

Experiment 1

Monday, 27 April 2020 10:18 PM



Mapúa University
School of Electrical, Electronics, and Computer Engineering



Experiment 1: Installation and Tool Familiarization

CPE106L (Software Design Laboratory)

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Group: 01

Section: B1

InLab

- **Objectives**

- **Install Anaconda**
- **Install Visual Studio Code**
- **Run python codes on VS Code**
- **Install and learn to use Git and Github**

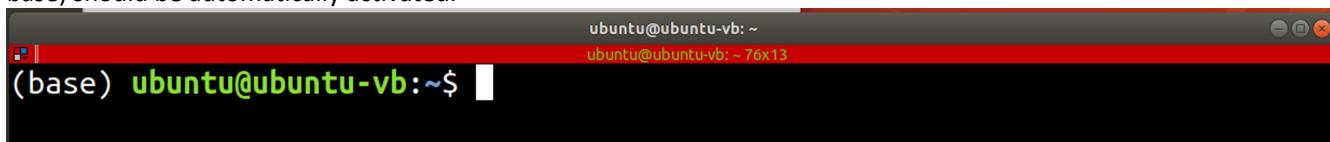
- **Anaconda**

- To install Anaconda, the installation file should be downloaded first from https://repo.anaconda.com/archive/Anaconda3-2020.02-Linux-x86_64.sh. Next is to navigate to the folder where the anaconda installer file is downloaded then execute the file.



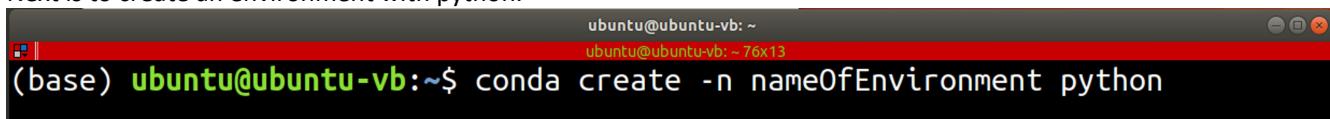
```
ubuntu@ubuntu-vb:~/Downloads$ ./Anaconda3-2020.02-Linux-x86_64.sh
```

Wait for the installation to finish then restart the system. After opening terminal, the anaconda environment (named base) should be automatically activated.



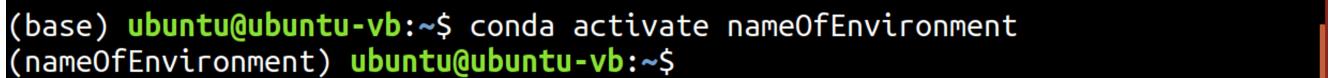
```
(base) ubuntu@ubuntu-vb:~$
```

Next is to create an environment with python.



```
(base) ubuntu@ubuntu-vb:~$ conda create -n nameOfEnvironment python
```

Then activate the environment.



```
(base) ubuntu@ubuntu-vb:~$ conda activate nameOfEnvironment  
(nameOfEnvironment) ubuntu@ubuntu-vb:~$
```

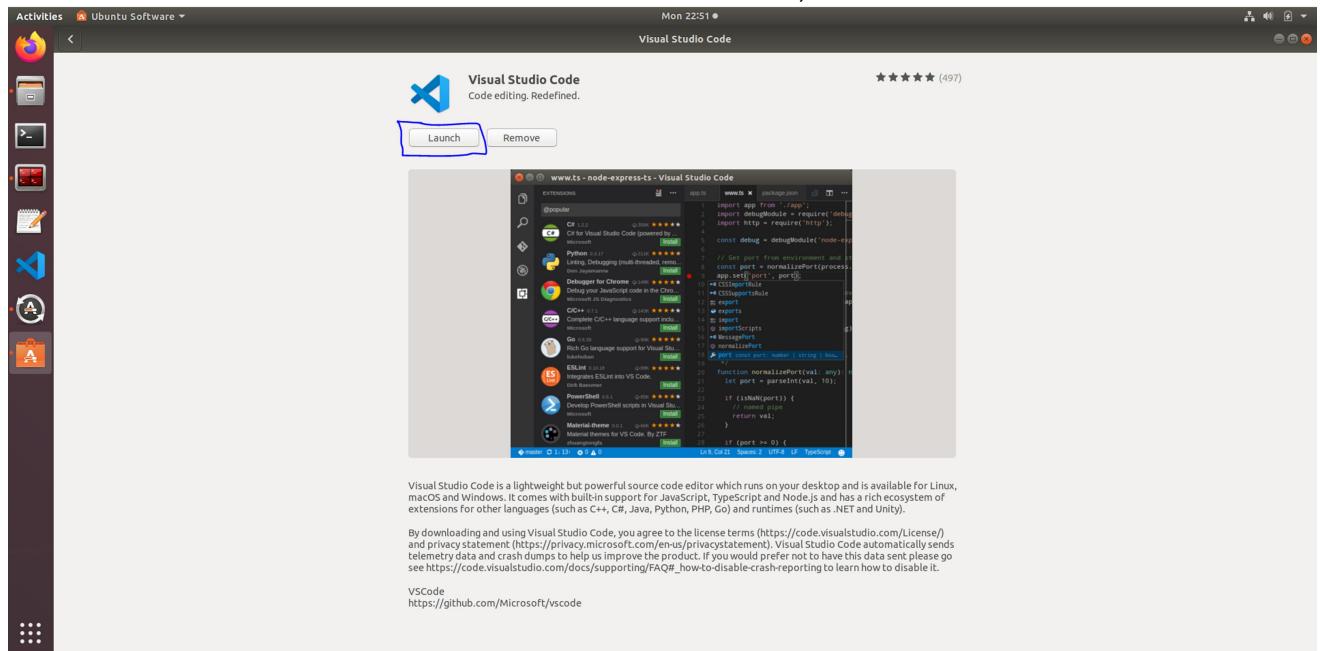
Anaconda is now ready to use.

- **Visual Studio Code**

- To install VS Code, click the show applications icon located at the bottom left corner of Ubuntu then search for Ubuntu Software and open it.



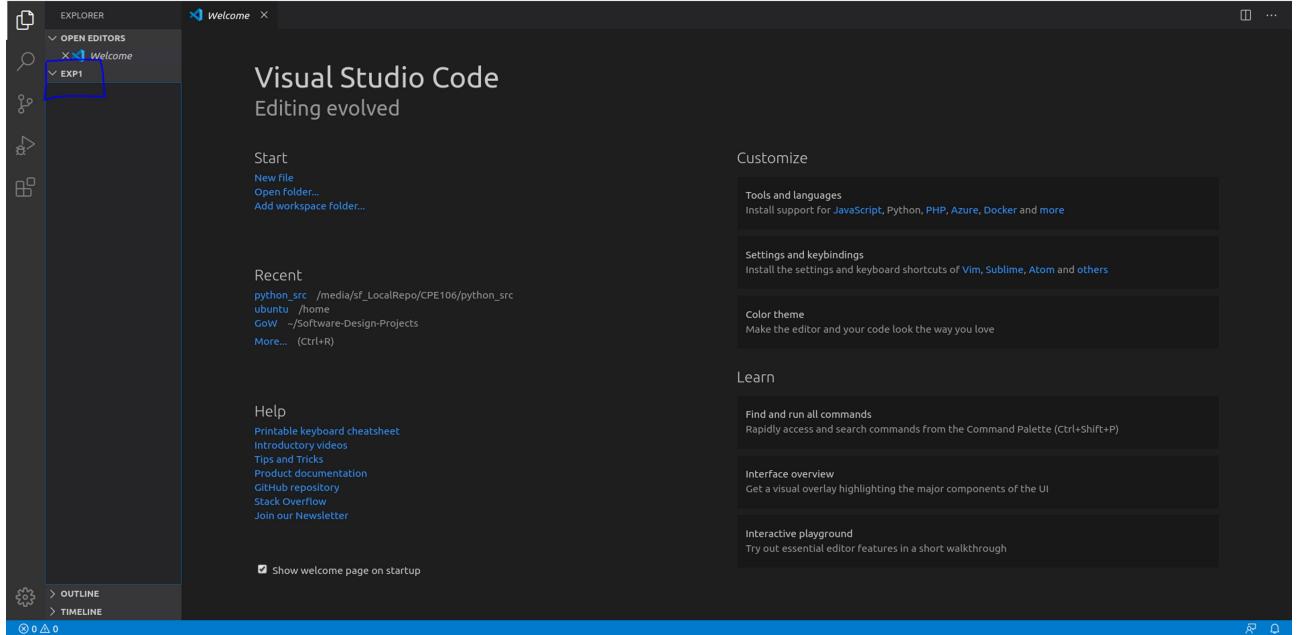
Next is to search for Visual Studio Code then install it. After installation, click launch to launch VS Code.



Alternatively, use terminal to navigate to a desired folder and open it in code.

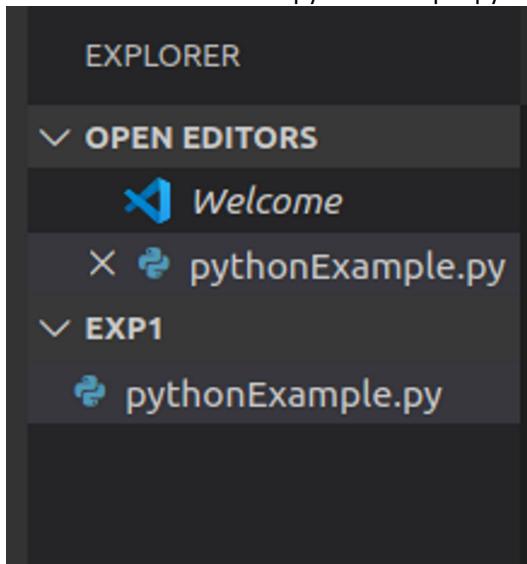
```
ubuntu@ubuntu-vb: ~/LocalRepo/Exp1
ubuntu@ubuntu-vb: ~/LocalRepo/Exp1
(nameOfEnvironment) ubuntu@ubuntu-vb:~$ cd LocalRepo/Exp1/
(nameOfEnvironment) ubuntu@ubuntu-vb:~/LocalRepo/Exp1$ code .
```

VS code will be automatically at the directory.



- **Python on VS Code**

- First, create a python file on vs code by clicking right mouse button on the explorer window below the directory then create a new file named "pythonExample.py".



Next is to code a sample python program and then save it.

```
>Welcome pythonExample.py
pythonExample.py
1 print("Hello World! -python")
```

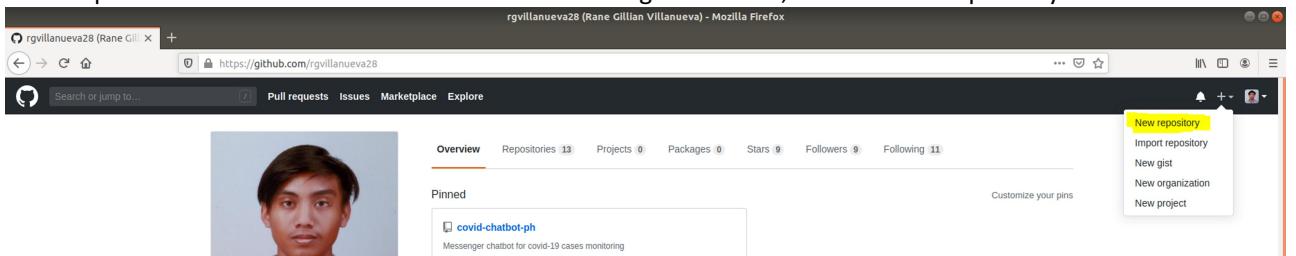
The image shows the VS Code editor with a single open file named 'pythonExample.py'. The code inside the file is a single line: 'print("Hello World! -python")'. The file tab shows the name and has a save icon.

Then run the python program.

The output will be seen on the terminal window located at the bottom.

- Git and GitHub

- First step is to create an account on Github. After creating an account, create a new repository.



Owner rgvillanueva28 / **Repository name *** Software-Design-Lab-Exercise ✓

Great repository names are short and memorable. Need inspiration? How about **cuddly-memory?**

Description (optional)

Public Anyone can see this repository. You choose who can commit.

Private You choose who can see and commit to this repository.

Skip this step if you're importing an existing repository.

Initialize this repository with a README
This will let you immediately clone the repository to your computer.

Add .gitignore: None | Add a license: None | ⓘ

Create repository

Next is to install git using terminal.

After installation, initialize your local git repository.

```
ubuntu@ubuntu-vb: ~/LocalRepo/Exp1
ubuntu@ubuntu-vb: ~/LocalRepo/Exp1$ git init .
Initialized empty Git repository in /home/ubuntu/LocalRepo/Exp1/.git/
```

Next is to define author name and email.

```
(nameOfEnvironment) ubuntu@ubuntu-vb:~/LocalRepo/Exp1$ git config --global user.name "Rane Gillian Villanueva"
(nameOfEnvironment) ubuntu@ubuntu-vb:~/LocalRepo/Exp1$ git config --global user.email "rgvillanueva28@gmail.com"
```

Then, stage the files.

```
(nameOfEnvironment) ubuntu@ubuntu-vb:~/LocalRepo/Exp1$ git add .
```

Next is to commit the files with a message.

```
(nameOfEnvironment) ubuntu@ubuntu-vb:~/LocalRepo/Exp1$ git commit -m "First git commit"
[master (root-commit) ffd6eaf] First git commit
 2 files changed, 4 insertions(+)
  create mode 100644 .vscode/settings.json
  create mode 100644 pythonExample.py
```

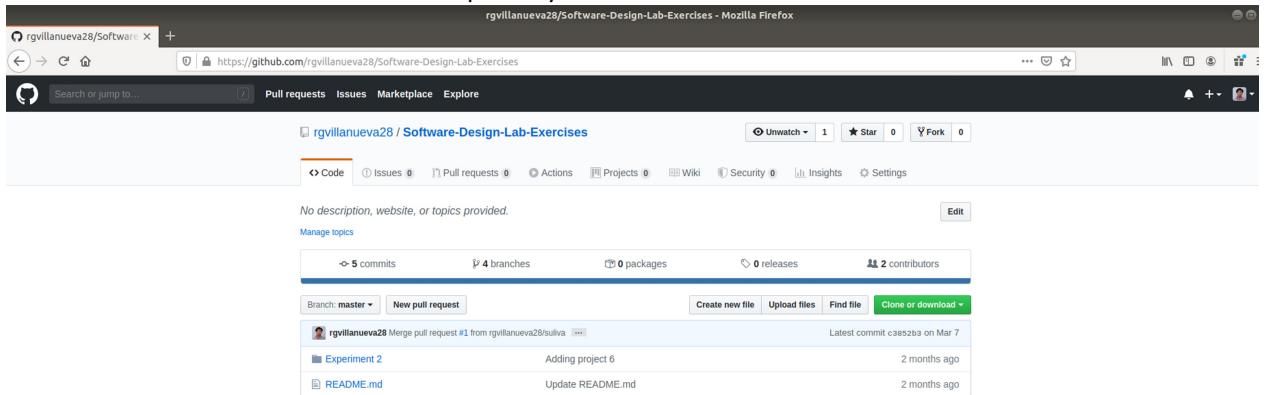
Next is to set the remote repository which was created on Github.

```
(nameOfEnvironment) ubuntu@ubuntu-vb:~/LocalRepo/Exp1$ git remote add origin "https://github.com/rgvillanueva28/Software-Design-Lab-Exercises"
```

Lastly, push to the remote repository. Enter the username and password. Password will not show up on the terminal.

```
(nameOfEnvironment) ubuntu@ubuntu-vb:~/LocalRepo/Exp1$ git push --set-upstream origin master
Username for 'https://github.com':
```

The files should now be on the remote repository on Github.



- **GitHub:** <http://bit.ly/2lvstu4>
- **OneDrive Files:** <http://bit.ly/2xkFvbN>
- **OneDrive PDF:**