Working with Ubuntu

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https://github.com/swacademy/Ubuntu

Office Suites

- Windows : Microsoft Office, LibreOffice
- Apple OS X : iWork, Microsoft Office, LibreOffice
- Linux : LibreOffice, KOffice, GNOME Office, Kexi
- The most popular suite is the LibreOffice(formerly OpenOffice).
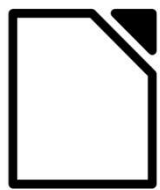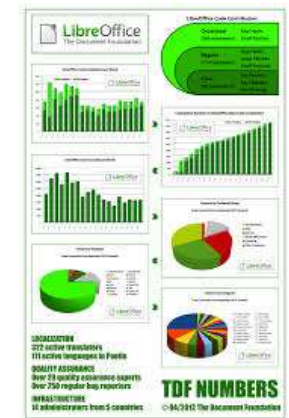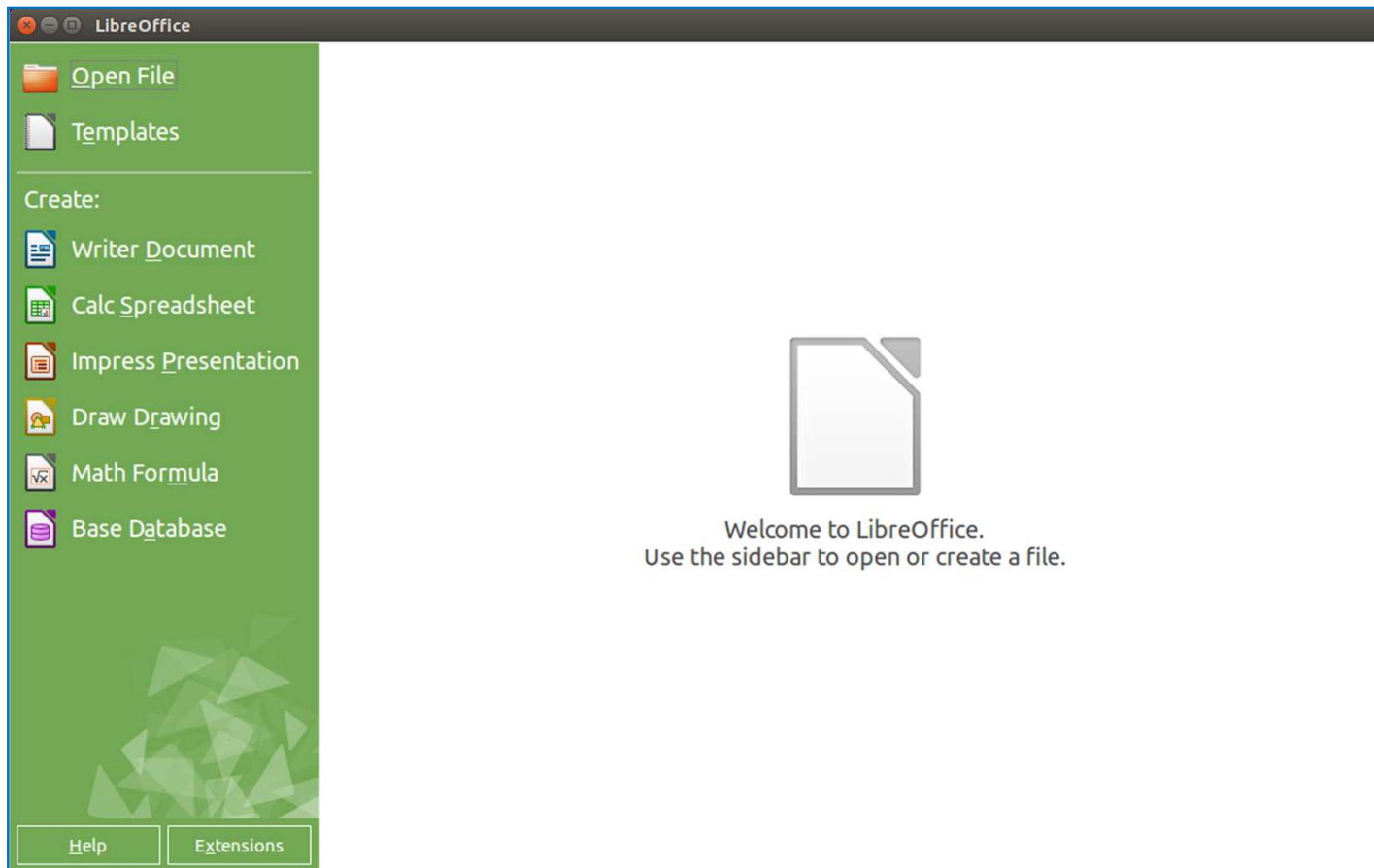
Office Suites (Cont.)

- Included :
    - Writer : word processor
    - Calc : spreadsheet
    - Impress : presentation manager
    - Draw : drawing program
    - Base : database
    - Math : equation editor

- In Ubuntu, is installed by default.

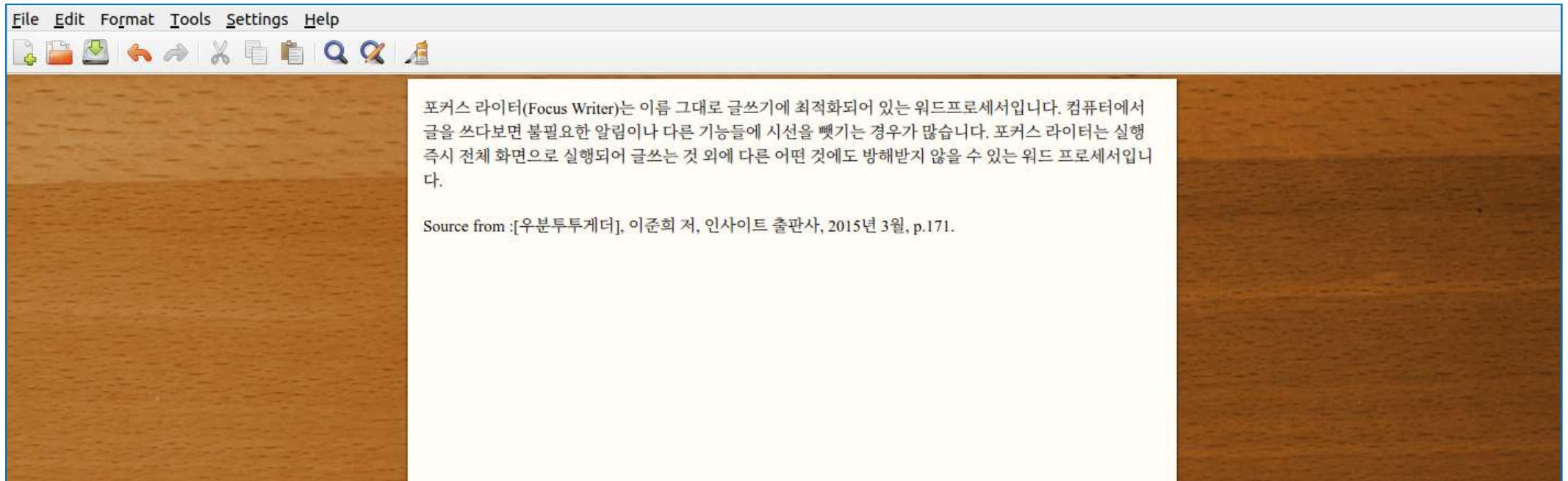- Note that *Base* is not installed by default and it can be installed through *Ubuntu Software Center*.

Office Suites (Cont.)

# Lab 1 : Installation FocusWriter on Ubuntu 22.04 LTS

FocusWriter

File Edit Format Tools Settings Help

포커스 라이터(Focus Writer)는 이름 그대로 글쓰기에 최적화되어 있는 워드프로세서입니다. 컴퓨터에서 글을 쓰다보면 불필요한 알림이나 다른 기능들에 시선을 뺏기는 경우가 많습니다. 포커스 라이터는 실행 즉시 전체 화면으로 실행되어 글쓰는 것 외에 다른 어떤 것에도 방해받지 않을 수 있는 워드 프로세서입니다.

Source from :[우분투투게더], 이준희 저, 인사이트 출판사, 2015년 3월, p.171.

Email Applications

- Windows : Microsoft Outlook, Mozilla Thunderbird

- Apple OS X : Mail.app, Microsoft Outlook, Mozilla Thunderbird

- Linux : Mozilla Thunderbird, Evolution, KMail

- Very popular email application is Mozilla Thunderbird.

- In Ubuntu, *Thunderbird* is the default email application.

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Thunderbird

- Is an email client developed by Mozilla and is easy to setup and use.
- It is free, fast, and comes packed full of useful features.

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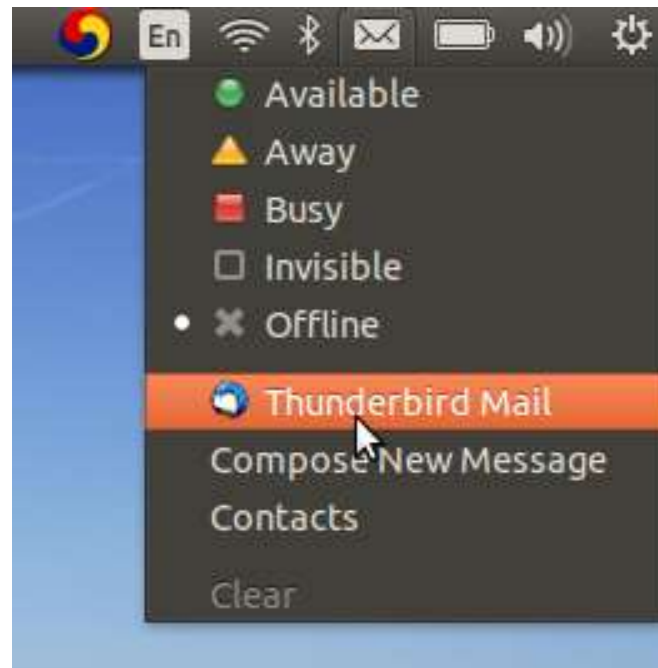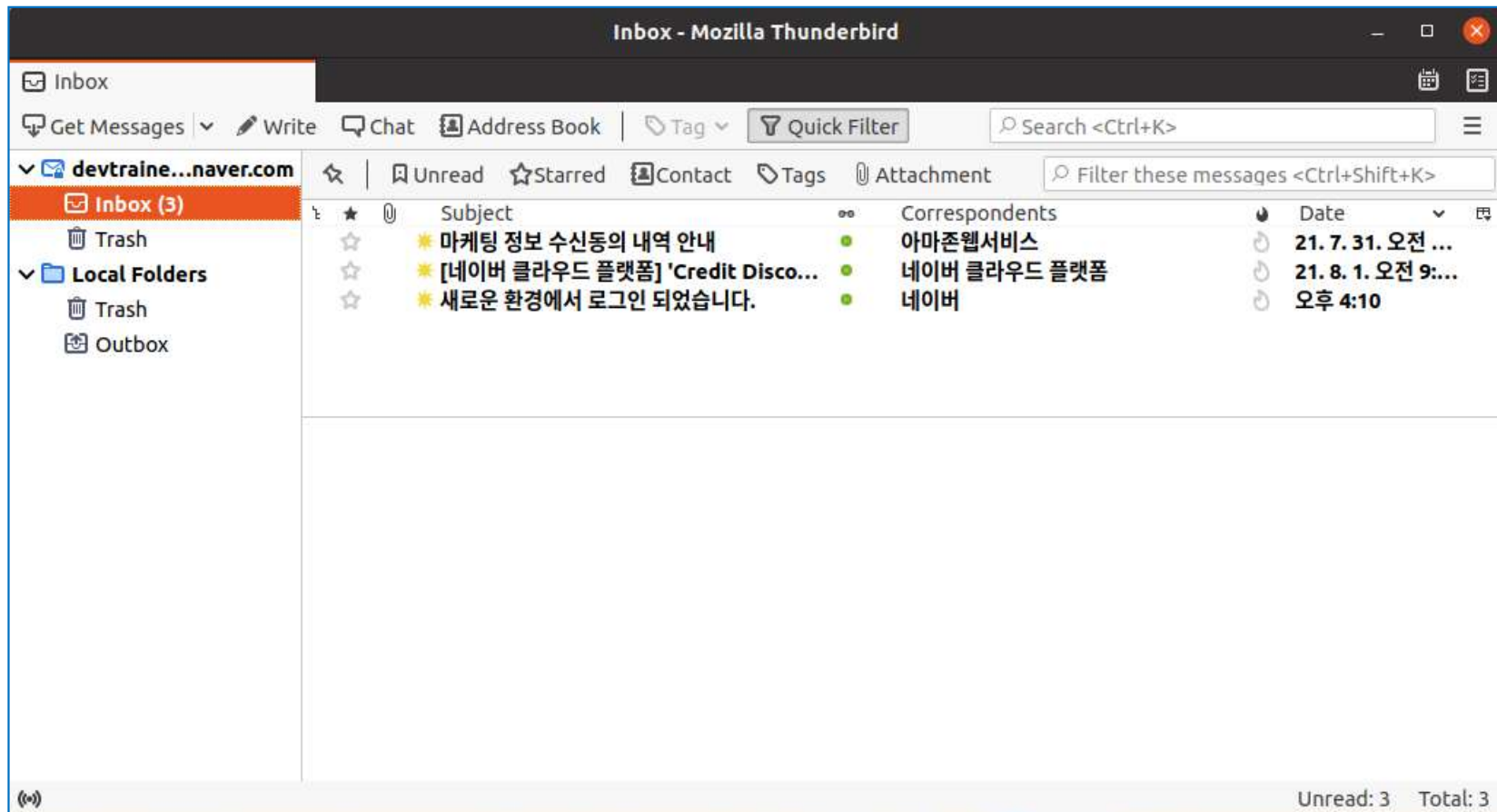
Thunderbird (Cont.)

Lab 2 : Configuration Thunderbird

Web Browser

- Windows : Microsoft Internet Explorer, Opera, Mozilla Firefox, Opera, Chromium, Google Chrome, Apple Safari

- Apple OS X : Safari, Mozilla Firefox, Chromium, Opera, Google Chrome

- Linux: Mozilla Firefox, Opera, Google Chrome, Chromium, Epiphany

- The most popular web browsers can be installed directly from the *Ubuntu Software Center*.

Web Browser (Cont.)
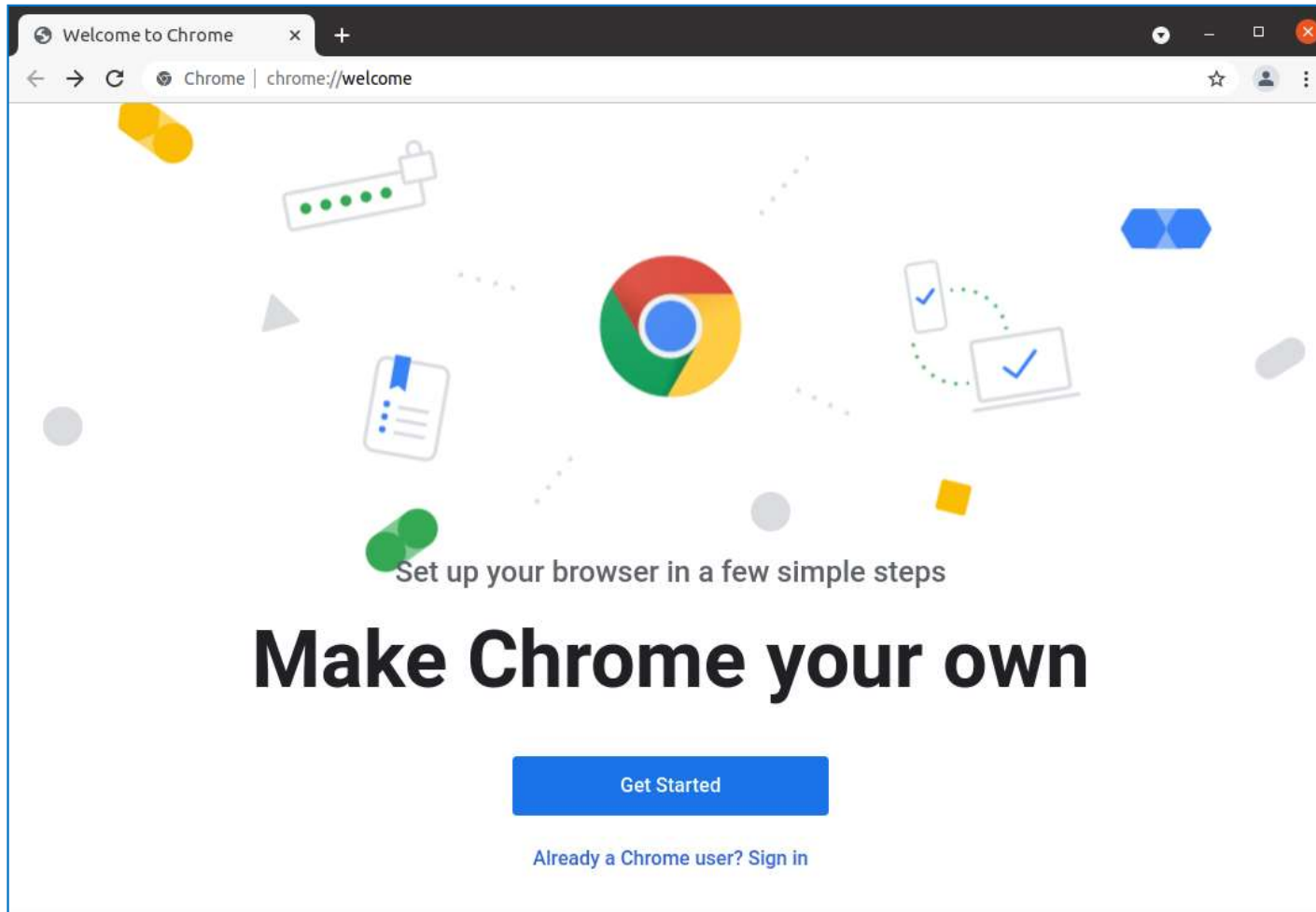
Lab 3 : Installation Google Chrome on Ubuntu 22.04 LTS

PDF Readers

- Windows : Adobe Acrobat Reader, Foxit Reader
- Apple OS X : Adobe Acrobat Reader
- Linux: Evince, Adobe Reader, Okular, Foxit Reader
- The default reader is a *Evince* that user-friendly and minimalistic reader.
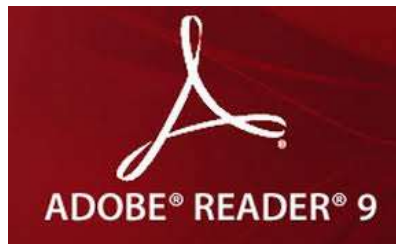
Foxit Reader
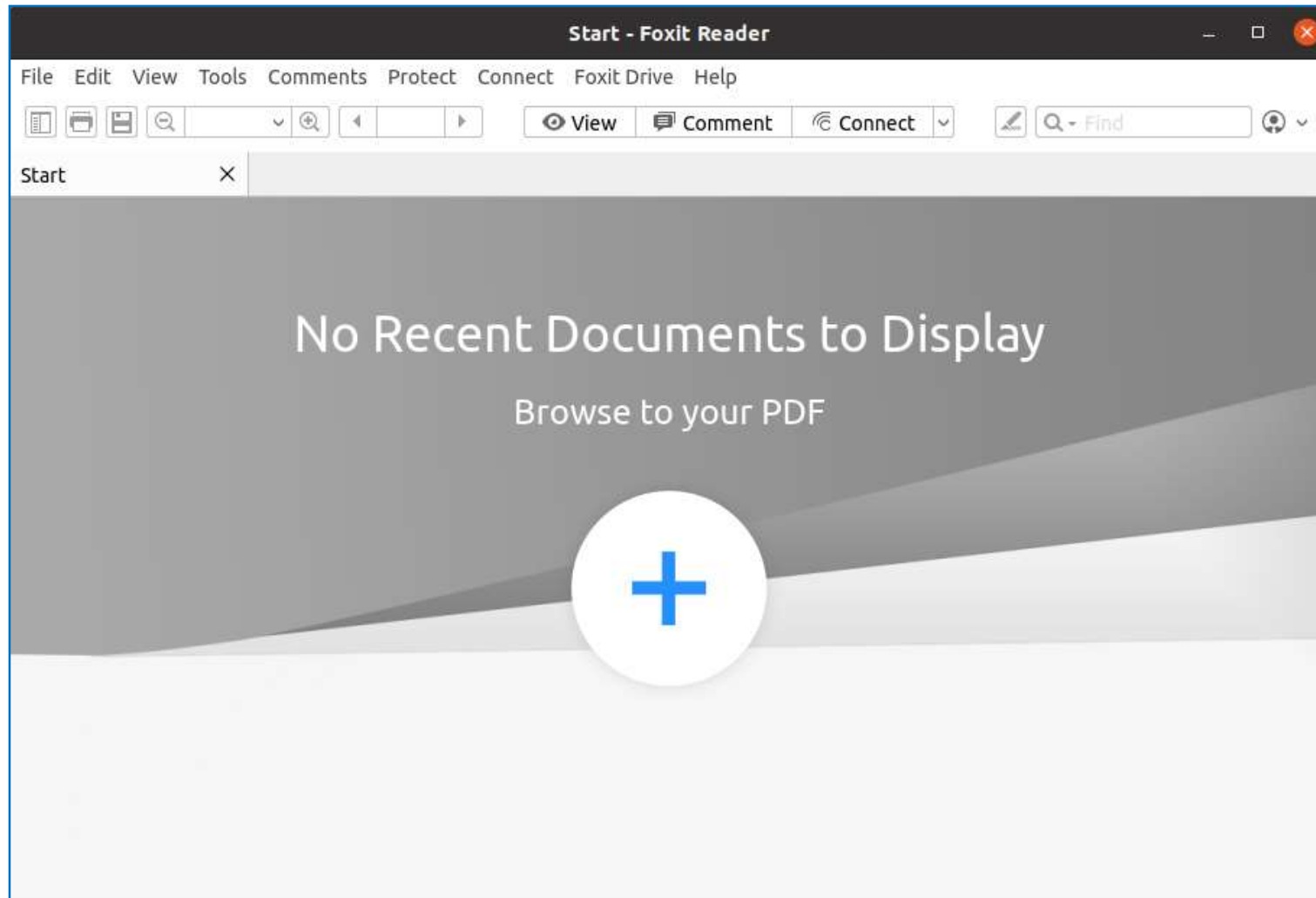
Lab 4 : Installation Foxit Reader on Ubuntu 22.04 LTS

Multimedia Players

- Windows : Windows Media Player, VLC

- Apple OS X : Quicktime, VLC

- Linux : Totem, VLC, MPlayer, Kaffeine

- VLC is a perennial favorite among videophiles.

- In Ubuntu, *Totem* is the default media player.

Totem
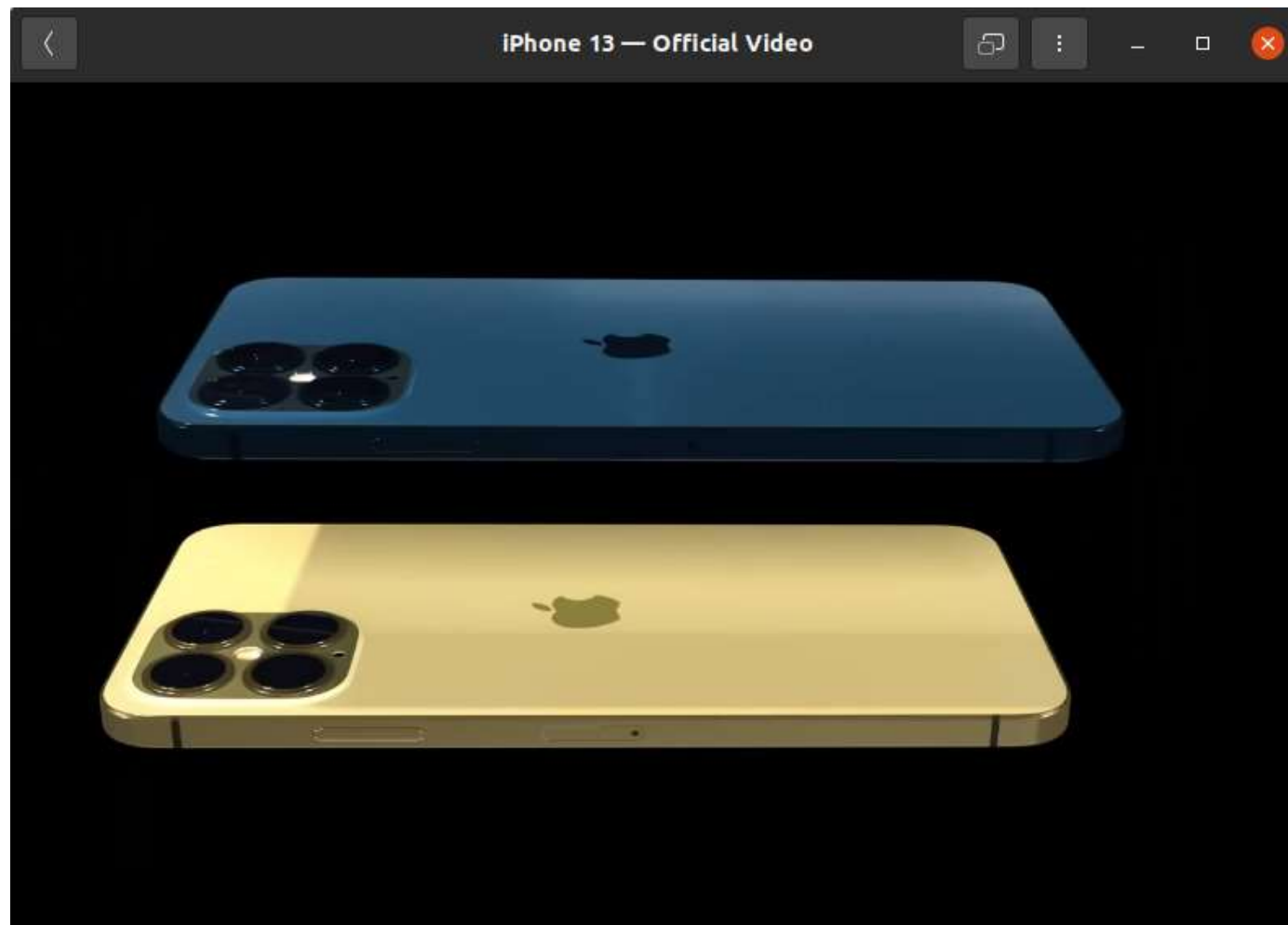
VLC
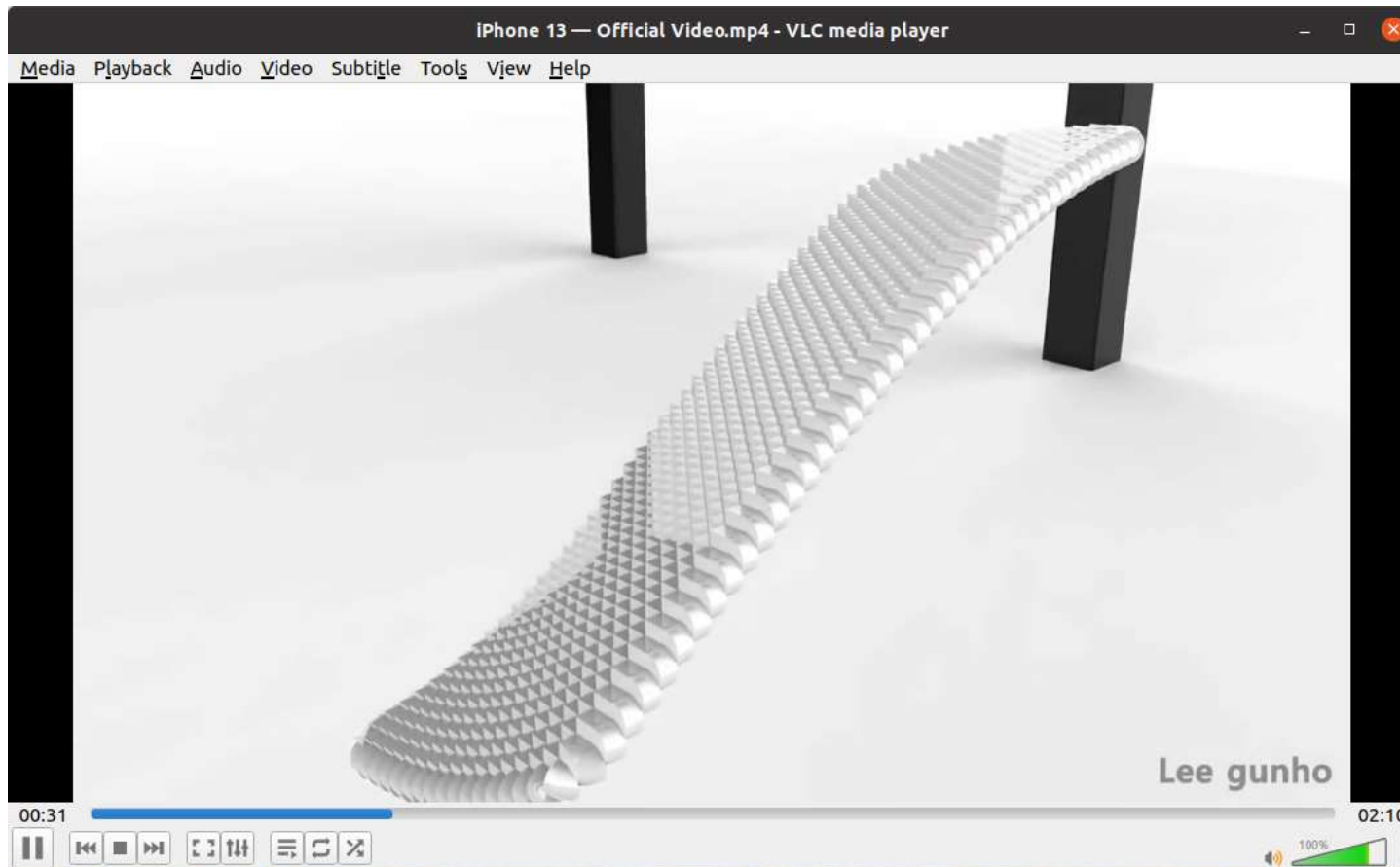
Lab 5 : Installation VLC on Ubuntu 22.04 LTS

Music Players and Podcatchers

- Windows : Windows Media Player, iTunes
- Apple OS X : iTunes
- Linux : Rhythmbox, Banshee, Amarok, Audacity, Miro
- In Ubuntu, *Rhythmbox* is installed by default.

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Banshee

Rhythmbox

CD / DVD Burning

- Windows : Nero Burning ROM, InfraRecorder
- Apple OS X : Burn, Toast Titanium
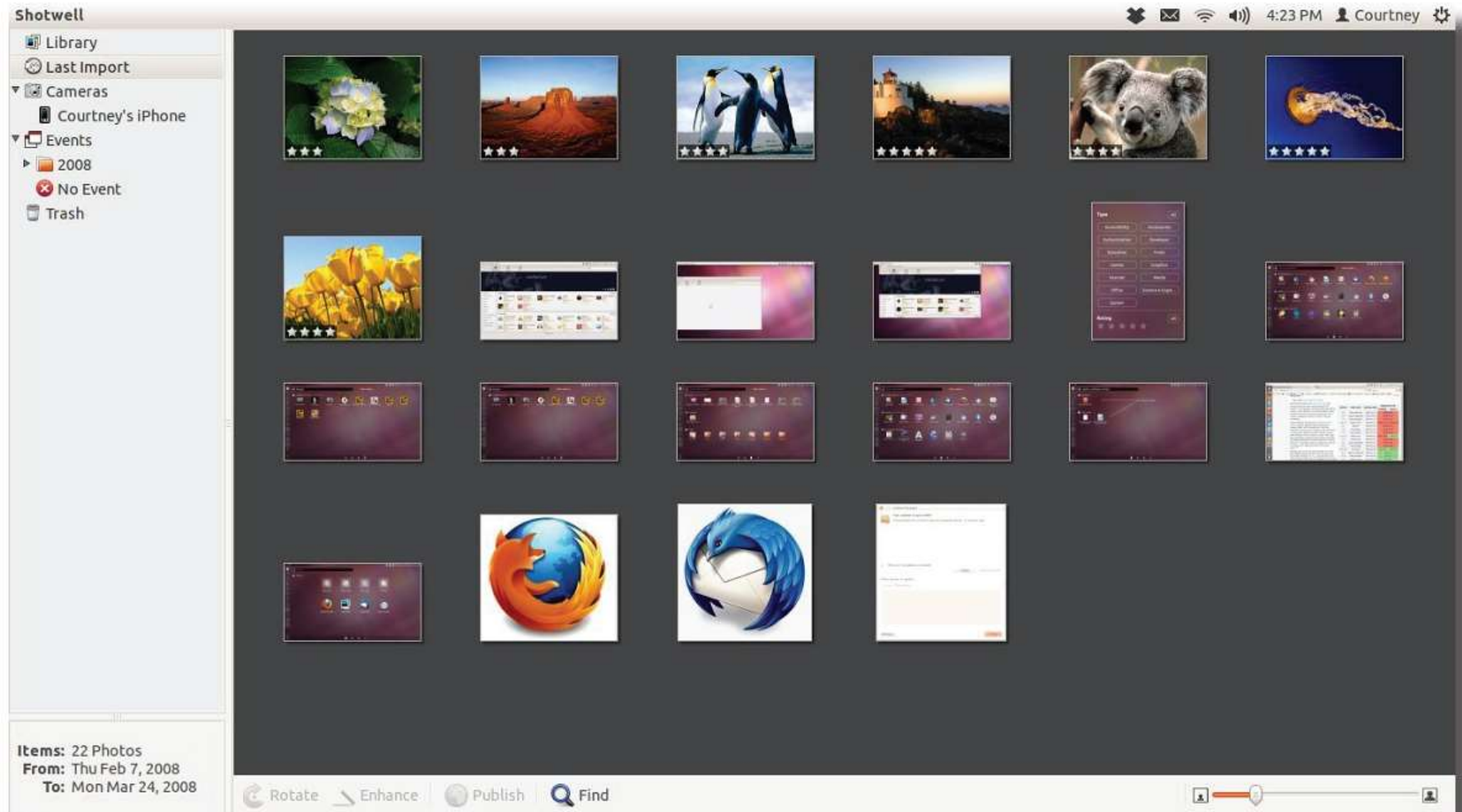- Linux : Brasero, K3b, Gnome-baker
- *Brasero* is a default burner application in Ubuntu.

Photo Management

- Windows : Microsoft Office Picture Manager, Picasa

- Apple OS X : Aperture, Picasa

- Linux : Shotwell, gThumb, Gwenview, F-Spot

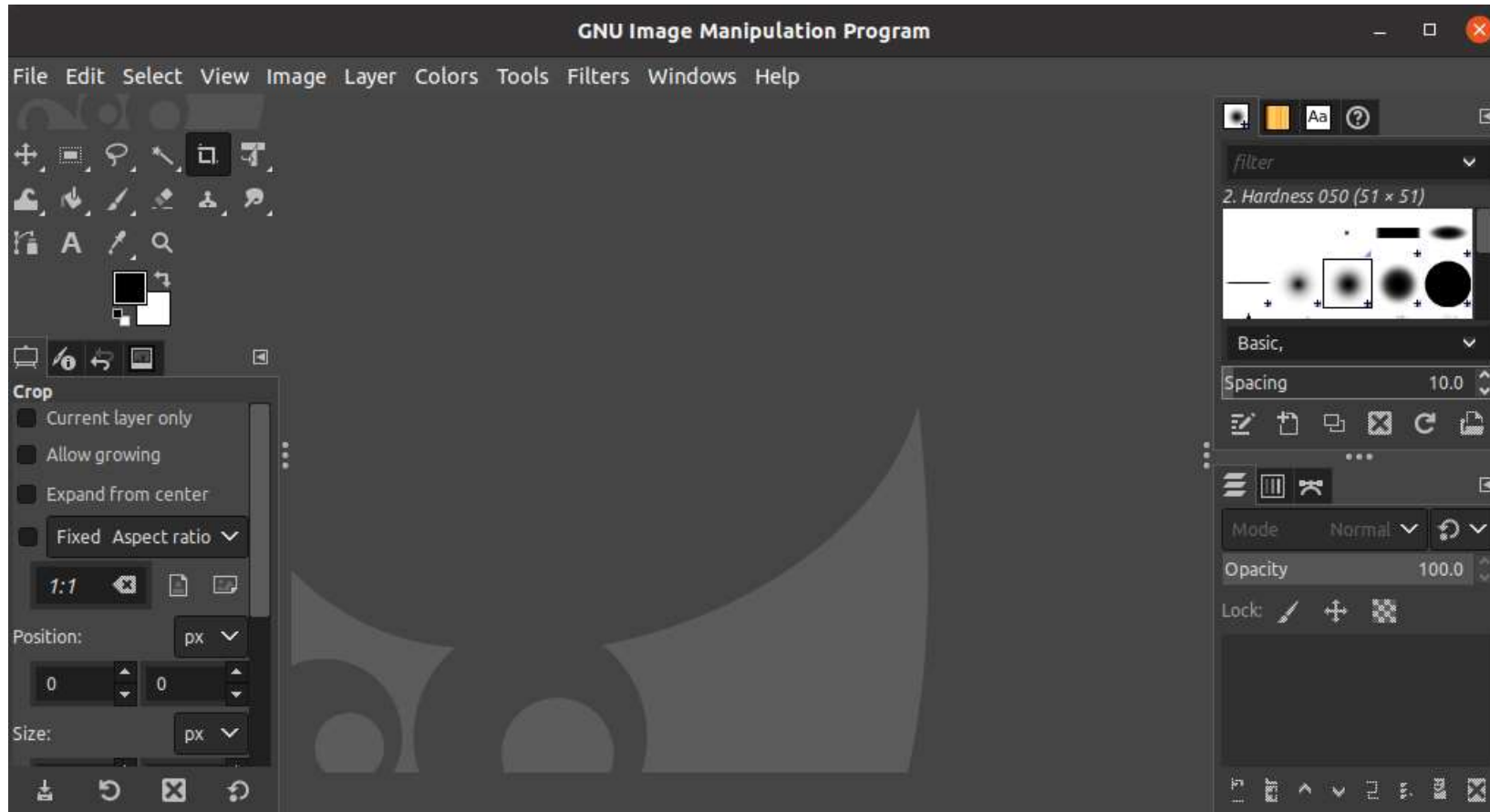- In Ubuntu, *Shotwell* is a default photo manager.

Shotwell

Graphics Editors

- Windows : Adobe Photoshop, GIMP

- Apple OS X : Adobe Photoshop, GIMP

- Linux : GIMP, Inkscape

- GIMP is a very powerful graphics editor.

- *GIMP* is not installed by default, but the application can be installed through the *Ubuntu Software Center*.

GIMP

Lab 6 : Installation GIMP on Ubuntu 22.04 LTS

Instant Messaging

- Windows : Windows Live Messenger, AIM, Yahoo! Messenger, Google Talk, KakaoTalk, Nateon

- Apple OS X : Windows Live Messenger, AIM, Yahoo! Messenger, Adium, iChat

- Linux: Empathy, Pidgin, Kopete

Using Instant Messaging

- Ubuntu includes the *Empathy* application that lets use instant messaging features to keep in touch with your contacts.

- *Empathy* lets connect to many instant messaging networks.
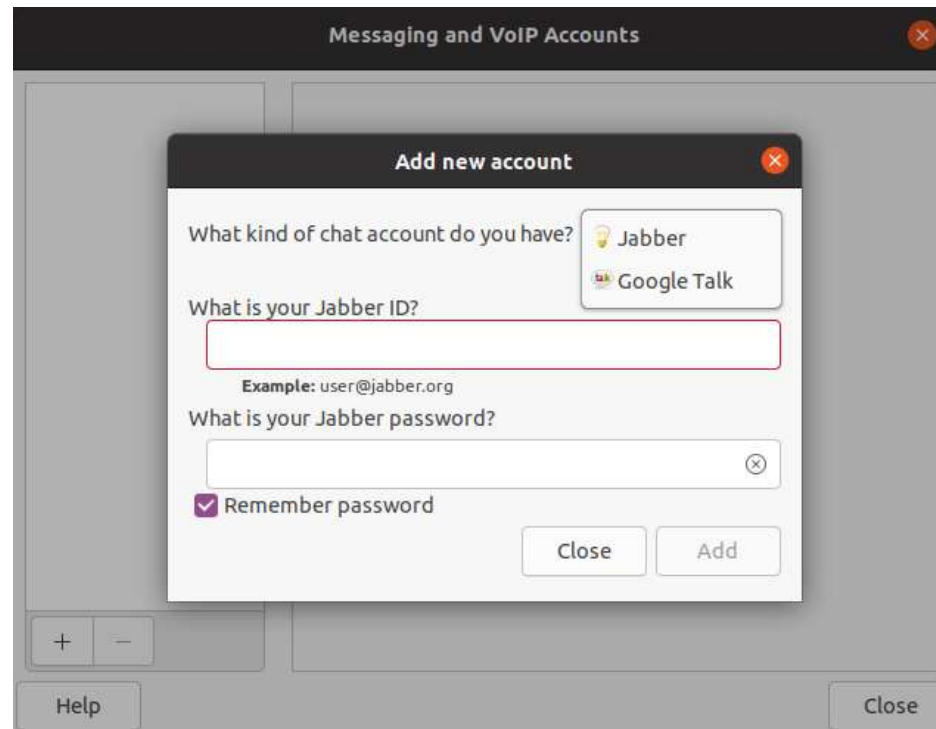
VoIP Applications

- Windows : Skype, Google Video Chat
- Apple OS X : Skype, Google Video Chat
- Linux : Ekiga, Skype, Google Video Chat
- VoIP technologies allow to talk to people over the   Internet.
- The most popular application is Skype, which is available for Linux.
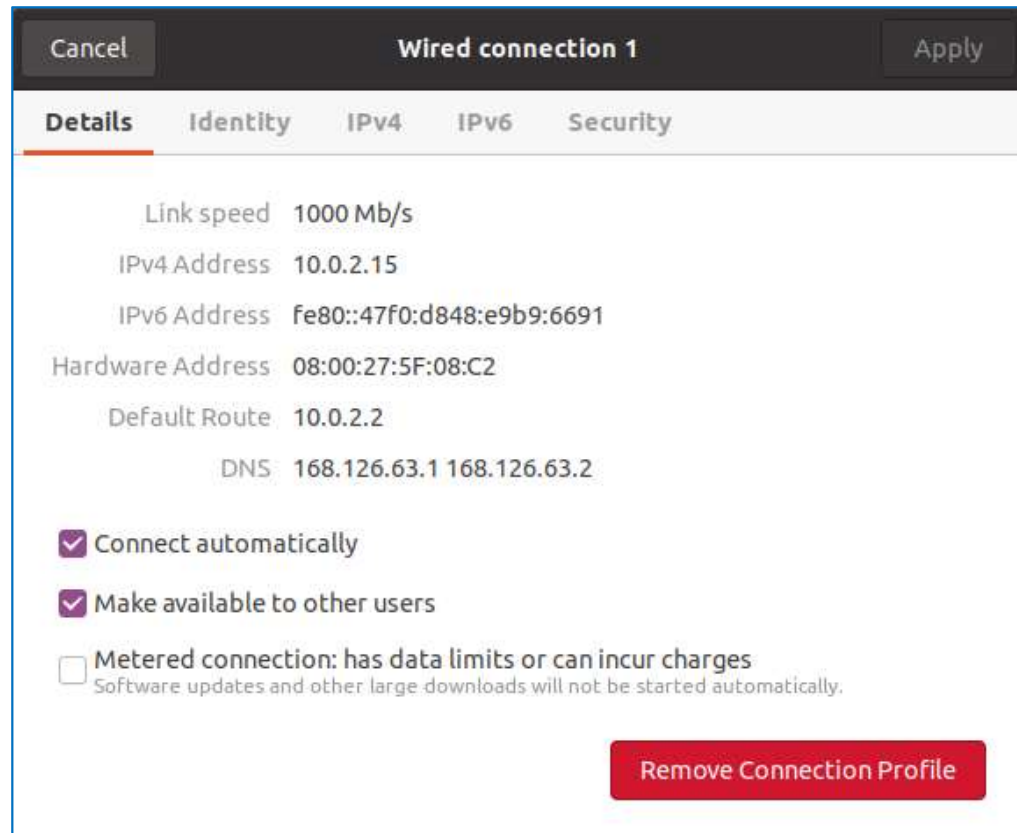
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Network Manager

- In order to connect to the Internet using Ubuntu, need to use the *NetworkManager* utility.

- Allows to turn network connections on or off.

- Manage wired and wireless networks.

- Make other network connections, such as dialup, mobile broadband, and VPNs.
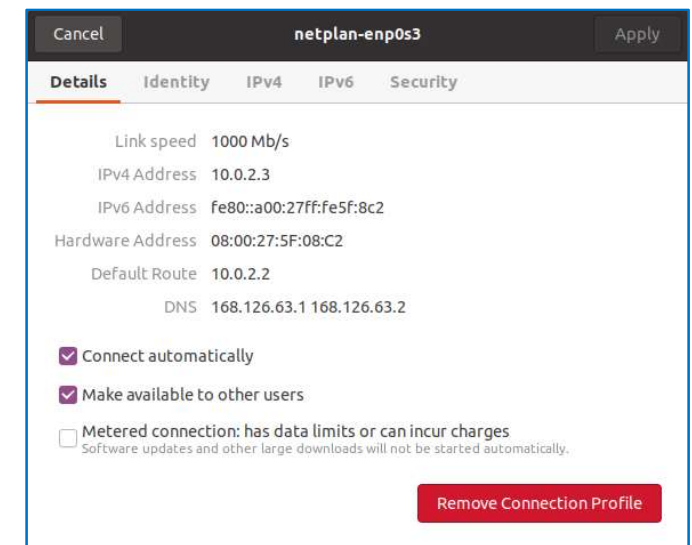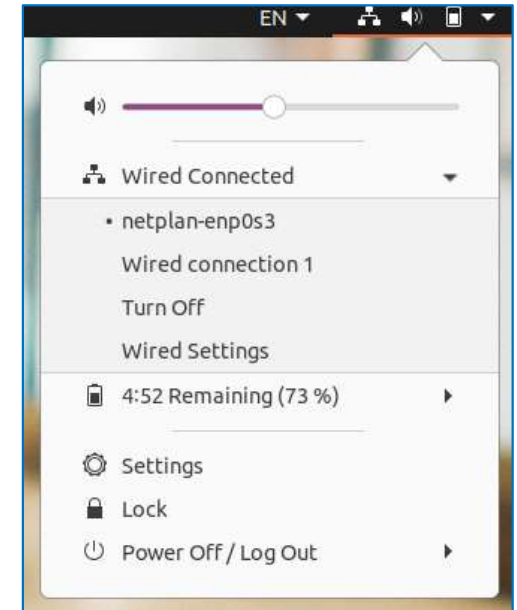
NetworkManager (Cont.)

- To manually configure a wired connection
    1. Click on the *NetworkManager* icon
    2. Select *Edit Connections*.
    3. Select *Wired connection*
    4. Click the *Edit…* button.

Package Management in Ubuntu

- Package ?
  - Distributions of software
  - Data in archive file containing a computer program[1]
  - Contain metadata for its deployment
    - The software's name
    - Description of its purpose
    - Version number
    - Vendor
    - Checksum
    - A list of dependencies[2] necessary for the software to run properly.

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Package Management in Ubuntu (Cont.)

- Package Manager(Package Management System)
  - Is a collection of software tools
  - Automates the process of installing, upgrading, configuring, and removing computer programs
- Repository
  - To give users more control over the kinds of software
  - Due to legal or convenience reasons on the distributors' side, where software is downloaded from.

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Package Management in Ubuntu (Cont.)

- Ubuntu Software Center

- apt-get
  - A CLI utility installing packages in terminal.

- Synaptic Package Manager
  - A GUI for dpkg[1]/APT[2]

- aptitude
  - A console client with CLI and ncurses-based TUI interfaces

- dpkg

1. dpkg is used to install, remove, and provide information about .deb packages.
Source from : https://en.wikipedia.org/wiki/Dpkg
2. Advanced Package Tool is a free software user interface that works with core libraries to handle the installation and removal of software on the Debian and other Linux distributions.
Source from : https://en.wikipedia.org/wiki/Advanced_Packaging_Tool

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Ubuntu Software Center
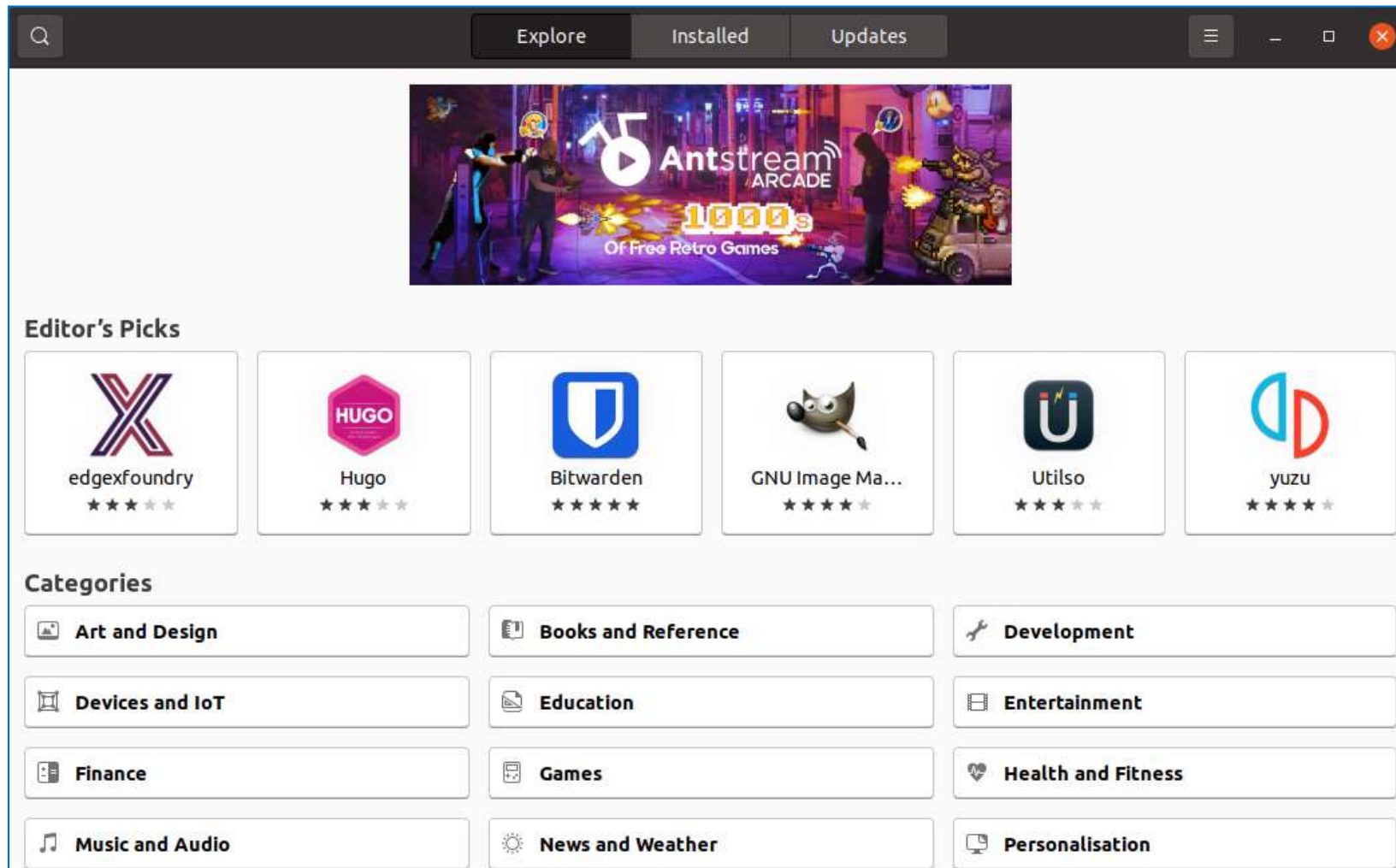
Lab 7 : Installation Frozen-Bubble Game using Ubuntu Software Center on Ubuntu 22.04 LTS

Installation Frozen-Bubble Game In Ubuntu Software Center

APT (Advanced Package Tool)

- Is a collection of tools.

- A significant part is defined in a C++ library of functions.

- Includes command-line programs.

- Three such programs are *apt*, *apt-get* and *apt-cache*.

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apt-get

- Is the command line package management tool.
- Supplied with the Debian package apt.
- APT searches its cached list of packages.
- Lists the dependencies that must be installed or updated.
- APT retrieves, configures and installs the dependencies automatically.

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apt-get (Cont.)

- ## Usage

`sudo apt [options] <command> <package-name 1> <package-name2> …`

- ## Example

`$ sudo apt install totem smplayer -y`

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apt-get (Cont.)

- Commands
  - *install* : install the new package.

    ```
    $ sudo apt install totem smplayer
    ```

  - *remove* : remove/delete an installed package except configuration files.

    ```
    $ sudo apt remove zip
    ```

  - *purge* : remove/delete everything including configuration files.

    ```
    $ sudo apt purse mysql-server
    ```

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apt-get (Cont.)

- Commands
  - *update* : sync the local software database with the repository database (build cache).

    $ `sudo apt update`

  - *upgrade* : upgrade all the software on your system to the latest versions.

    $ `sudo apt upgrade`

  - *dist-upgrade* : upgrades the whole linux distribution to a new version.

    $ `sudo apt dist-upgrade`

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apt-get (Cont.)

- Commands
  - *check* : verifies system's integrity using apt.
  - *clean* : removes the downloaded packages from the cache directory (/var/cache/apt/archives/).
  - *autoclean* : like clean, The difference is that it only removes package files that can no longer be downloaded, and are largely useless.
  - *autoremove* : remove packages that were automatically installed to satisfy dependencies for some package and that are no more needed.

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apt-get (Cont.)

- Options
  - *-h, --help* : shows a short usage summary.
  - *-d, --download-only* : downloads only, not unpacked or installed.
  - *-y, --yes* : automatic yes to prompt.
  - *-f, --fix-broken* : fix, attempt to correct a system with broken dependencies in place.

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apt-cache

- Performs a variety of operations on APT's package cache.

- Does not manipulate the state of the system.

- Provide operations to search

- Generate interesting output from the package metadata.

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apt-cache (Cont.)

- Commands
  - *search* : performs a full text search on all available package lists for the regex pattern given.
  - *pkgnames* : prints the name of each package in the system.
  - *depends* : shows a listing of each dependency a package has.
  - *show* : displays the package records for the named packages.
  - $ `apt-cache show docky`

apt-cache (Cont.)

$ **apt-cache show frozen-bubble**

PPA

- Personal Package Archive
- Is a special software repository for uploading source packages to be built and published as an APT.
- Usage

```
$ sudo add-apt-repository <PPA Address>
```

- Example

```
$ sudo add-apt-repository ppa:docky-core/ppa
```
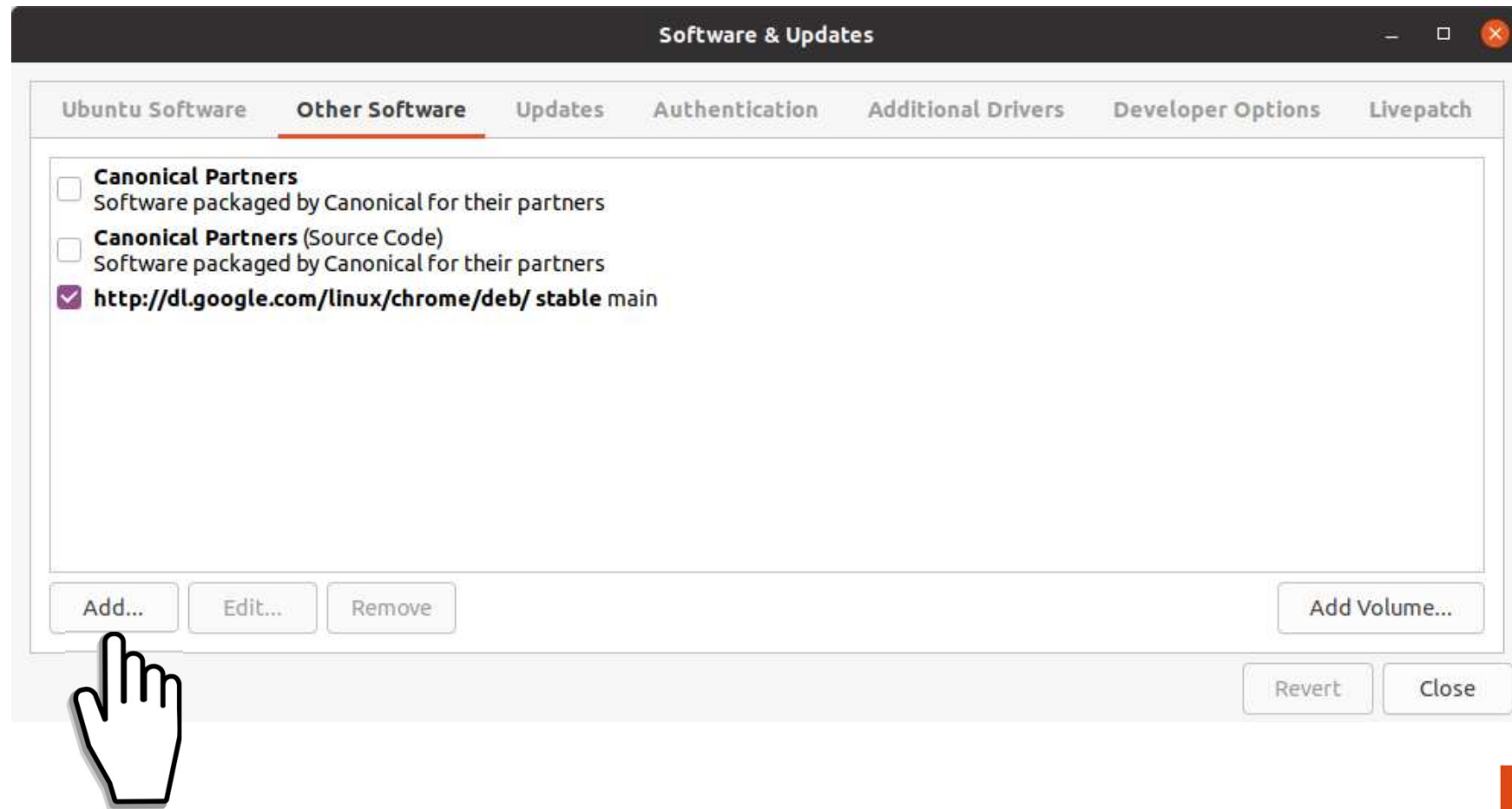
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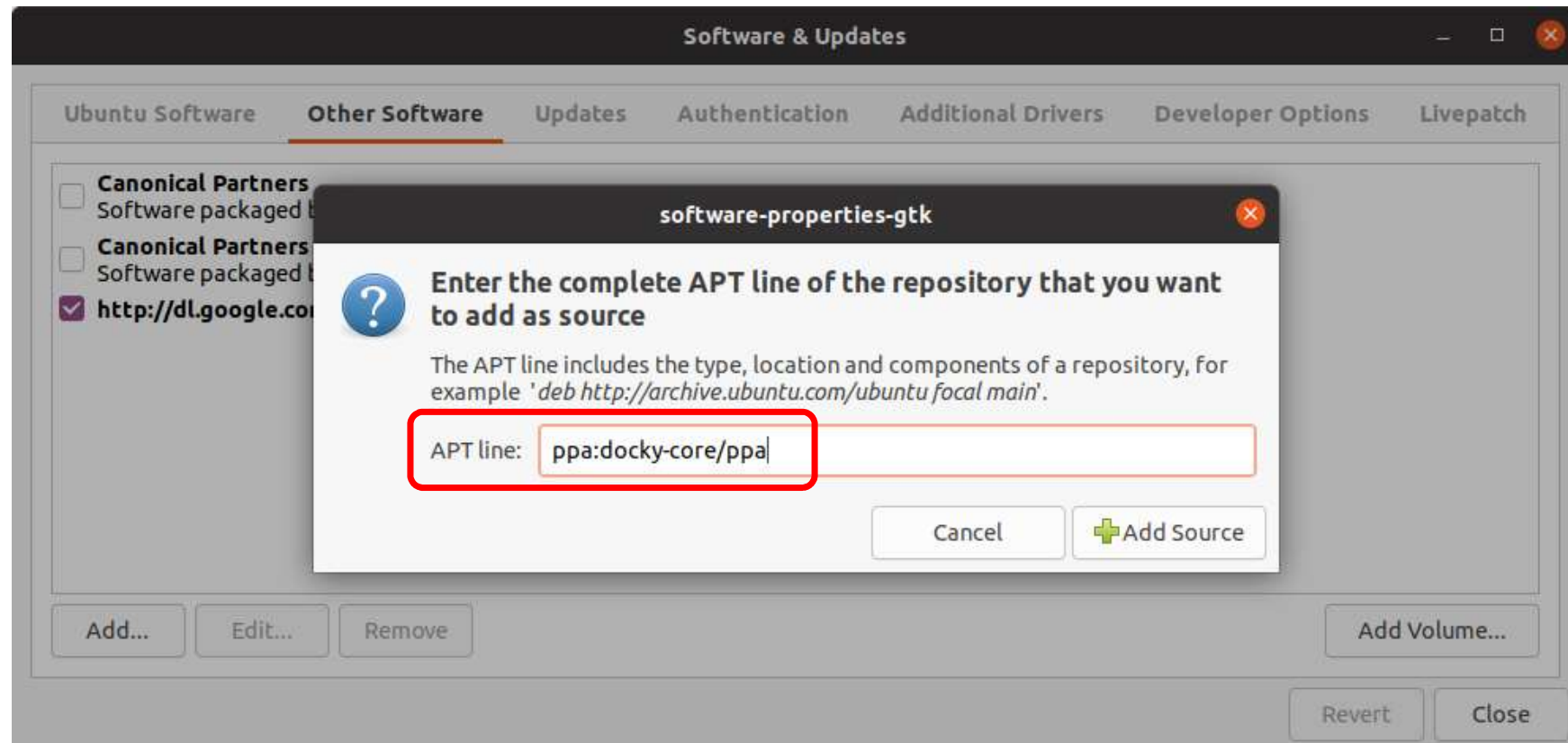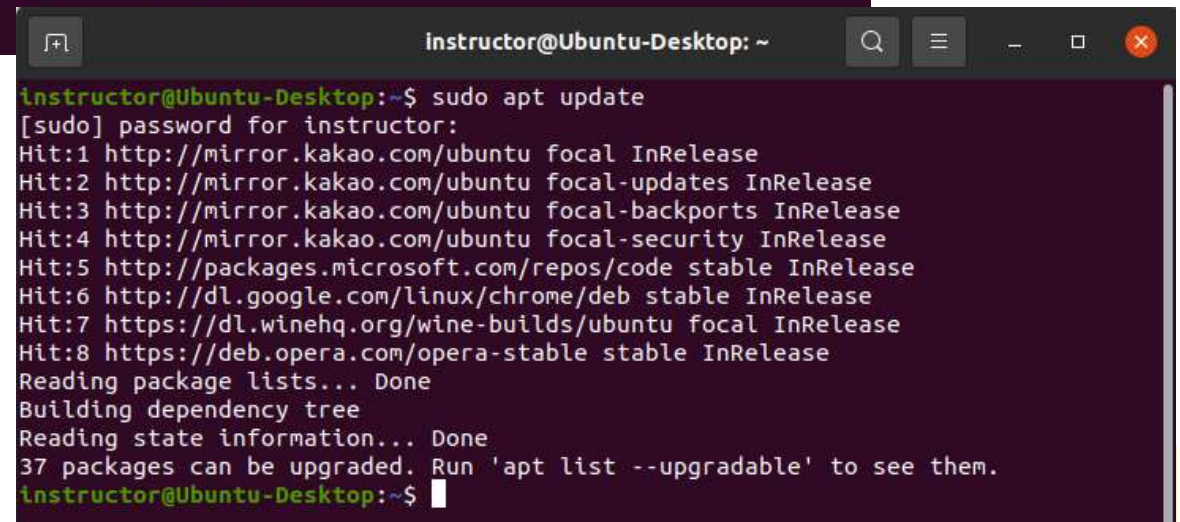
PPA (Cont.)
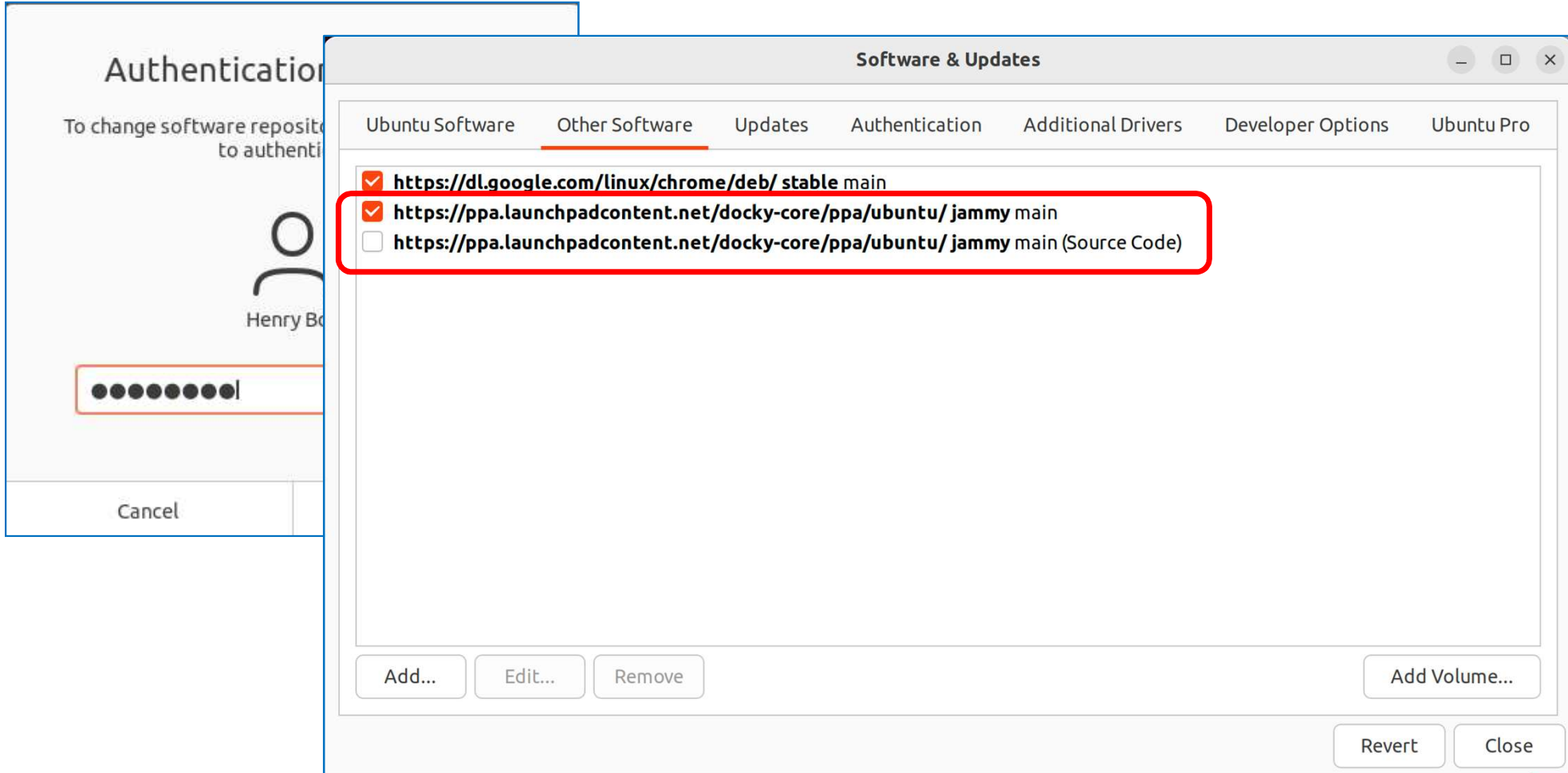
PPA (Cont.)

PPA (Cont.)

PPA (Cont.) Or

$ sudo add-apt-repository

```
instructor@Ubuntu-Desktop:~$ sudo add-apt-repository 'deb https://dl.winehq.org/wine-builds/ubuntu/ focal main'
Hit:1 http://mirror.kakao.com/ubuntu focal InRelease
Hit:2 http://mirror.kakao.com/ubuntu focal-updates InRelease
Hit:3 http://mirror.kakao.com/ubuntu focal-backports InRelease
Hit:4 http://mirror.kakao.com/ubuntu focal-security InRelease
Hit:5 https://deb.opera.com/opera-stable stable InRelease
Hit:6 http://packages.microsoft.com/repos/code stable InRelease
Get:7 https://dl.winehq.org/wine-builds/ubuntu focal InRelease [6,257 B]
Hit:8 http://dl.google.com/linux/chrome/deb stable InRelease
Get:9 https://dl.winehq.org/wine-builds/ubuntu focal/main i386 Packages [239 kB]
Get:10 https://dl.winehq.org/wine-builds/ubuntu focal/main amd64 Packages [237 kB]
Fetched 482 kB in 1s (499 kB/s)
Reading package lists... Done
```

```
                                    instructor@Ubuntu-Desktop: ~

instructor@Ubuntu-Desktop:~$ sudo apt update
[sudo] password for instructor:
Hit:1 http://mirror.kakao.com/ubuntu focal InRelease
Hit:2 http://mirror.kakao.com/ubuntu focal-updates InRelease
Hit:3 http://mirror.kakao.com/ubuntu focal-backports InRelease
Hit:4 http://mirror.kakao.com/ubuntu focal-security InRelease
Hit:5 http://packages.microsoft.com/repos/code stable InRelease
Hit:6 http://dl.google.com/linux/chrome/deb stable InRelease
Hit:7 https://dl.winehq.org/wine-builds/ubuntu focal InRelease
Hit:8 https://deb.opera.com/opera-stable stable InRelease
Reading package lists... Done
Building dependency tree
Reading state information... Done
37 packages can be upgraded. Run 'apt list --upgradable' to see them.
instructor@Ubuntu-Desktop:~$
```

PPA (Cont.) Or

$ sudo add-apt-repository

Synaptic Package Manager

Lab 8 : Installation Synaptic Manager on Ubuntu 22.04 LTS

aptitude

- Is a front-end to the Advanced Packaging Tool (APT).

- Displays a list of software packages.

- Allows the user to interactively pick packages to install or remove.

- Was initially created for Debian, but has appeared in RPM Package Manager (RPM) based distributions.

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Lab 9 : Installation aptitude and installation gnome-clocks using aptitude

aptitude – gnome-clocks

dpkg

- Is the software at the base of the package management system in the free operating system Debian.

- Is used to install, remove, and provide information about .deb packages.

- Usage
  - dpkg [options] action

dpkg (Cont.)

- $ `dpkg -l`
- List packages.

dpkg (Cont.)

- $ `dpkg -l zip`

dpkg (Cont.)

- $ `dpkg -s zip`
- Find package(s) owning file(s).

dpkg (Cont.)

- $ **dpkg -L zip**
- List files 'owned' by packge(s).

dpkg (Cont.)

- $ `dpkg -c opera*.deb`
- Check for broken package(s).

dpkg (Cont.)

- $ **`sudo dpkg -i(--install) opera*.deb`**
- Package install

dpkg (Cont.)

- $ **sudo dpkg -r | --remove**
- $ **sudo dpkg -P | --purge**
- Package remove

Lab 10 : Installation VSCode on Ubuntu 22.04 Using dpkg

VSCode
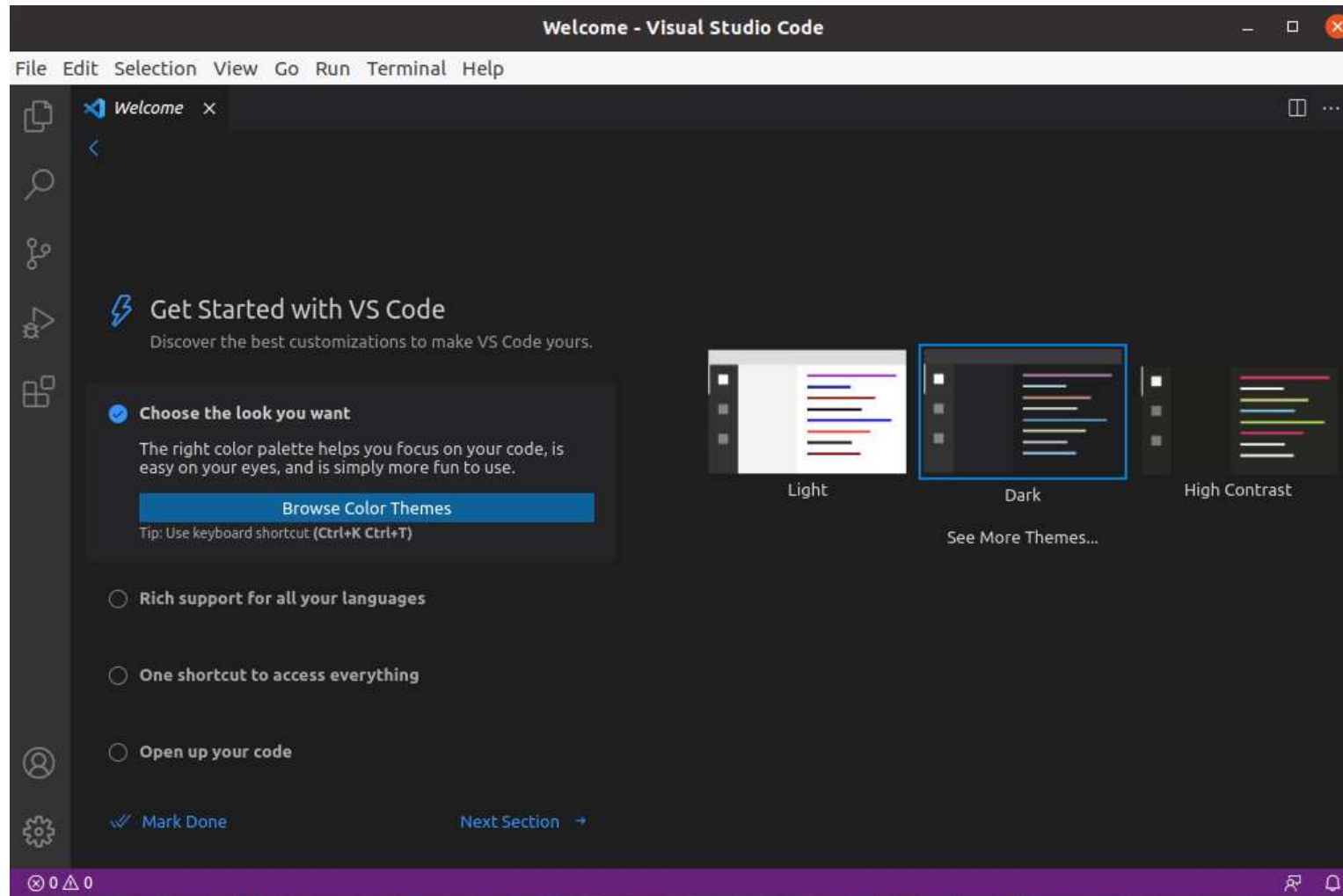
Wine

- Wine Is Not an Emulator

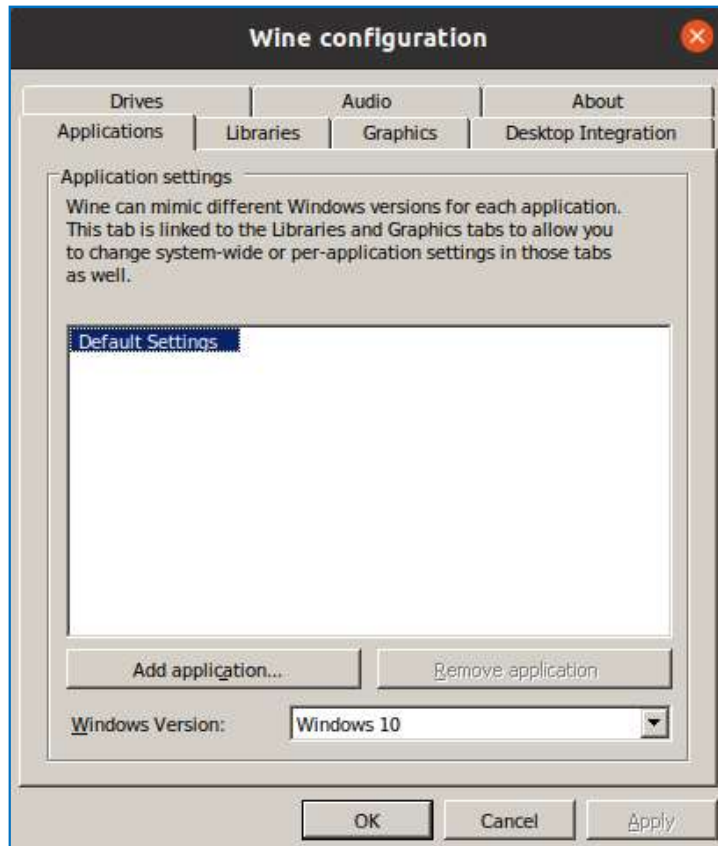- Aims to allow application software and computer games developed for Microsoft Windows to run on Unix-like OS.

Lab 11 : Installation WINE on Ubuntu 22.04 LTS

Wine (Cont.)

Ubuntu Desktop