:3::a
Connecting to www.gnu.org (www.gnu.org)|208.118.235.148|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2520603 (2.4M) [application/pdf]
Saving to: 'emacs.pdf'

100%[=====] 2,520,603      596KB/s   in 4.1s

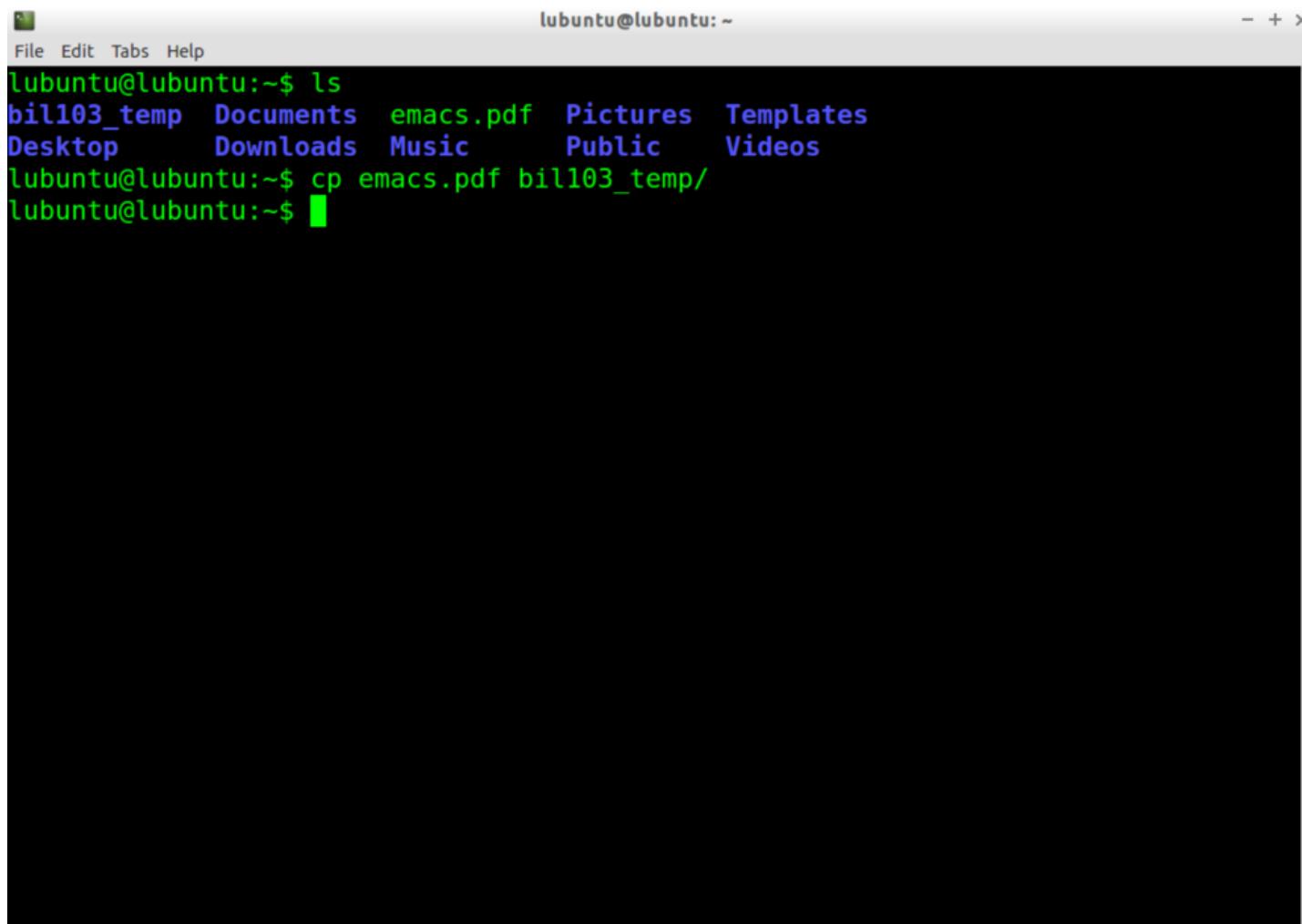
2015-09-20 23:44:48 (596 KB/s) - 'emacs.pdf' saved [2520603/2520603]

lubuntu@lubuntu:~$ ls
bill103_temp  Documents  emacs.pdf  Pictures  Templates
Desktop        Downloads  Music     Public    Videos
lubuntu@lubuntu:~$
```

A red oval highlights the file name "emacs.pdf" in the output of the "ls" command.

Command Line - 5

- cp – copy files and directories (with -R)



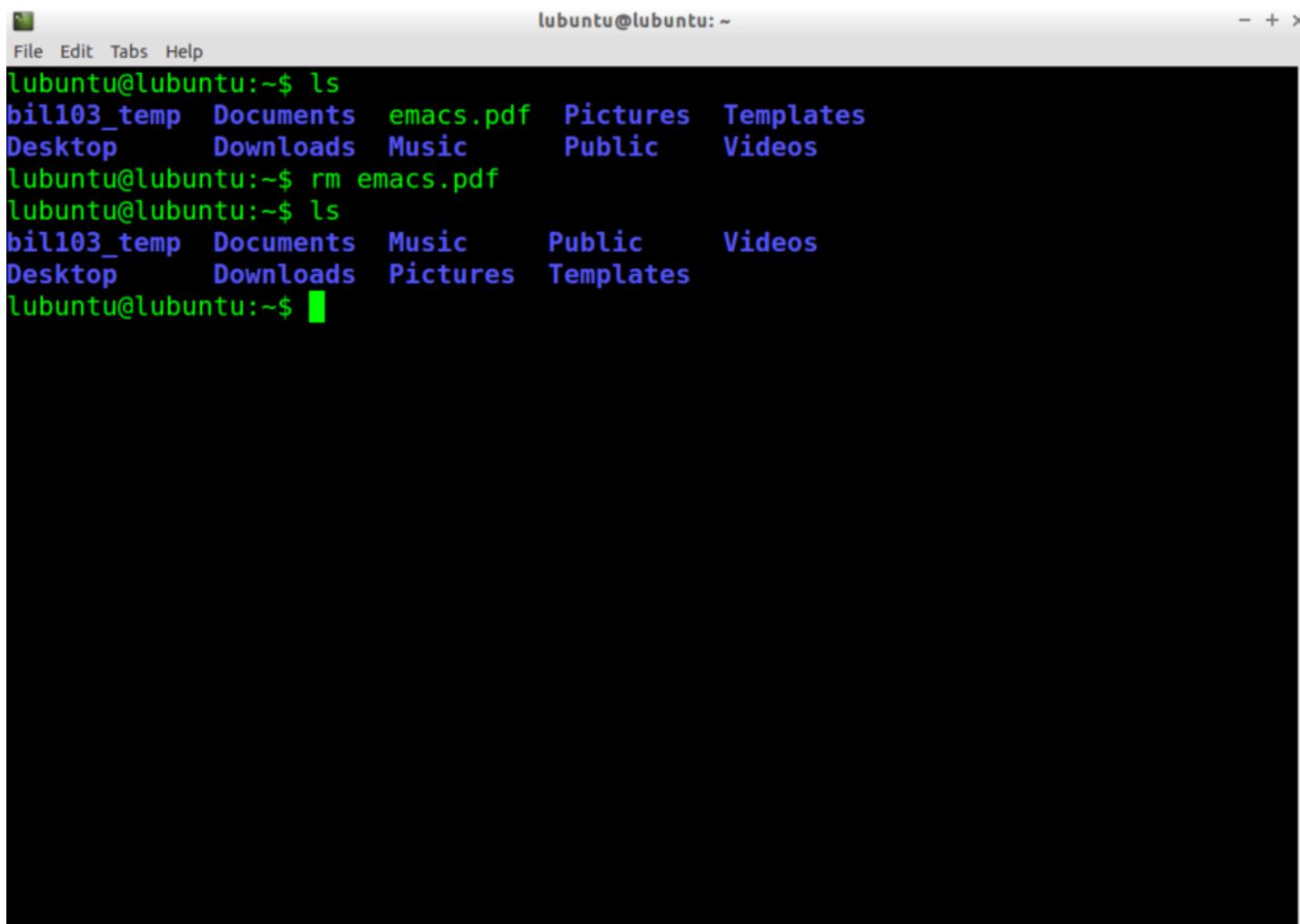
A screenshot of a terminal window titled "lubuntu@lubuntu: ~". The window has a standard Linux-style title bar with icons for minimize, maximize, and close. The menu bar includes "File", "Edit", "Tabs", and "Help". The terminal itself is black with white text. It shows the user's home directory (~) and the command history:

```
lubuntu@lubuntu:~$ ls
bill103_temp  Documents  emacs.pdf  Pictures  Templates
Desktop        Downloads  Music      Public    Videos
lubuntu@lubuntu:~$ cp emacs.pdf bill103_temp/
lubuntu@lubuntu:~$ █
```

The cursor is represented by a small green square at the end of the last command.

Command Line - 6

- rm – remove files or directories



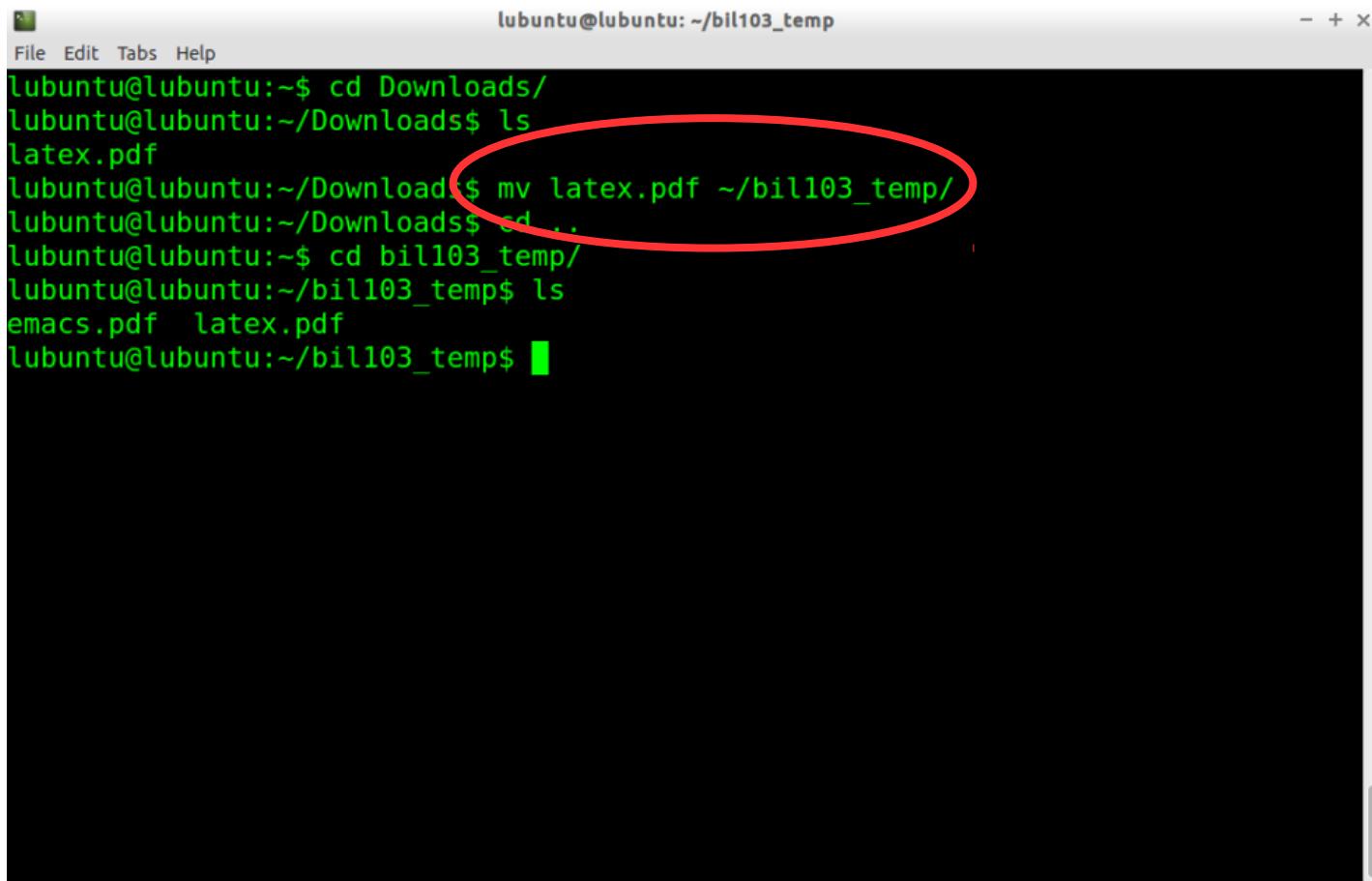
A screenshot of a terminal window titled "lubuntu@lubuntu: ~". The window has a standard Linux-style title bar with icons for minimize, maximize, and close. The terminal menu bar includes "File", "Edit", "Tabs", and "Help". The command history shows:

```
lubuntu@lubuntu:~$ ls
bill103_temp  Documents  emacs.pdf  Pictures  Templates
Desktop        Downloads  Music      Public    Videos
lubuntu@lubuntu:~$ rm emacs.pdf
lubuntu@lubuntu:~$ ls
bill103_temp  Documents  Music      Public    Videos
Desktop        Downloads  Pictures  Templates
lubuntu@lubuntu:~$ █
```

The terminal window is set against a dark background with light-colored text.

Command Line - 7

- mv – move files and directories

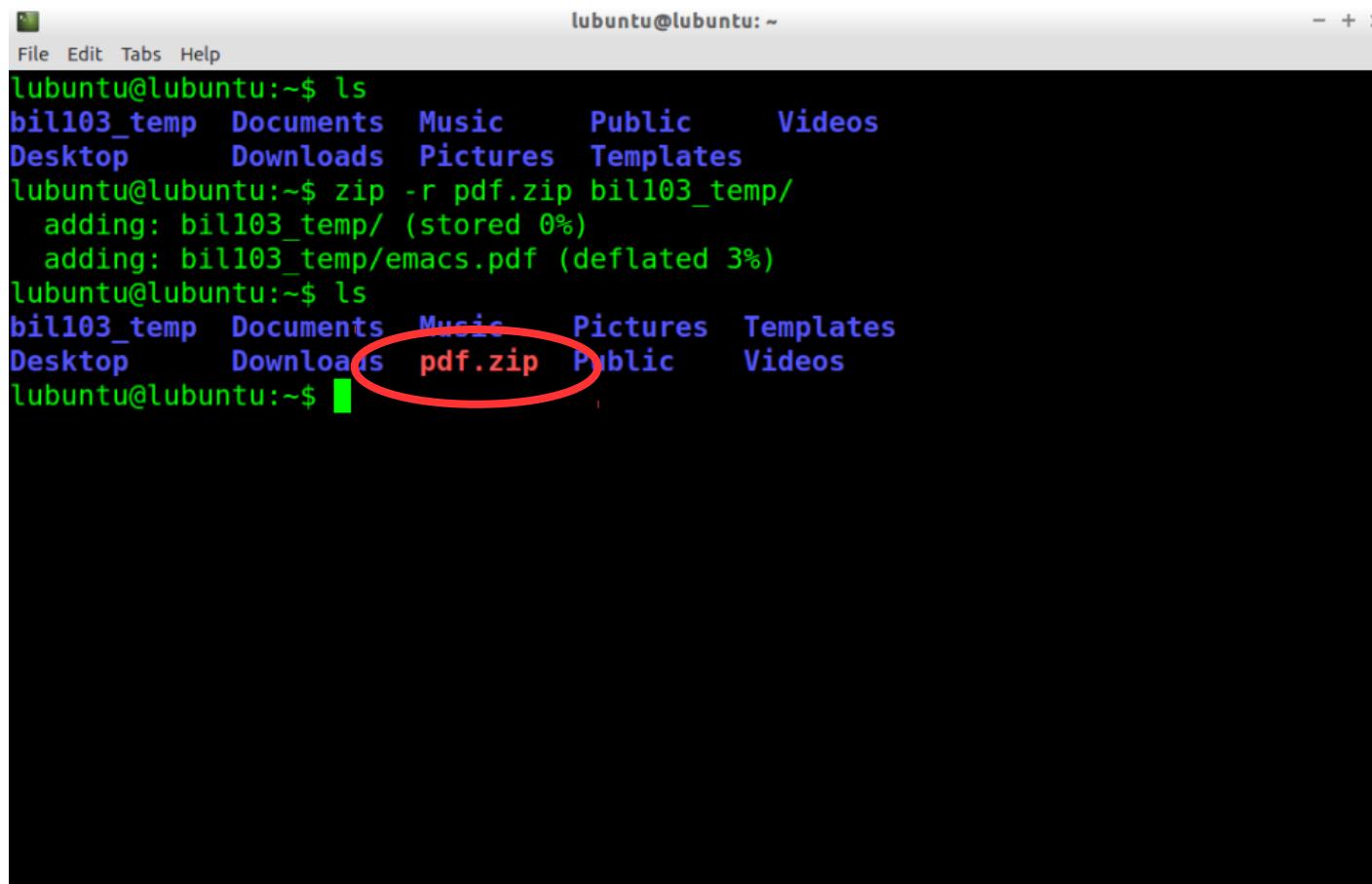


A screenshot of a terminal window titled "lubuntu@lubuntu: ~/bil103_temp". The window has a red oval highlighting the command "mv latex.pdf ~/bil103_temp/". The terminal output is as follows:

```
lubuntu@lubuntu:~$ cd Downloads/
lubuntu@lubuntu:~/Downloads$ ls
latex.pdf
lubuntu@lubuntu:~/Downloads$ mv latex.pdf ~/bil103_temp/
lubuntu@lubuntu:~/Downloads$ cd ..
lubuntu@lubuntu:~$ cd bil103_temp/
lubuntu@lubuntu:~/bil103_temp$ ls
emacs.pdf  latex.pdf
lubuntu@lubuntu:~/bil103_temp$
```

Command Line Create/Extract - 1

- zip – package and compress files
(-r for multiple files)

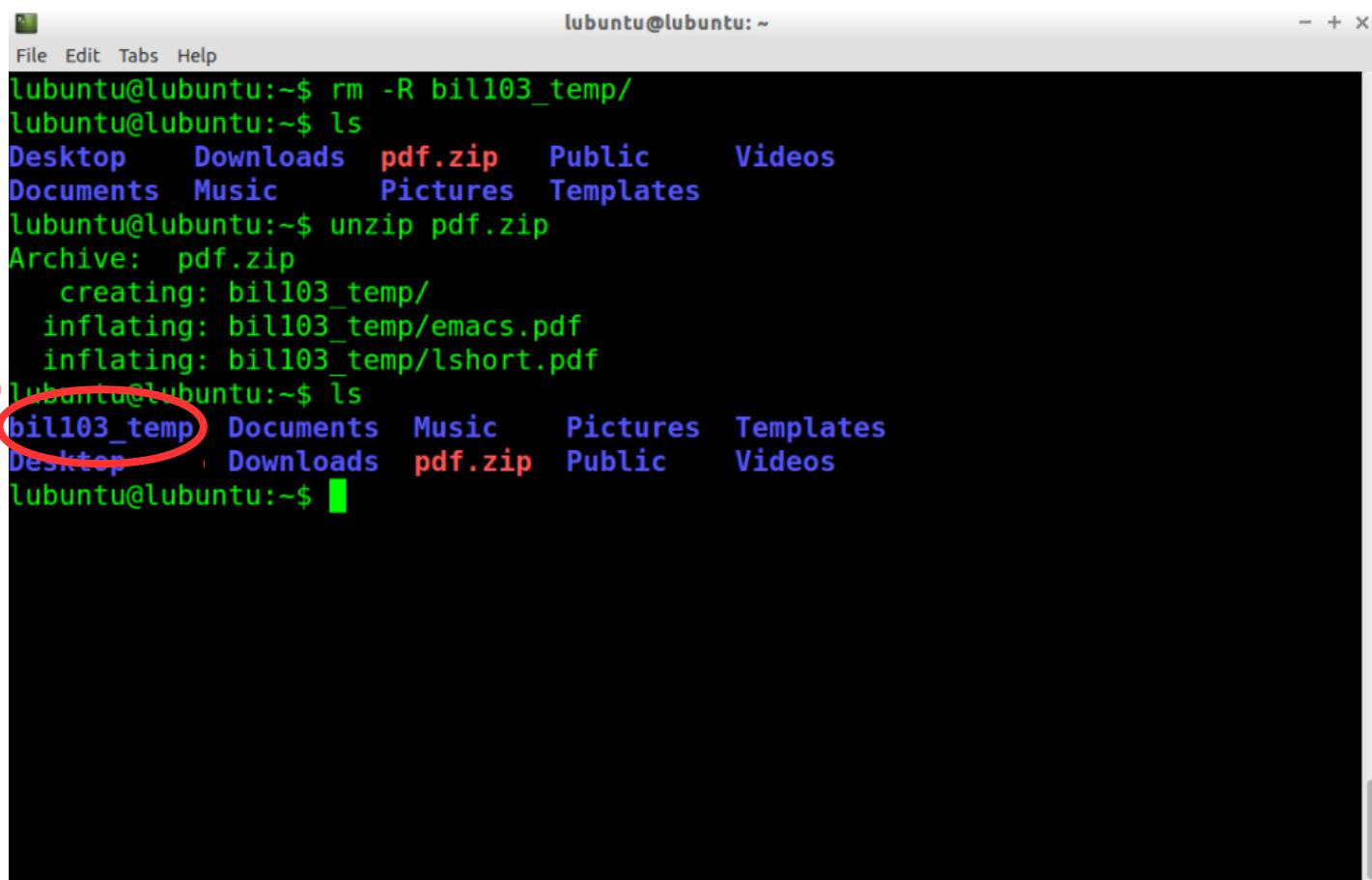


```
lubuntu@lubuntu:~$ ls
bill103_temp  Documents  Music      Public      Videos
Desktop        Downloads  Pictures   Templates
lubuntu@lubuntu:~$ zip -r pdf.zip bill103_temp/
  adding: bill103_temp/ (stored 0%)
  adding: bill103_temp/emacs.pdf (deflated 3%)
lubuntu@lubuntu:~$ ls
bill103_temp  Documents  Music      Pictures  Templates
Desktop        Downloads  pdf.zip  Public    Videos
lubuntu@lubuntu:~$
```

A screenshot of a terminal window titled "lubuntu@lubuntu: ~". The window shows a command-line session. The user first lists the contents of their home directory with the command "ls", which shows directories like "bill103_temp", "Documents", "Music", "Public", and "Videos", along with desktop icons for "Desktop", "Downloads", "Pictures", and "Templates". The user then runs the command "zip -r pdf.zip bill103_temp/", which creates a compressed archive named "pdf.zip" containing the "bill103_temp" directory. Finally, the user lists the contents again with "ls" and highlights the newly created "pdf.zip" file with a red oval. The terminal window has a standard window title bar with minimize, maximize, and close buttons.

Command Line Create/Extract - 2

- `unzip` – extract zip files



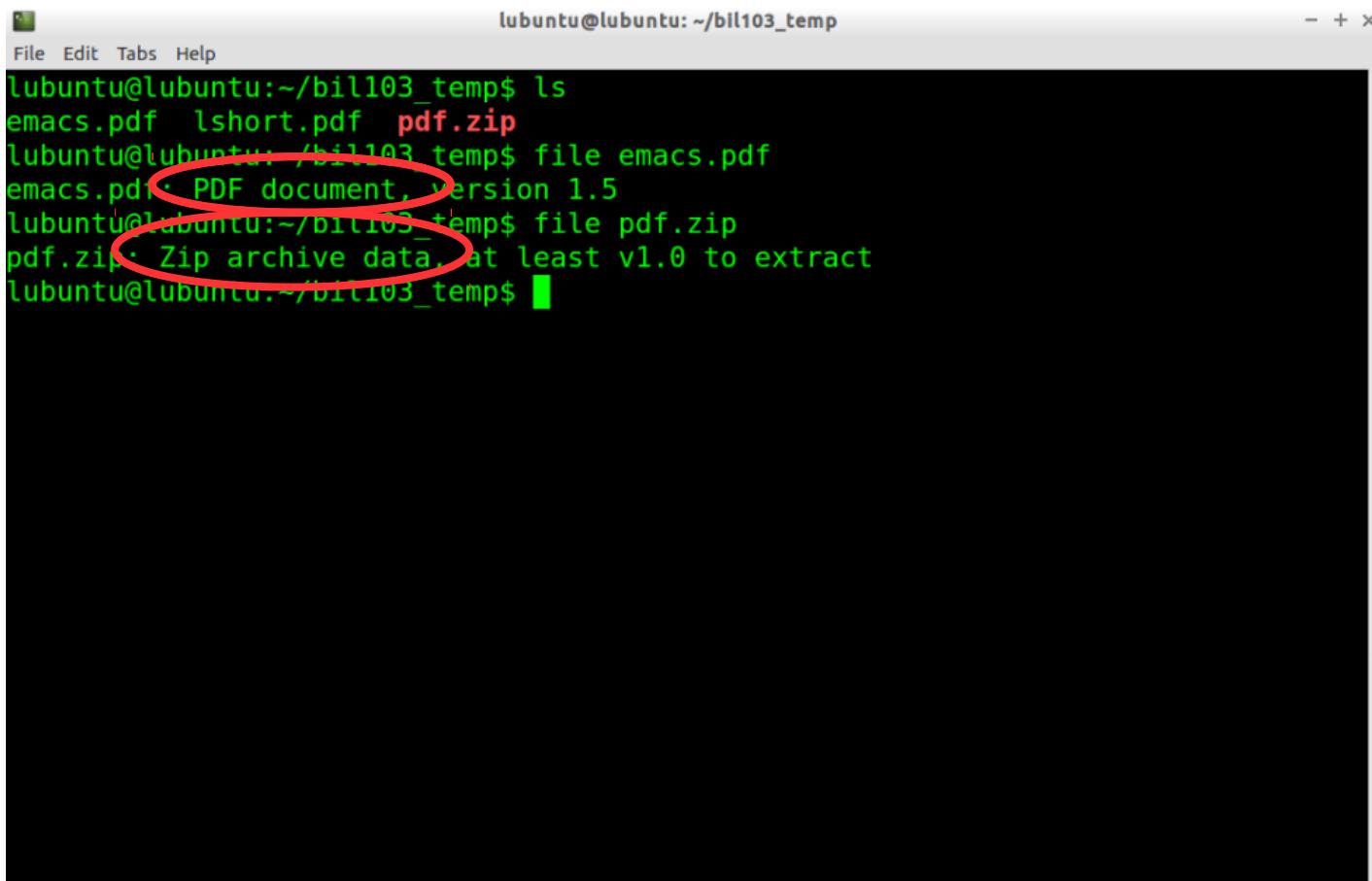
A screenshot of a terminal window titled "lubuntu@lubuntu:~". The window has a standard Linux-style title bar with icons for minimize, maximize, and close. The terminal menu bar includes "File", "Edit", "Tabs", and "Help". The command-line interface shows the following session:

```
lubuntu@lubuntu:~$ rm -R bill03_temp/
lubuntu@lubuntu:~$ ls
Desktop  Downloads  pdf.zip  Public    Videos
Documents  Music      Pictures  Templates
lubuntu@lubuntu:~$ unzip pdf.zip
Archive: pdf.zip
  creating: bill03_temp/
    inflating: bill03_temp/emacs.pdf
    inflating: bill03_temp/lshort.pdf
lubuntu@lubuntu:~$ ls
bill03_temp  Documents  Music      Pictures  Templates
Desktop      Downloads  pdf.zip  Public    Videos
lubuntu@lubuntu:~$
```

The directory "bill03_temp" is circled in red at the bottom of the terminal output.

Command Line MIME Types

- file – determine file type



A screenshot of a terminal window titled "lubuntu@lubuntu: ~/bill103_temp". The window contains the following text:

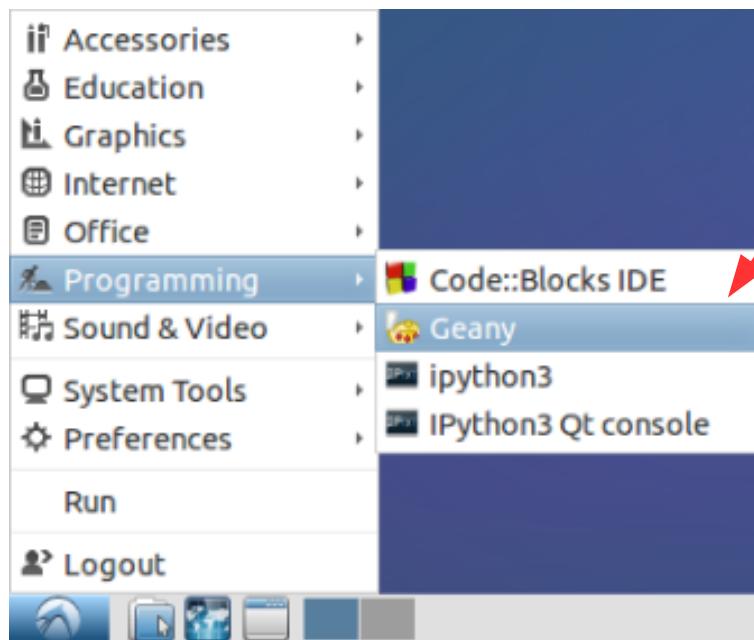
```
lubuntu@lubuntu:~/bill103_temp$ ls
emacs.pdf  lshort.pdf  pdf.zip
lubuntu@lubuntu:~/bill103_temp$ file emacs.pdf
emacs.pdf: PDF document, Version 1.5
lubuntu@lubuntu:~/bill103_temp$ file pdf.zip
pdf.zip: Zip archive data, at least v1.0 to extract
lubuntu@lubuntu:~/bill103_temp$
```

The lines "emacs.pdf: PDF document, Version 1.5" and "pdf.zip: Zip archive data, at least v1.0 to extract" are circled with red ink.

Geany – Character Encodings

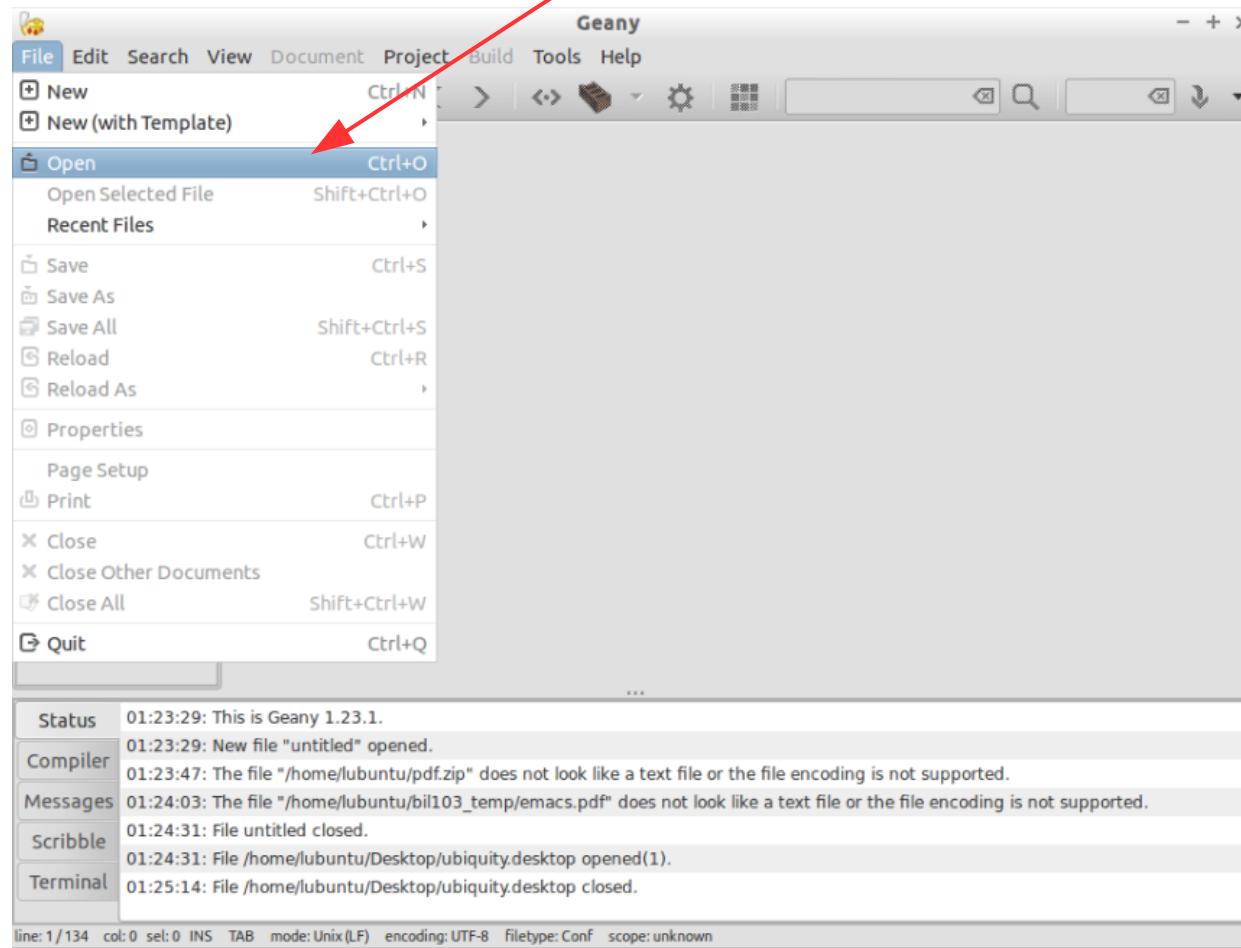
- Start Geany from

Start → Programming → Geany



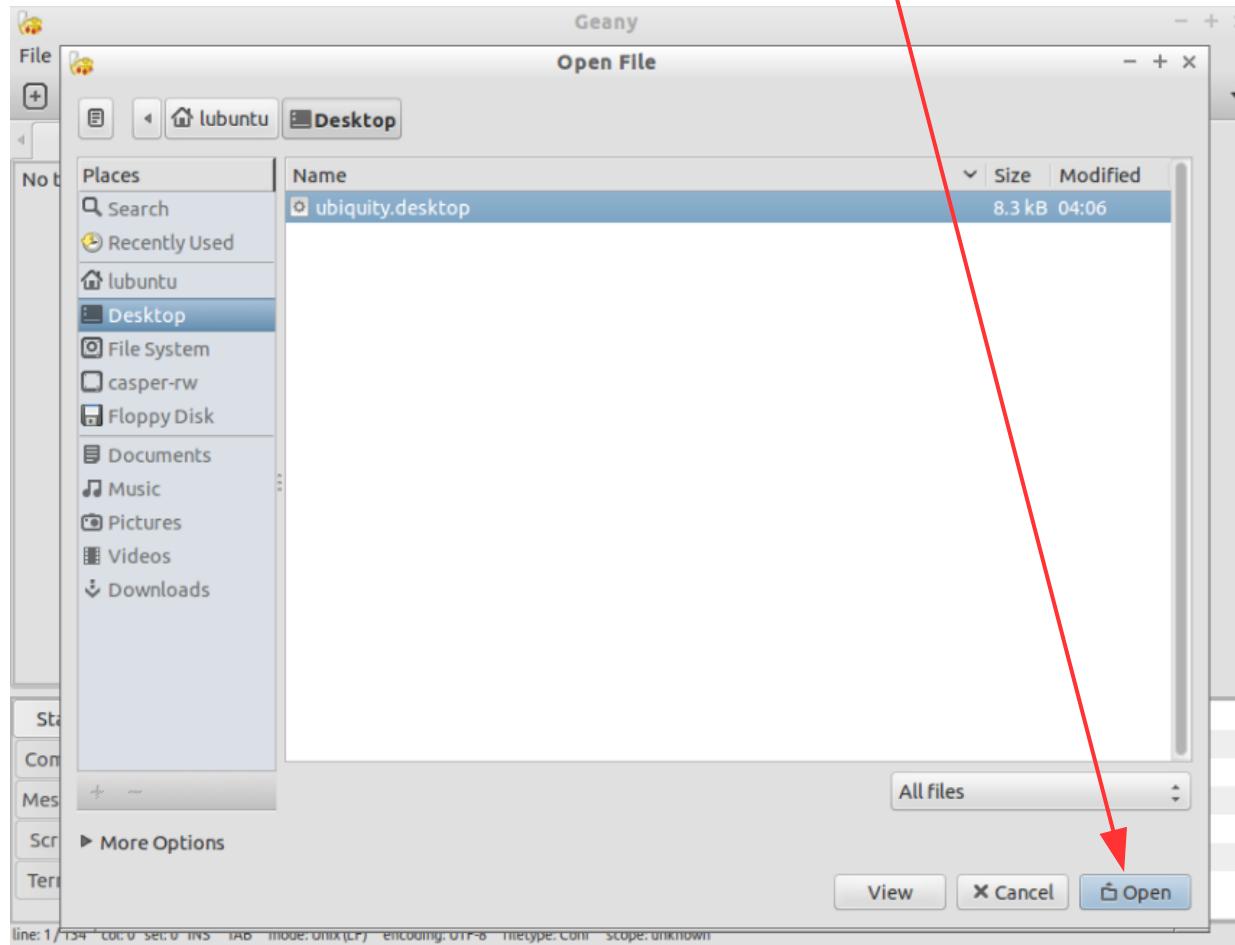
Geany – Character Encodings - 2

- Open a file from: File → Open



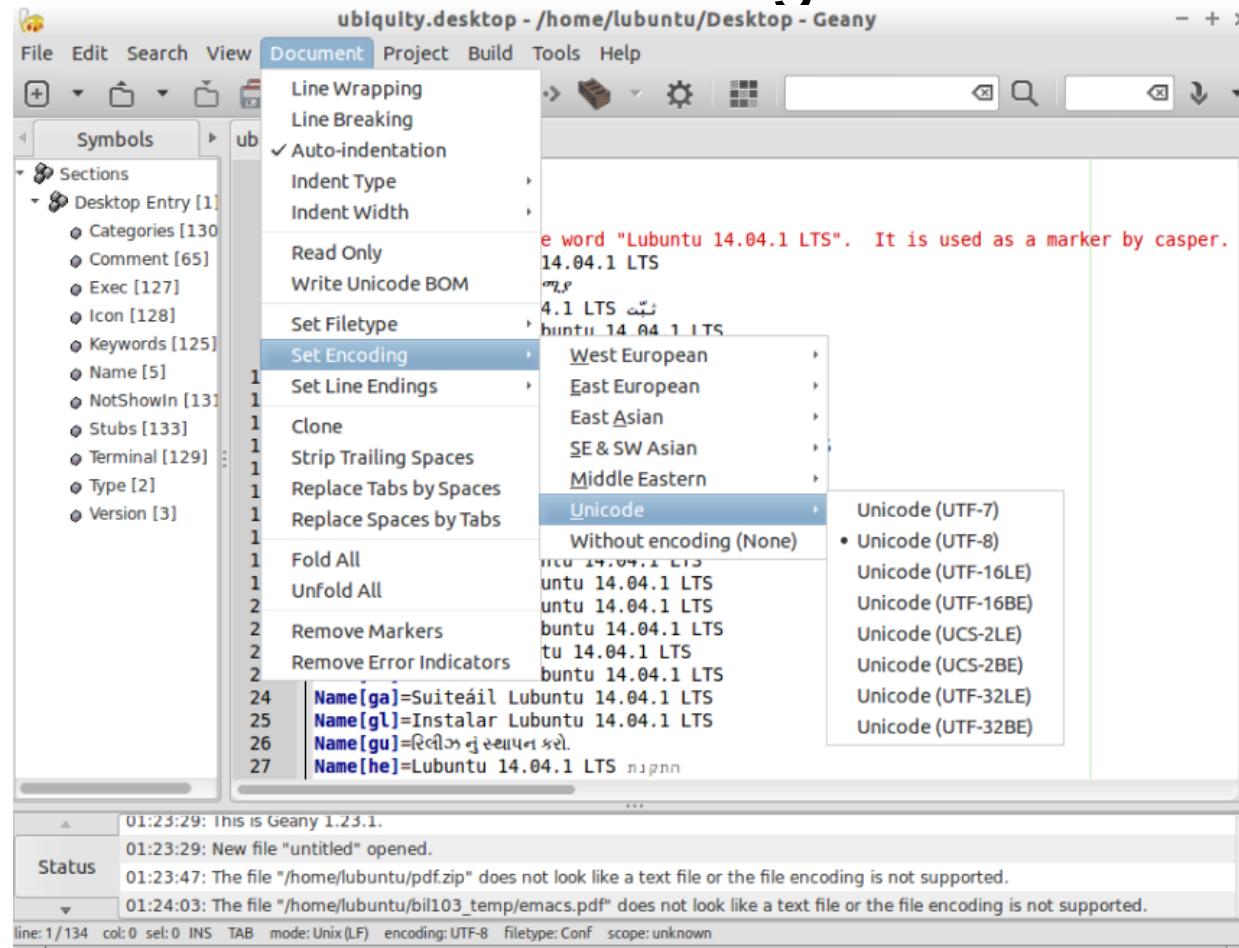
Geany – Character Encodings - 3

- Search the file and click Open



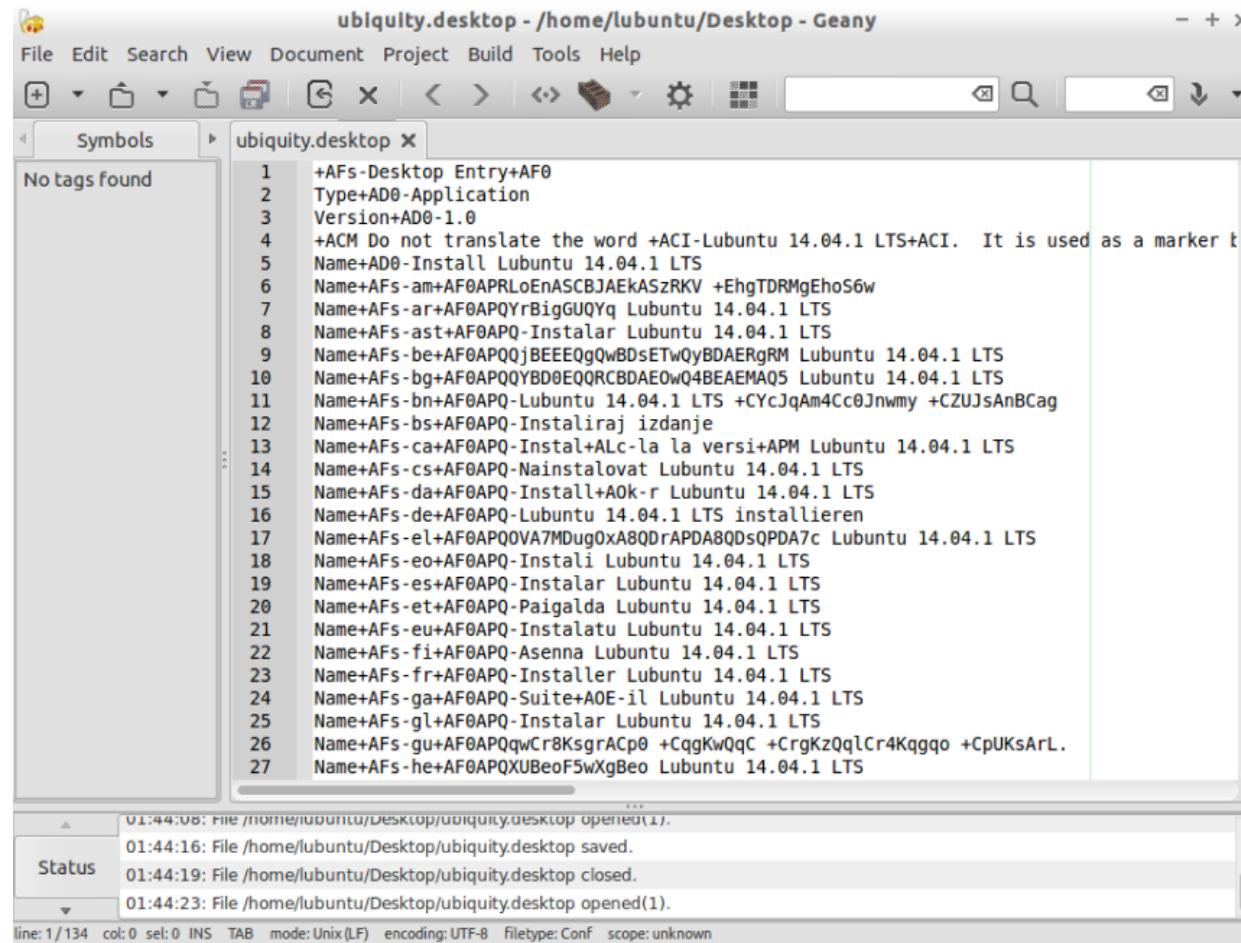
Geany – Character Encodings - 4

- You can change character encodings by:
Document → Set Encoding

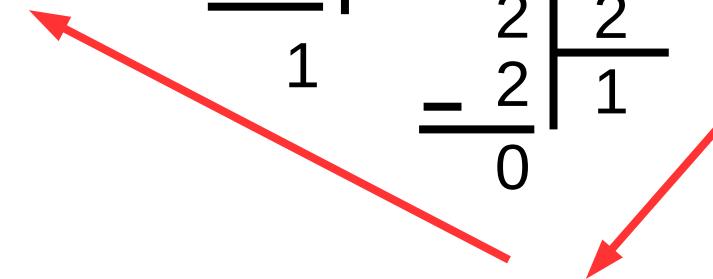


Geany – Character Encodings - 5

- Change encoding to UTF7, save and reopen file



Decimal to Binary

$$\begin{array}{r} 11 \Big| 2 \\ -10 \Big| 5 \\ \hline 1 \end{array}$$
$$\begin{array}{r} 5 \Big| 2 \\ -4 \Big| 2 \\ \hline 1 \end{array}$$
$$\begin{array}{r} 2 \Big| 2 \\ -2 \Big| 1 \\ \hline 0 \end{array}$$


Read from tail to head: $11 = 1011$

Binary to Decimal

1	0	1	1
↓	↓	↓	↓
8	4	2	1

$$8 + 2 + 1 = \\ 11$$

Binary to Hexadecimal

- Group numbers by four

1 0 0 1 1 1 0 1
 \ /\ \ /\
 9 D

$$10011101 = 9D$$

- Reverse the process to convert hexadecimal to binary