Expt 1.

Monday, February 24, 2020 5:12 PM

Mapua University School Electrical, Electronics, and Computer Engineering

Experiment 1: Relevant Tools and Standards

Presented By:

CPE106L-B2-GROUP09

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Presented To:

Professor Dionis Padilla

Prelab

Monday, February 24, 2020 5:13 PM

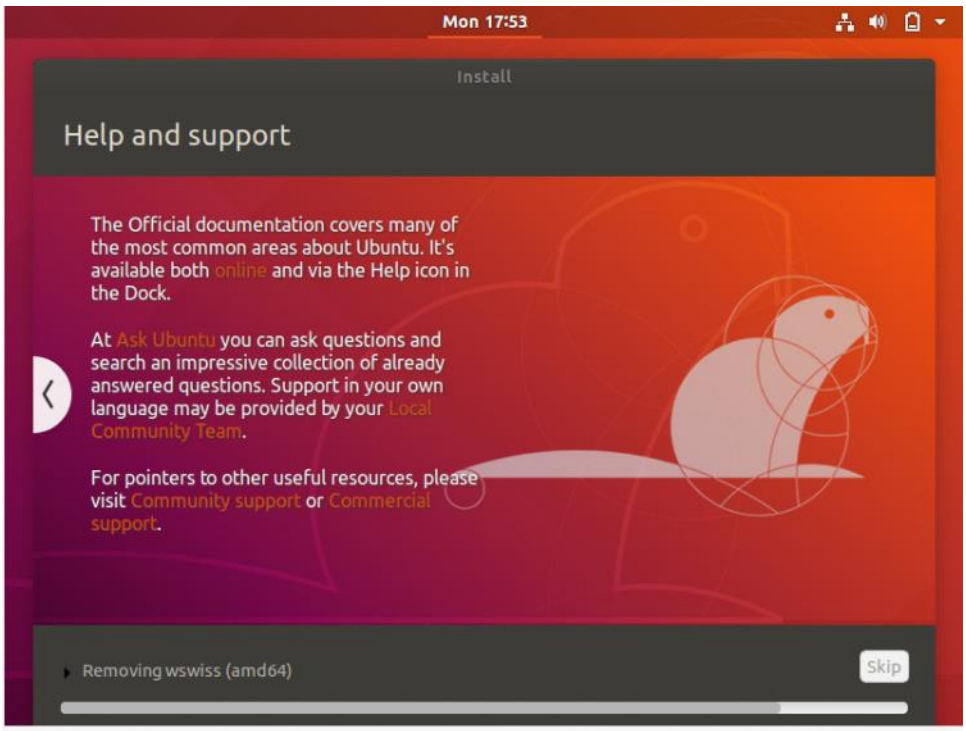

Fig.1. Installation of Ubuntu on VirtualBox

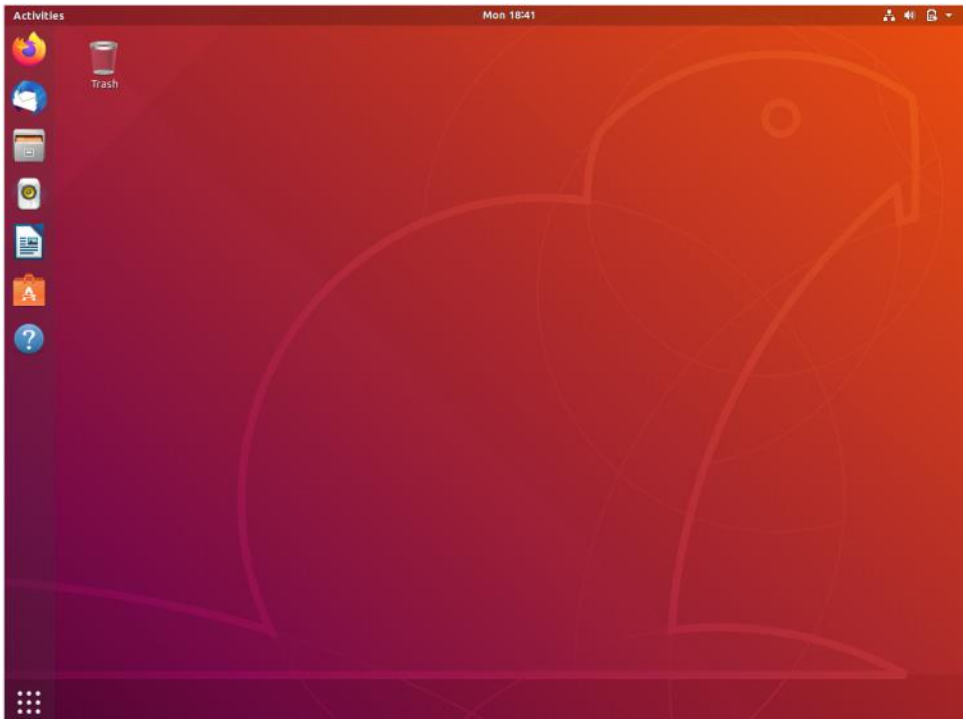

Fig.2. Main page after the installation of Ubuntu on VirtualBox

```
richard@richard-VirtualBox:~$ git config --global user.name "c0rleyyy"
richard@richard-VirtualBox:~$ git config --global user.email "richard_vincent29@yahoo.com"
richard@richard-VirtualBox:~$
```

Fig.3. Signing-in to GitHub using Linux terminal

Fig.4. Creating a master branch in GitHub through Linux terminal

Fig.5. Switching to a new branch in GitHub through Linux terminal

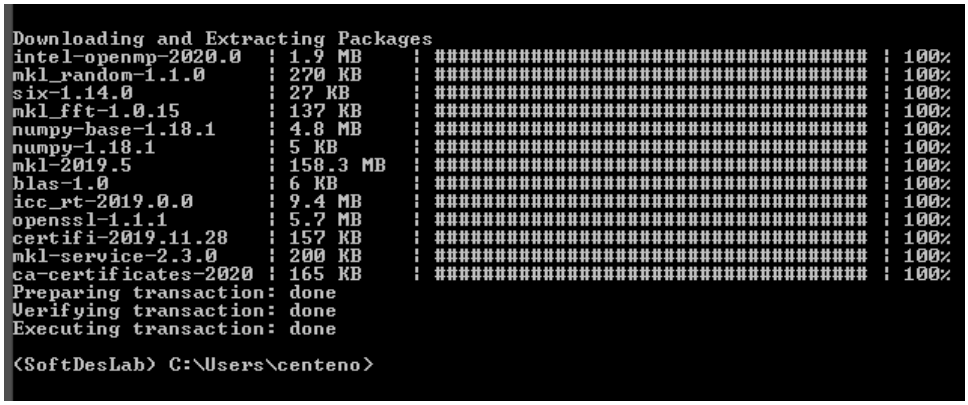

Fig.6. Installation of NumPy through Anaconda Prompt

Fig.7. Installation of Git through Anaconda Prompt

```
(base) C:\Users\docto>conda create -n softDesLab python=3.7
Solving environment: done


==> WARNING: A newer version of conda exists. <==
  current version: 4.5.11
  latest version: 4.8.2

Please update conda by running

    $ conda update -n base -c defaults conda



## Package Plan ##

  environment location: C:\Users\docto\Anaconda3\envs\softDesLab

  added / updated specs:
    - python=3.7


The following packages will be downloaded:

    package                    |            build
    ---------------------------|-----------------
    ca-certificates-2020.1.1   |                0         165 KB
    python-3.7.6               |       h60c2a47_2        18.3 MB
    setuptools-45.2.0          |           py37_0         674 KB
    pip-20.0.2                 |           py37_1         1.9 MB
    openssl-1.1.1d             |       he774522_4         5.7 MB
    vs2015_runtime-14.16.27012 |       hf0eaf9b_1         2.4 MB
    sqlite-3.31.1              |       he774522_0         961 KB
    wheel-0.34.2               |           py37_0          67 KB
    certifi-2019.11.28         |           py37_0         157 KB
    ------------------------------------------------------------
                                           Total:        30.3 MB

The following NEW packages will be INSTALLED:

    ca-certificates: 2020.1.1-0
    certifi:         2019.11.28-py37_0
    openssl:         1.1.1d-he774522_4
    pip:             20.0.2-py37_1
    python:          3.7.6-h60c2a47_2
    setuptools:      45.2.0-py37_0
    sqlite:          3.31.1-he774522_0
    vc:              14.1-h0510ff6_4
    vs2015_runtime:  14.16.27012-hf0eaf9b_1
    wheel:           0.34.2-py37_0
```

Fig.8. Creating "softDesLab" in Anaconda Prompt

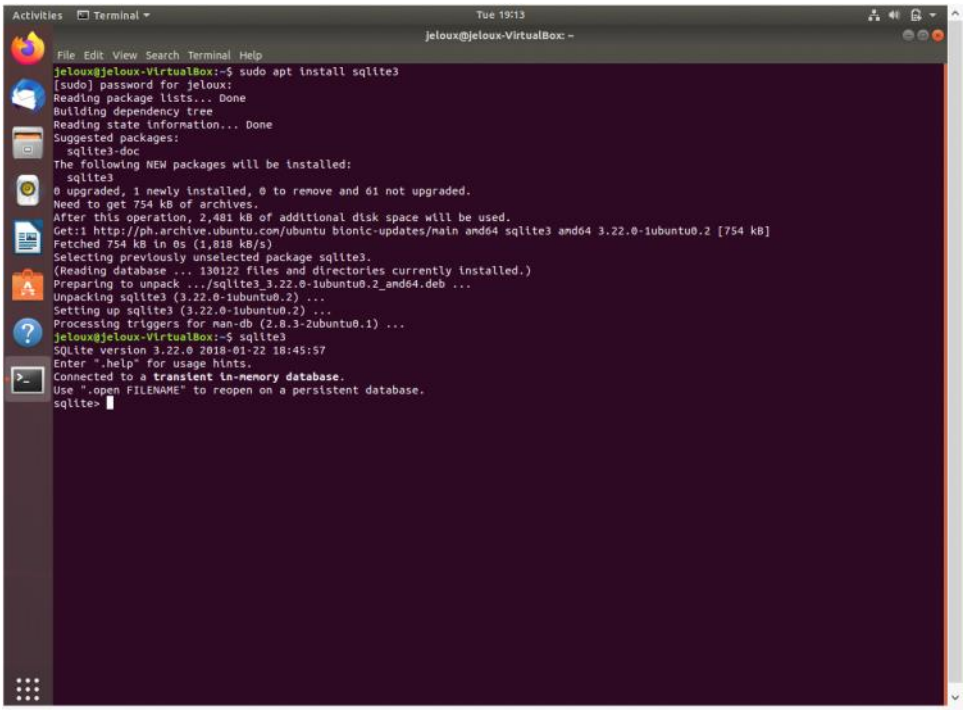

Fig.9. Installation of sqlite3 through Ubuntu

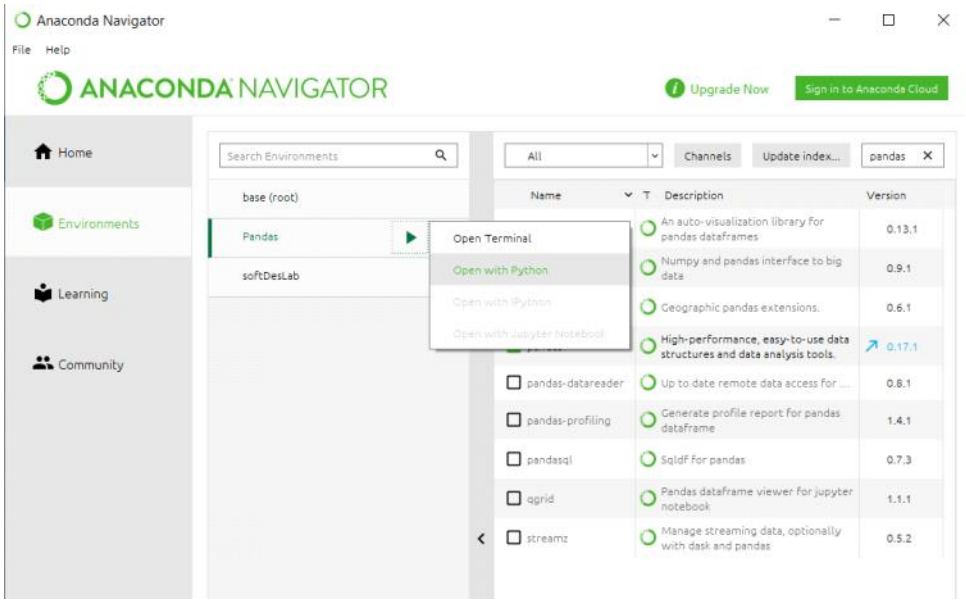

Fig.10. Installation of Pandas package through Anaconda Navigator

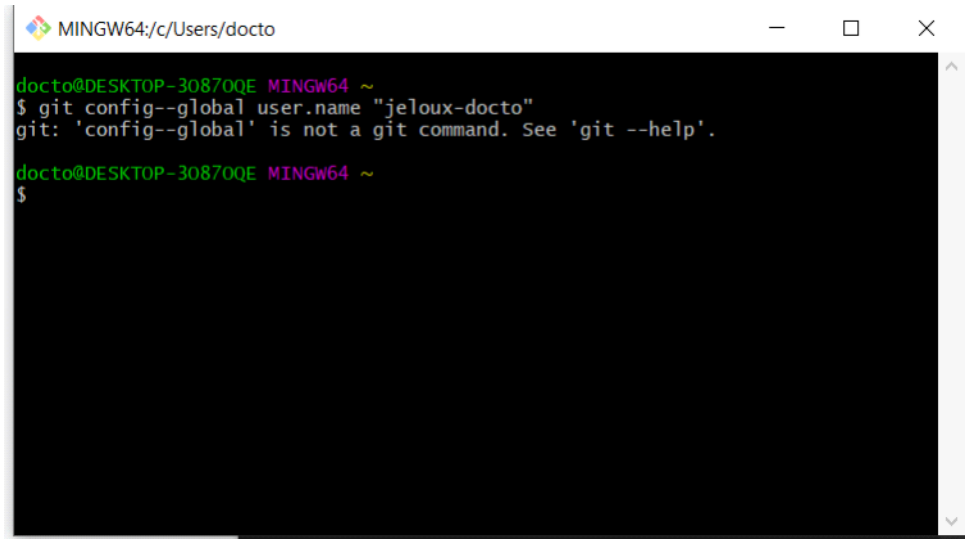

Fig.11. Setting up all Git setting as the author of changer made in codebase

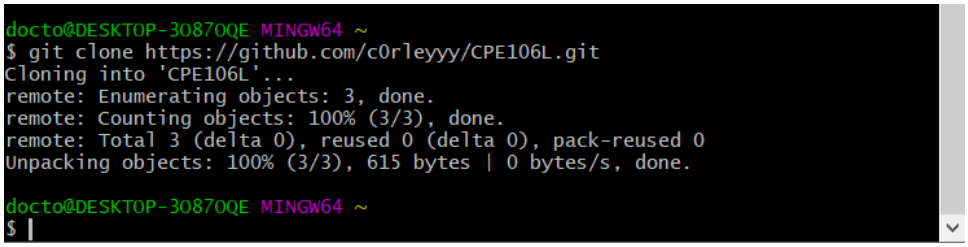

Fig.12. Utiliazation of Cloning in GitHub

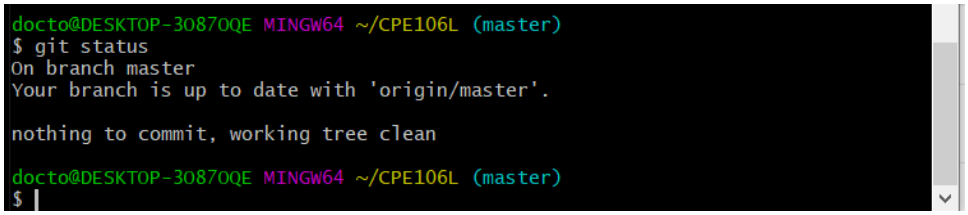

Fig.13. Checking of branch status in GitHub

```
centeno@centeno-VirtualBox:~$ sudo apt-get install sqlitebrowser
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  fonts-liberation2 fonts-opensymbol gir1.2-geocodeglib-1.0 gir1.2-gst-plugins-base-1.0 gir1.2-gstreamer-1.0 gir1.2-gudev-1.0
  gir1.2-udisks-2.0 grilo-plugins-0.3-base gstreamer1.0-gtk3 libboost-date-time1.65.1 libboost-filesystem1.65.1 libboost-iostreams1.65.1
  libboost-locale1.65.1 libcdr-0.1-1 libclucene-contribs1v5 libclucene-core1v5 libcmis-0.5-5v5 libcoland2 libdazzle-1.0-0 libe-book-0.1-1
  libedataserverui-1.2-2 libeot0 libepubgen-0.1-1 libetonyek-0.1-1 libevent-2.1-6 libexiv2-14 libfreerdp-client2-2 libfreerdp2-2 libgc1c2
  libgee-0.8-2 libgexiv2-2 libgom-1.0-0 libgpgmepp6 libgpod-common libgpod4 liblangtag-common liblangtag1 liblirc-client0 liblua5.3-0
  libmediaart-2.0-0 libmspub-0.1-1 libodfgen-0.1-1 libqqwing2v5 libraw16 librevenge-0.0-0 libsgutils2-2 libssh-4 libsuitesparseconfig5
  libvncclient1 libwinpr2-2 libxaplan30 libxmlsec1 libxmlsec1-nss lp-solve media-player-info python3-mako python3-markupsafe syslinux
  syslinux-common syslinux-legacy usb-creator-common
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libdouble-conversion1 libqscintilla2-qt5-13 libqscintilla2-qt5-l10n libqt5core5a libqt5dbus5 libqt5gui5 libqt5network5 libqt5printsupport5
  libqt5svg5 libqt5widgets5 libxcb-xinerama0 qt5-gtk-platformtheme qttranslations5-l10n
Suggested packages:
  libqscintilla2-doc qt5-image-formats-plugins qtwayland5
The following NEW packages will be installed:
  libdouble-conversion1 libqscintilla2-qt5-13 libqscintilla2-qt5-l10n libqt5core5a libqt5dbus5 libqt5gui5 libqt5network5 libqt5printsupport5
  libqt5svg5 libqt5widgets5 libxcb-xinerama0 qt5-gtk-platformtheme qttranslations5-l10n sqlitebrowser
0 upgraded, 14 newly installed, 0 to remove and 270 not upgraded.
Need to get 11.9 MB of archives.
After this operation, 51.6 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://ph.archive.ubuntu.com/ubuntu bionic/main amd64 libdouble-conversion1 amd64 2.0.1-4ubuntu1 [33.0 kB]
Get:2 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5core5a amd64 5.9.5+dfsg-0ubuntu2.5 [2,036 kB]
Get:3 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5dbus5 amd64 5.9.5+dfsg-0ubuntu2.5 [195 kB]
Get:4 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5network5 amd64 5.9.5+dfsg-0ubuntu2.5 [635 kB]
Get:5 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libxcb-xinerama0 amd64 1.13-2~ubuntu18.04 [5,264 B]
Get:6 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5gui5 amd64 5.9.5+dfsg-0ubuntu2.5 [2,568 kB]
Get:7 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5widgets5 amd64 5.9.5+dfsg-0ubuntu2.5 [2,203 kB]
Get:8 http://ph.archive.ubuntu.com/ubuntu bionic/main amd64 libqt5svg5 amd64 5.9.5-0ubuntu1 [128 kB]
Get:9 http://ph.archive.ubuntu.com/ubuntu bionic/universe amd64 libqscintilla2-qt5-l10n all 2.10.2+dfsg-4 [39.7 kB]
Get:10 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5printsupport5 amd64 5.9.5+dfsg-0ubuntu2.5 [178 kB]
Get:11 http://ph.archive.ubuntu.com/ubuntu bionic/universe amd64 libqscintilla2-qt5-13 amd64 2.10.2+dfsg-4 [1,030 kB]
```

Fig.14. Installation of db browser through Linux terminal

```
Get:7 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5widgets5 amd64 5.9.5+dfsg-0ubuntu2.5 [2,203 kB]
Get:8 http://ph.archive.ubuntu.com/ubuntu bionic/main amd64 libqt5svg5 amd64 5.9.5-0ubuntu1 [128 kB]
Get:9 http://ph.archive.ubuntu.com/ubuntu bionic/universe amd64 libqscintilla2-qt5-l10n all 2.10.2+dfsg-4 [39.7 kB]
Get:10 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libqt5printsupport5 amd64 5.9.5+dfsg-0ubuntu2.5 [178 kB]
Get:11 http://ph.archive.ubuntu.com/ubuntu bionic/universe amd64 libqscintilla2-qt5-13 amd64 2.10.2+dfsg-4 [1,030 kB]
Get:12 http://ph.archive.ubuntu.com/ubuntu bionic-updates/main amd64 qt5-gtk-platformtheme amd64 5.9.5+dfsg-0ubuntu2.5 [117 kB]
Get:13 http://ph.archive.ubuntu.com/ubuntu bionic/main amd64 qttranslations5-l10n all 5.9.5-0ubuntu1 [1,485 kB]
Get:14 http://ph.archive.ubuntu.com/ubuntu bionic/universe amd64 sqlitebrowser amd64 3.10.1-1.1 [1,223 kB]
Fetched 11.9 MB in 17s (685 kB/s)
Selecting previously unselected package libdouble-conversion1:amd64.
(Reading database ... 117364 files and directories currently installed.)
Preparing to unpack .../00-libdouble-conversion1_2.0.1-4ubuntu1_amd64.deb ...
Unpacking libdouble-conversion1:amd64 (2.0.1-4ubuntu1) ...
Selecting previously unselected package libqt5core5a:amd64.
Preparing to unpack .../01-libqt5core5a_5.9.5+dfsg-0ubuntu2.5_amd64.deb ...
Unpacking libqt5core5a:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Selecting previously unselected package libqt5dbus5:amd64.
Preparing to unpack .../02-libqt5dbus5_5.9.5+dfsg-0ubuntu2.5_amd64.deb ...
Unpacking libqt5dbus5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Selecting previously unselected package libqt5network5:amd64.
Preparing to unpack .../03-libqt5network5_5.9.5+dfsg-0ubuntu2.5_amd64.deb ...
Unpacking libqt5network5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Selecting previously unselected package libxcb-xinerama0:amd64.
Preparing to unpack .../04-libxcb-xinerama0_1.13-2~ubuntu18.04_amd64.deb ...
Unpacking libxcb-xinerama0:amd64 (1.13-2~ubuntu18.04) ...
Selecting previously unselected package libqt5gui5:amd64.
Preparing to unpack .../05-libqt5gui5_5.9.5+dfsg-0ubuntu2.5_amd64.deb ...
Unpacking libqt5gui5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Selecting previously unselected package libqt5widgets5:amd64.
Preparing to unpack .../06-libqt5widgets5_5.9.5+dfsg-0ubuntu2.5_amd64.deb ...
Unpacking libqt5widgets5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Selecting previously unselected package libqt5svg5:amd64.
Preparing to unpack .../07-libqt5svg5_5.9.5-0ubuntu1_amd64.deb ...
Unpacking libqt5svg5:amd64 (5.9.5-0ubuntu1) ...
Selecting previously unselected package libqscintilla2-qt5-l10n.
Preparing to unpack .../08-libqscintilla2-qt5-l10n_2.10.2+dfsg-4_all.deb ...
Unpacking libqscintilla2-qt5-l10n (2.10.2+dfsg-4) ...
```

Fig.15. Continuation of installation of db browser through Linux terminal

```
Unpacking libqt5printsupport5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Selecting previously unselected package libqscintilla2-qt5-13.
Preparing to unpack .../10-libqscintilla2-qt5-13_2.10.2+dfsg-4_amd64.deb ...
Unpacking libqscintilla2-qt5-13 (2.10.2+dfsg-4) ...
Selecting previously unselected package qt5-gtk-platformtheme:amd64.
Preparing to unpack .../11-qt5-gtk-platformtheme_5.9.5+dfsg-0ubuntu2.5_amd64.deb ...
Unpacking qt5-gtk-platformtheme:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Selecting previously unselected package qttranslations5-l10n.
Preparing to unpack .../12-qttranslations5-l10n_5.9.5-0ubuntu1_all.deb ...
Unpacking qttranslations5-l10n (5.9.5-0ubuntu1) ...
Selecting previously unselected package sqlitebrowser.
Preparing to unpack .../13-sqlitebrowser_3.10.1-1.1_amd64.deb ...
Unpacking sqlitebrowser (3.10.1-1.1) ...
Setting up libxcb-xinerama0:amd64 (1.13-2~ubuntu18.04) ...
Setting up libdouble-conversion1:amd64 (2.0.1-4ubuntu1) ...
Processing triggers for mime-support (3.60ubuntu1) ...
Processing triggers for desktop-file-utils (0.23-1ubuntu3.18.04.2) ...
Processing triggers for libc-bin (2.27-3ubuntu1) ...
Setting up qttranslations5-l10n (5.9.5-0ubuntu1) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Setting up libqscintilla2-qt5-l10n (2.10.2+dfsg-4) ...
Processing triggers for gnome-menus (3.13.3-11ubuntu1.1) ...
Processing triggers for hicolor-icon-theme (0.17-2) ...
Setting up libqt5core5a:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5dbus5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5network5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5gui5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up qt5-gtk-platformtheme:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5widgets5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5printsupport5:amd64 (5.9.5+dfsg-0ubuntu2.5) ...
Setting up libqt5svg5:amd64 (5.9.5-0ubuntu1) ...
Setting up libqscintilla2-qt5-13 (2.10.2+dfsg-4) ...
Setting up sqlitebrowser (3.10.1-1.1) ...
Processing triggers for libc-bin (2.27-3ubuntu1) ...
```

Fig.16. Continuation of installation of db browser through Linux terminal

```
centeno@centeno-VirtualBox:~$ sqlitebrowser
```

Fig.17. Activation of db browser through Linux terminal

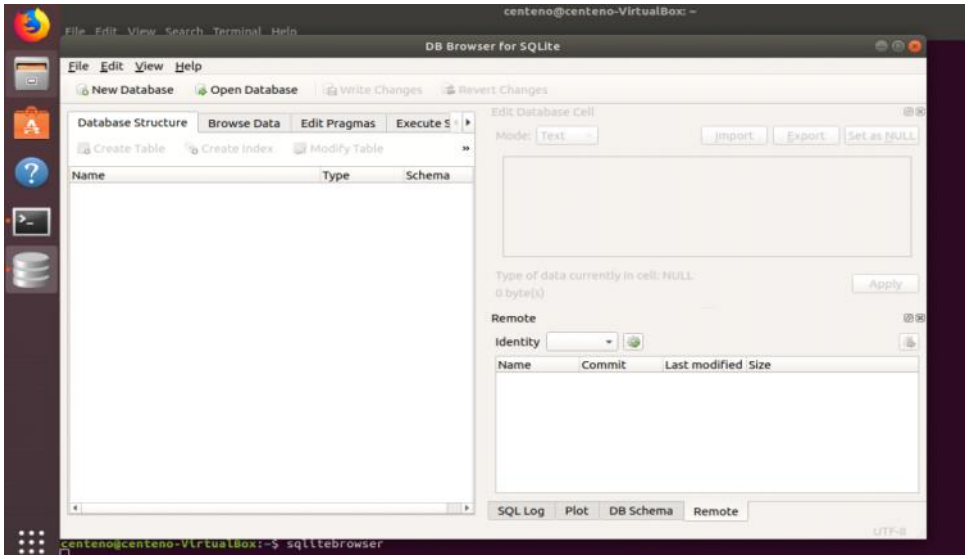

Fig.18. Home screen of db browser

```
centeno@centeno-VirtualBox:~$ sudo snap install --classic code
code c47d83b2 from Visual Studio Code (vscode✓) installed
centeno@centeno-VirtualBox:~$ code
```
Fig.19. Installation of visual code through Linux terminal

```
centeno@centeno-VirtualBox:~$ code
```
Fig.20. Activation of visual code through Linux terminal

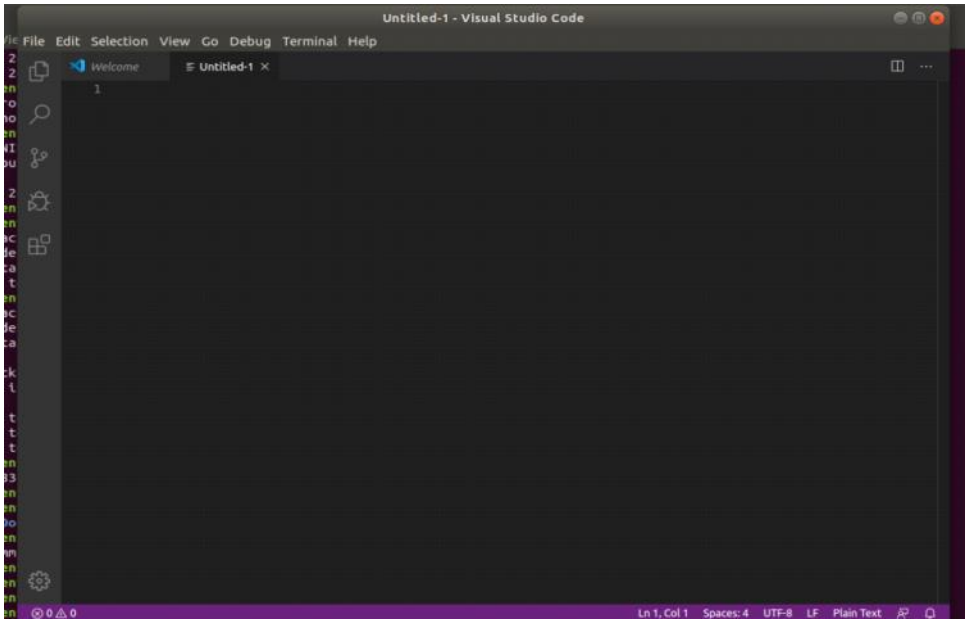

Fig.21. Home screen of Visual Studio code

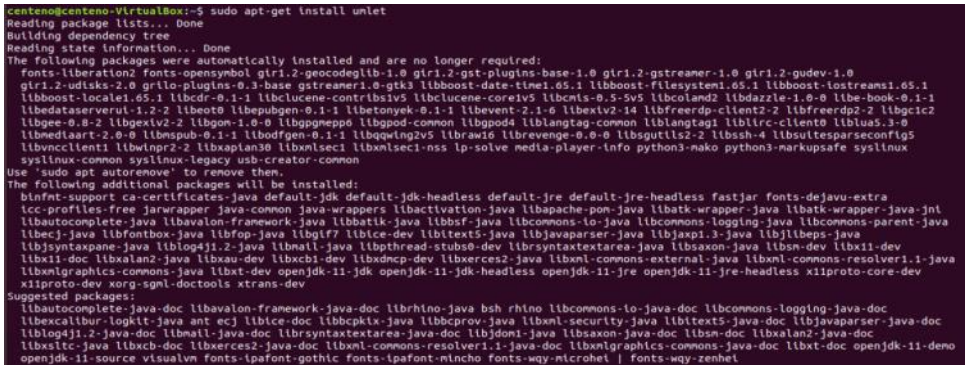

Fig.22. Installation of UMlet through Linux terminal

```
Adding debian:Deutsche_Telekom_Root_CA_2.pem
Adding debian:DigiCert_Global_Root_G3.pem
Adding debian:Autoridad_de_Certificacion_Firmaprofesional_CIF_A62634068.pem
Adding debian:VeriSign_Universal_Root_Certification_Authority.pem
Adding debian:ISRG_Root_X1.pem
Adding debian:Starfield_Class_2_CA.pem
Adding debian:T-TeleSec_GlobalRoot_Class_2.pem
Adding debian:TWCA_Global_Root_CA.pem
Adding debian:AffirmTrust_Premium.pem
Adding debian:ssl-cert-snakeoil.pem
Adding debian:AffirmTrust_Commercial.pem
Adding debian:DigiCert_Global_Root_G2.pem
Adding debian:OpenTrust_Root_CA_G3.pem
Adding debian:ePKI_Root_Certification_Authority.pem
Adding debian:Security_Communication_RootCA2.pem
Adding debian:EE_Certification_Centre_Root_CA.pem
Adding debian:Staat_der_Nederlanden_Root_CA_-_G2.pem
Adding debian:Verisign_Class_3_Public_Primary_Certification_Authority_-_G3.pem
Adding debian:COMODO_RSA_Certification_Authority.pem
Adding debian:QuoVadis_Root_CA_2.pem
Adding debian:GeoTrust_Primary_Certification_Authority_-_G2.pem
Adding debian:Security_Communication_Root_CA.pem
Adding debian:Certplus_Root_CA_G2.pem
Adding debian:AffirmTrust_Networking.pem
Adding debian:VeriSign_Class_3_Public_Primary_Certification_Authority_-_G4.pem
done.
Setting up default-jre (2:1.11-68ubuntu1~18.04.1) ...
Setting up openjdk-11-jdk:amd64 (11.0.6+10-1ubuntu1~18.04.1) ...
update-alternatives: using /usr/lib/jvm/java-11-openjdk-amd64/bin/jconsole to provide /usr/bin/jconsole (jconsole) in auto mode
Setting up default-jdk (2:1.11-68ubuntu1~18.04.1) ...
Setting up umlet (13.3-1.1) ...
Processing triggers for libc-bin (2.27-3ubuntu1) ...
Processing triggers for ca-certificates (20180409) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...

done.
```

Fig.23. Installation of UMlet through Linux terminal

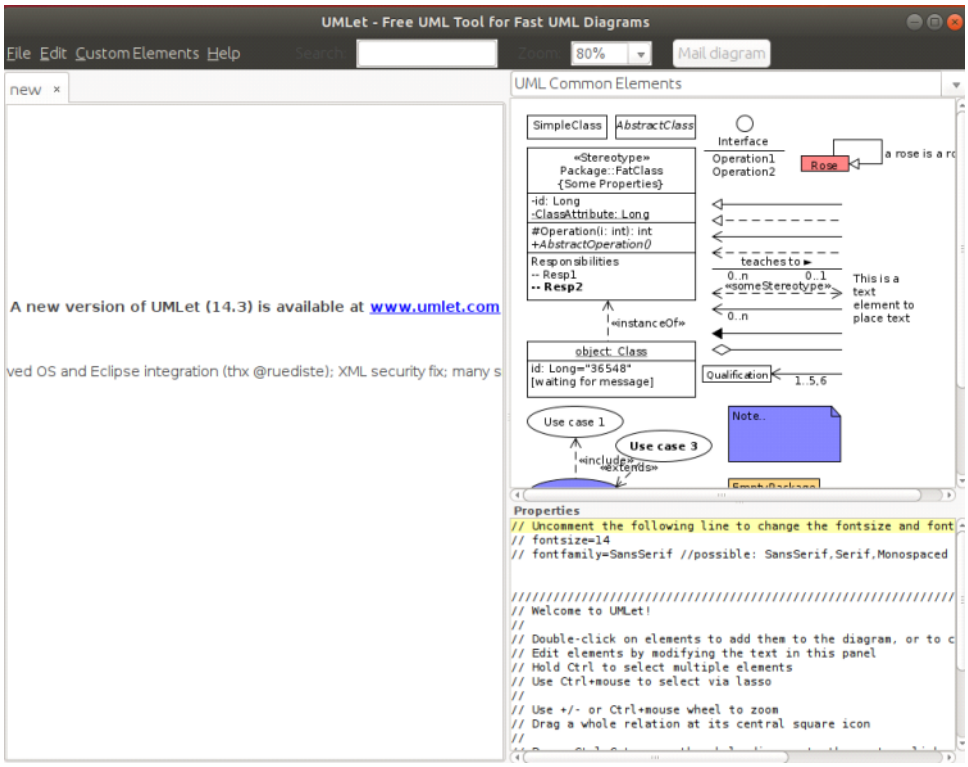

Fig. 24. UMLet homescreen in Ubuntu

Figures above shows the necessary applications and extensions we need in this subject. Applications such as Oracle VM Virtual Box lets us make use of Ubuntu in a Windows PC. Anaconda Navigator is an application that lets us compile and run our python codes. Some examples of extensions installed are pyqt, pandas, numpy and matlab. In the Ubuntu terminal we installed Git, VSCode, UMLet and DB Browser. These are some of the applications that we will make use in the entire term.