



## **Faculty of Technology and Engineering**

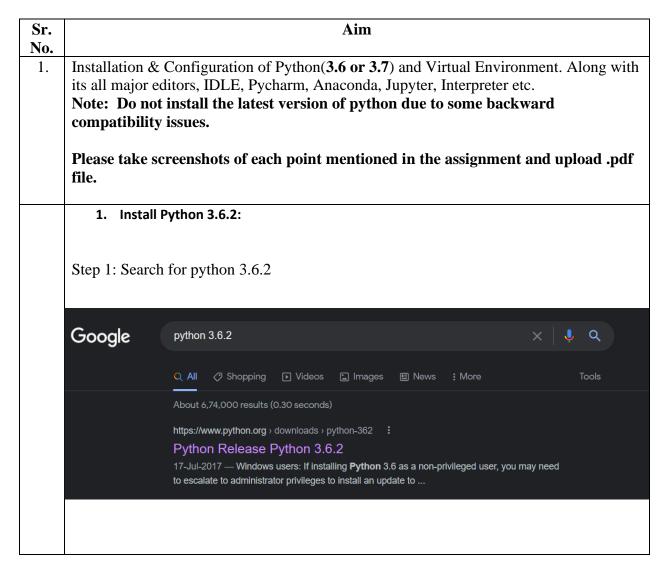
## U & P U. Patel Department of Computer Engineering

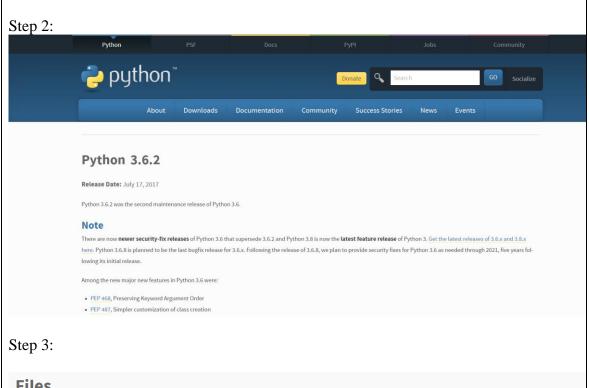
Date: 01 / 12 / 2021

#### **Practical List**

Academic Year	:	2021-22	Semester	••	4
Course code	:	CE259	Course name	:	Programming in Python

Note: Practical List is for Students. We need to cover concept require to implement respective practical





#### **Files**

Version	Operating System	Description	MD5 Sum	File Size	G
Gzipped source tarball	Source release		e1a36bfffdd1d3a780b1825daf16e56c	22580749	S
XZ compressed source tarball	Source release		2c68846471994897278364fc18730dd9	16907204	S
Mac OS X 64-bit/32-bit installer	macOS	for Mac OS X 10.6 and later	86e6193fd56b1e757fc8a5a2bb6c52ba	27561006	S
Windows help file	Windows		e520a5c1c3e3f02f68e3db23f74a7a90	8010498	S
Windows x86-64 embeddable zip file	Windows	for AMD64/EM64T/x64	0fdfe9f79e0991815d6fc1712871c17f	7047535	S
Windows x86-64 executable installer	Windows	for AMD64/EM64T/x64	4377e7d4e6877c248446f7cd6a1430cf	31434856	S
Windows x86-64 web-based installer	Windows	for AMD64/EM64T/x64	58ffad3d92a590a463908dfedbc68c18	1312496	S
Windows x86 embeddable zip file	Windows		2ca4768fdbadf6e670e97857bfab83e8	6332409	S
Windows x86 executable installer	Windows		8d8e1711ef9a4b3d3d0ce21e4155c0f5	30507592	S
Windows x86 web-based installer	Windows		ccb7d66e3465eaf40ade05b76715b56c	1287040	S

## Step 4:



### Step 5:



#### Step 6:

#### Test if installation was successful:

```
Command Prompt - python

Microsoft Windows [Version 10.0.19043.1415]

(c) Microsoft Corporation. All rights reserved.

C:\Users\admin>python

Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:57:36) [MSC v.1900 64 bit (AMD64)] on win32

Type "help", "copyright", "credits" or "license" for more information.

>>> print("Hello world 20CE140")

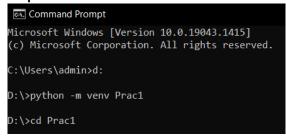
Hello world 20CE140

>>>
```

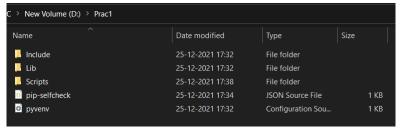
#### **Self-Exercise:**

- Use virtualenv to create virtual environment
- 2. Create virtual Environment using python -m command Open Command Prompt and write the following commands-

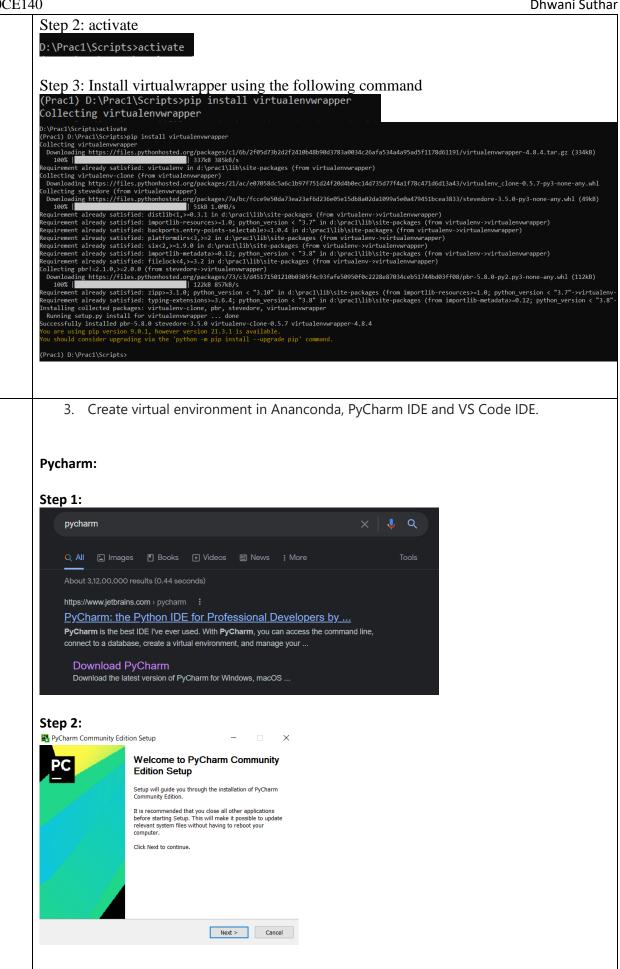
#### Step 1:

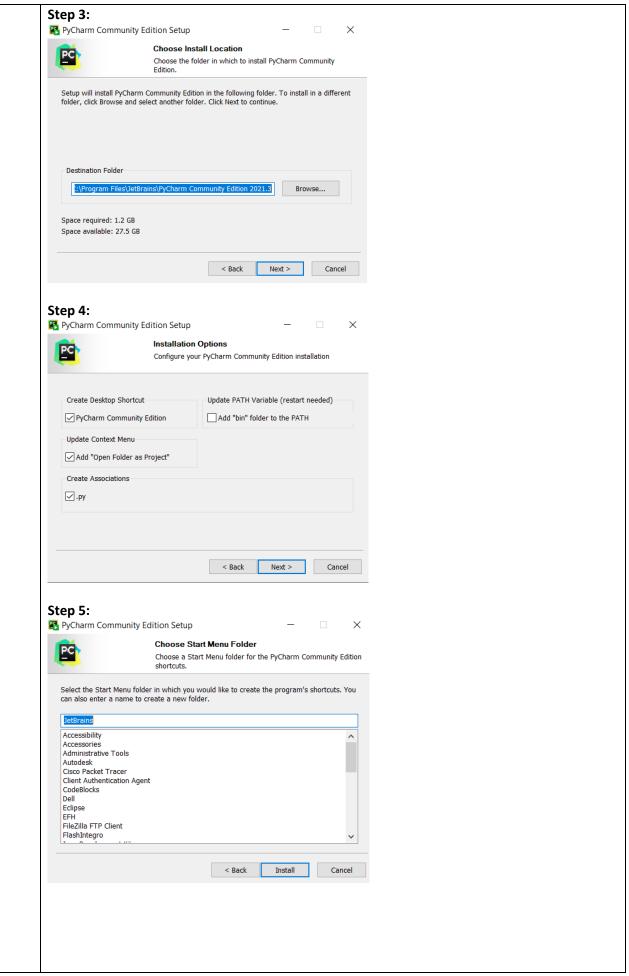


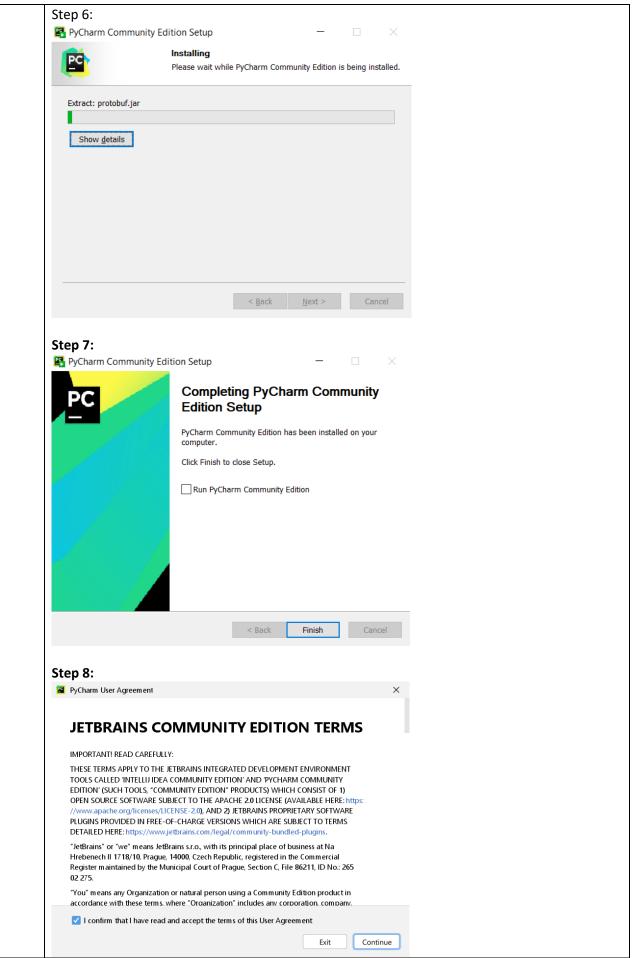
#### A folder named Prac1 will be made in D drive which includes:

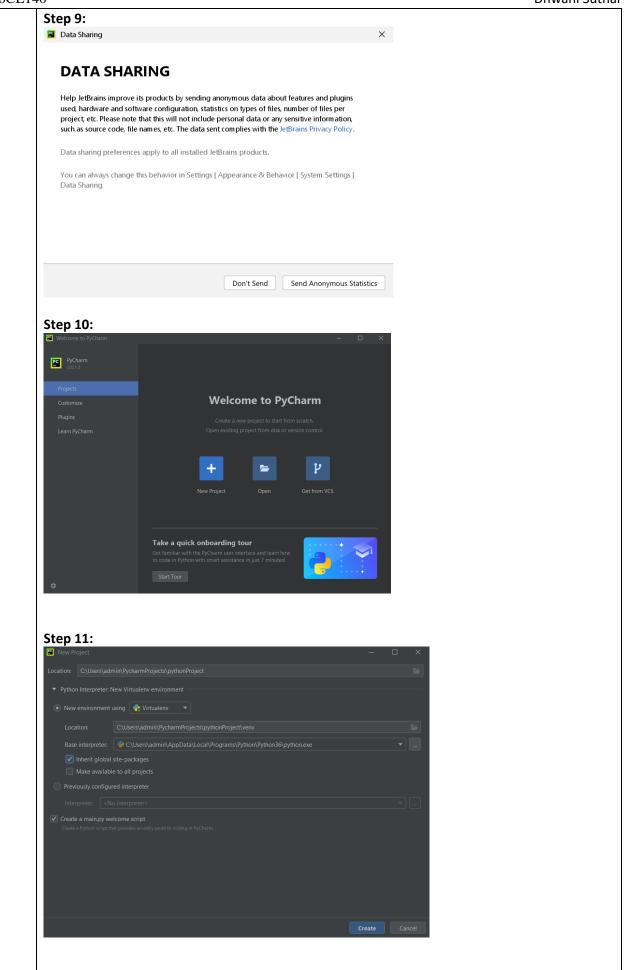


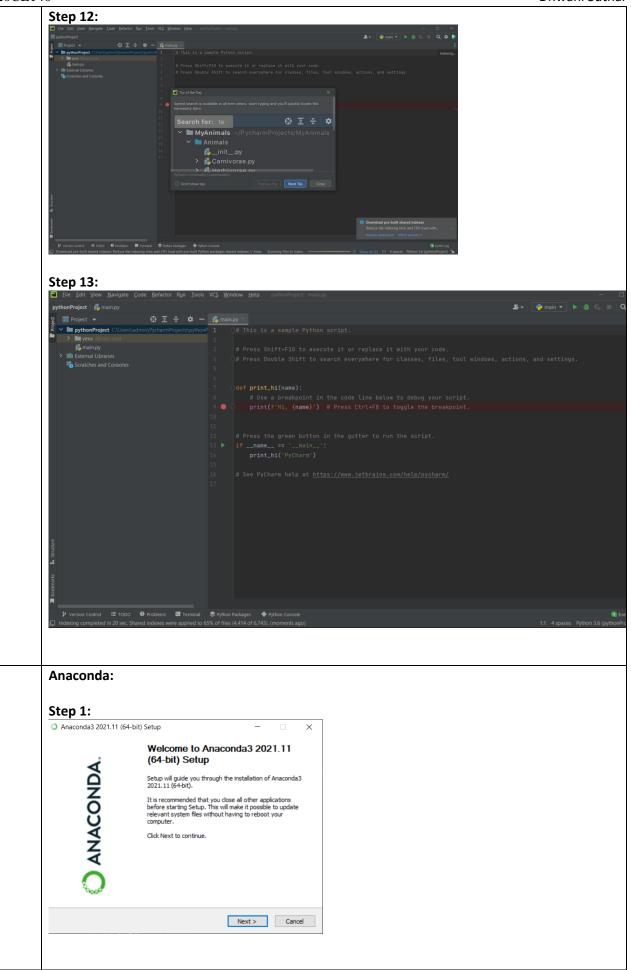
# Step 2: Command Prompt ):\>cd Prac1 D:\Prac1>cd Scripts D:\Prac1\Scripts>activate Step 3: Prac1) D:\Prac1\Scripts>pip install numpy ollecting numpy Downloading https://files.pythonhosted.org/packages/ea/bc/da526221bc111857c7ef39c3af670bbcf5e69c247b0d22e51986f6d0c5c2/numpy-1.19 amd64.whl (13.2MB) Step 4: :1) D:\Prac1\Scripts>pip install virtualenv ecting virtualenv wnloading https://files.pythonhosted.org/pa eda6b7df3dfdbda24e6cc572c86ff959a4ce110391b/distlib-0.3.4-py2.py3-none-any.whl (461kB) Step 5: Prac1) D:\Prac1\Scripts>virtualenv newPrac2 reated virtual environment CPython3.6.2.final.0-64 in 1251ms creator CPython3Windows(dest=D:\Prac1\Scripts\newPrac2, clear=False, no\_vcs\_ignore=False, global=False) seeder FromAppData(download=False, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app\_data\_dir=C:\Users\admin\AppData\Local\pypa\ added seed packages: pip==21.3.1, setuptools==58.3.0, wheel==0.37.0 activators BashActivator,BatchActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator Step 6: (Prac1) D:\Prac1\Scripts>deactivate D:\Prac1\Scripts> Virtual Wrapper: Step 1: Go into file directory where virtualenv is intalled Command Prompt Microsoft Windows [Version 10.0.19043.1415] (c) Microsoft Corporation. All rights reserved. C:\Users\admin>d: D:\>cd .\Prac1\Scripts

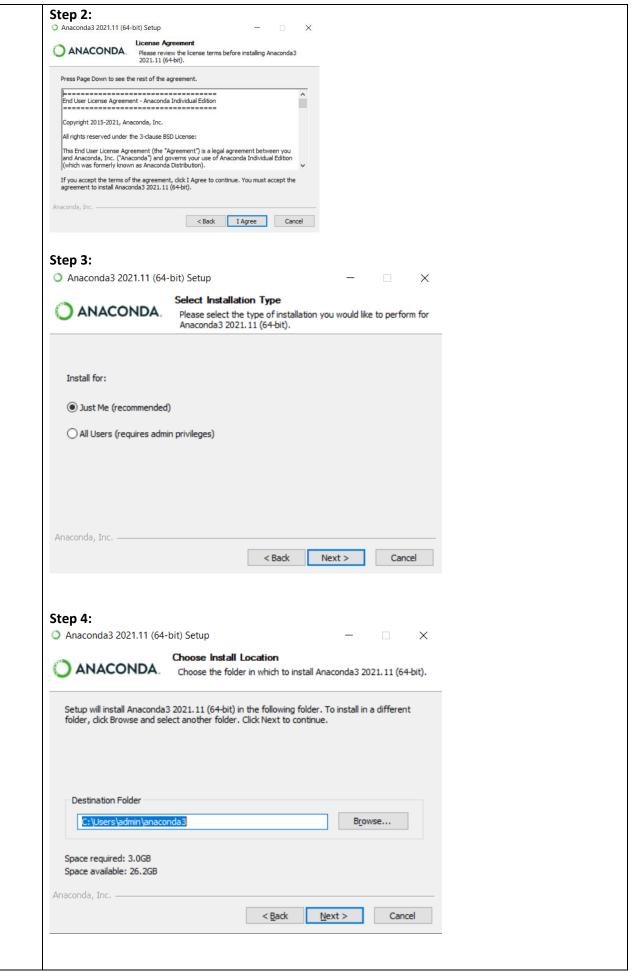


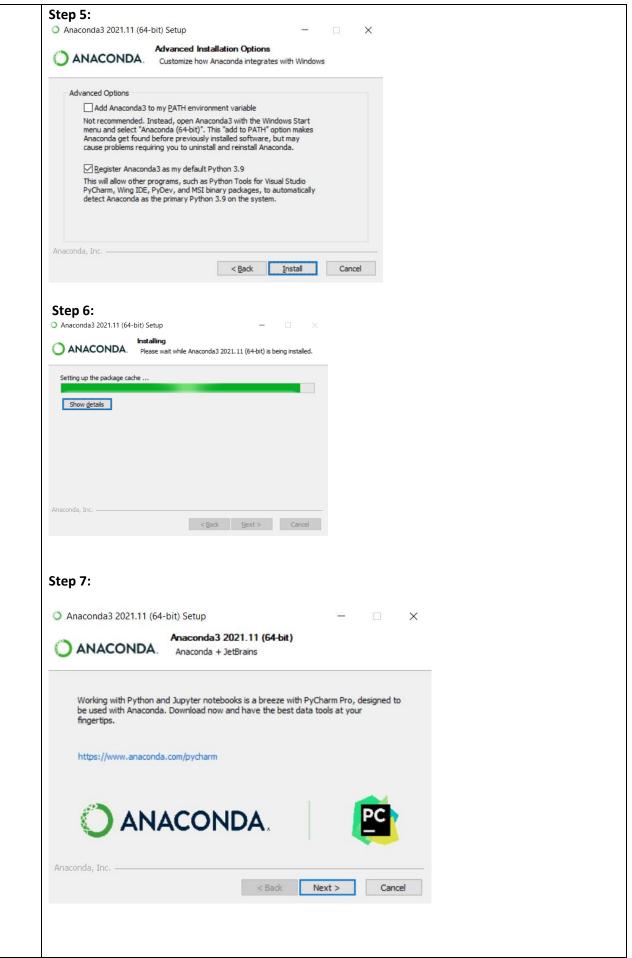


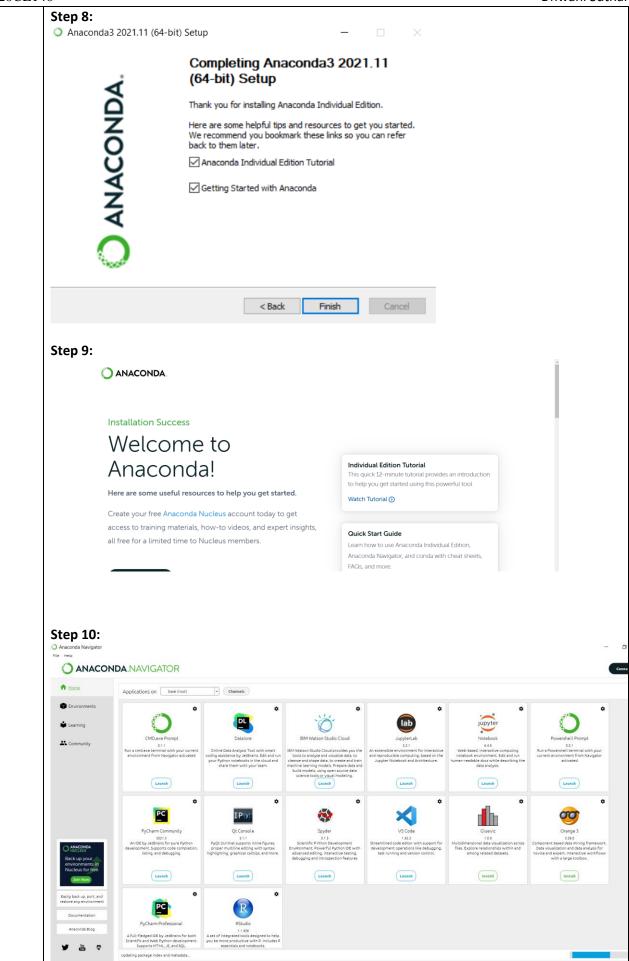






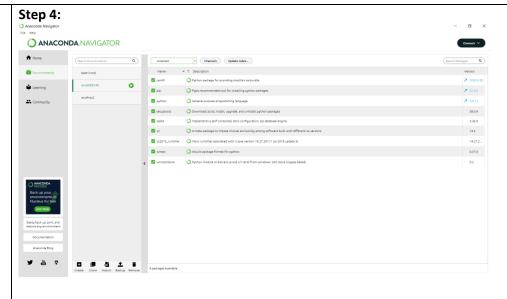




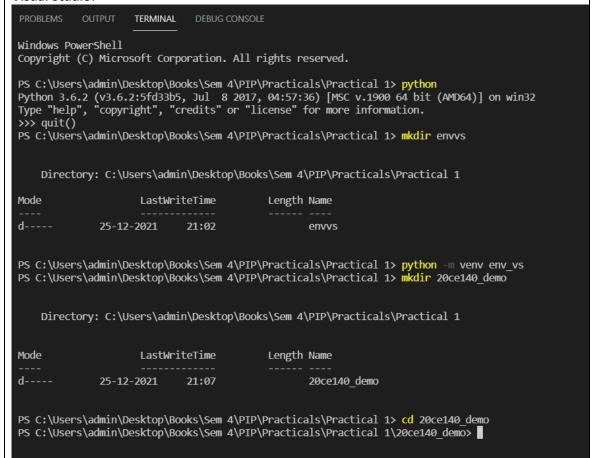


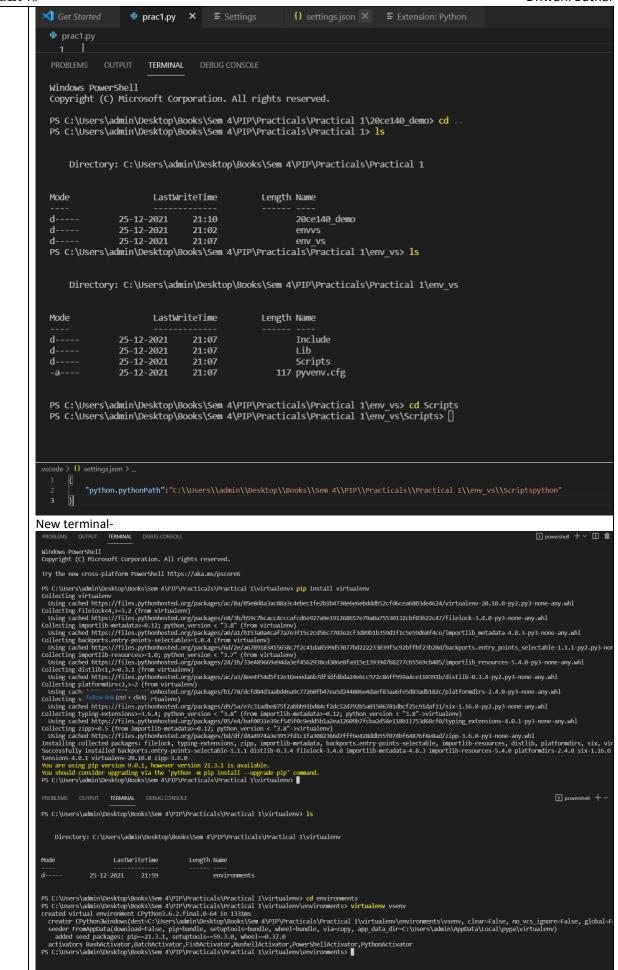
20CE140 **Dhwani Suthar** Jupyter Untitled Last Checkpoint: a few seconds ago (unsaved changes) File Edit View Insert Cell Kernel Widgets Help Trusted Python 3 (ipykernel 🖺 | + | % | 4 | 1 | ↑ | ↓ | ▶ Run | ■ | C | ▶ | Code In [1]: print("Hello world 20CE140") Hello world 20CE140 Now, open Anaconda Powershell Step 1: Check if conda is installed in the path. Anaconda Prompt (anaconda3) - conda create -n envPrac1 python=3.6 anaconda (base) C:\Users\admin>conda -V conda 4.10.3 Step 2: Open anaconda Navigator and click on 'create' O Anaconda Navigator ANACONDA.NAVIGATOR 
 ♣ Home
 Eserch Environments
 Q
 Installed
 > Channels
 Bydder Index.

 ⑤ Environments
 best FredQ
 Name
 ▼ T Description
 certifi O Python package for providing mozilla's ca bundle. pip Pypa recommended tool for installing python package 14.27.2.. wheel A built-package format for python. 0.37.0 wincertstore O Python module to extract calend criticerts from windows' certistore (ctypes based) Create Clone import Backup Remove 9 peckages Step 3: Create new environment env20CE140 Name: Location: C:\Users\admin\anaconda3\envs\env20CE140 Packages: V Python 3.6.13 □ R 3.6.1 Cancel Create



#### **Visual Studio:**

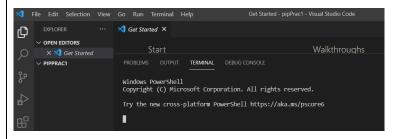






Virtual environment in Python

Step 1: Locate the folder where the python project is located and open a new terminal



Step 2: Copy path

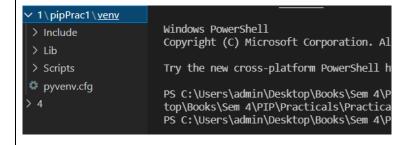


Step 3: Write the following command

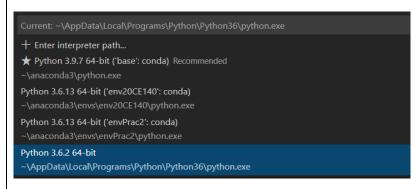
python -m venv <file path>\venv



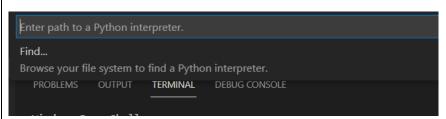
Step 4: venv is created



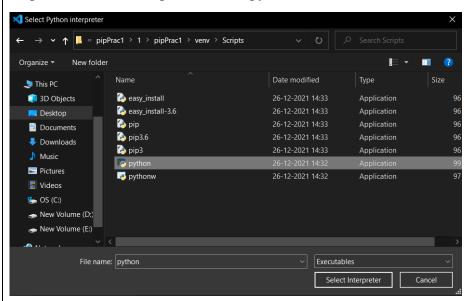
Step 5: Now press ctrl+shift+p and click on 'select interpreter' for Python



Step 6: Then click on 'Enter interpreter' and Find



Step 7: Go to venv\Scripts and select python.exe



Step 8: Now open new Terminal to check if we're in the environment or not



Switch between virtual environment using activate and deactivate option. Step 1: Open a folder in cmd where we want to have a virtualenv Command Prompt Microsoft Windows [Version 10.0.19043.1415] (c) Microsoft Corporation. All rights reserved. C:\Users\admin>cd \Desktop\Books\Sem 4\PIP\Practicals\Practical 1 The system cannot find the path specified. C:\Users\admin>cd .\Desktop\Books\Sem 4\PIP\Practicals\Practical 1 C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1>cd task2 C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2>mkdir dhwani C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2>cd dhwani C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani>mkdir envs ::\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani>cd envs Step 2: Create virtual environment in this folder using 'virtualenv <env name>' ... Command Prompt :\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>virtualenv env1 ppData\\coal\pypa\virtualenv\
 added seed packages: pip==21.3.1, setuptools==59.3.0, wheel==0.37.0
 activators BashActivator,BatchActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator

Step 3: Go into Scripts folder

```
Command Prompt
C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>dir
Volume in drive C is OS
Volume Serial Number is DCFE-F275
Directory of C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs
26-12-2021 14:47
                      <DIR>
26-12-2021 14:47
                      <DIR>
26-12-2021 14:47
                     <DIR>
                                      env1
               0 File(s)
                                       0 bytes
               3 Dir(s) 21,643,898,880 bytes free
C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>cd env1
C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1>dir
Volume in drive C is OS
Volume Serial Number is DCFE-F275
Directory of C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1
                      <DTR>
26-12-2021 14:47
26-12-2021 14:47
                      <DIR>
26-12-2021 14:47
                                   42 .gitignore
26-12-2021
            14:47
                      <DIR>
                                      Lib
26-12-2021
                                  405 pyvenv.cfg
           14:47
26-12-2021 14:47
                     <DIR>
                                      Scripts
               2 File(s)
                                      447 bytes
               4 Dir(s) 21,643,825,152 bytes free
Command Prompt
C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1>cd Scripts
C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1\Scripts>dir
Volume in drive C is OS
Volume Serial Number is DCFE-F275
Directory of C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1\Scripts
26-12-2021 14:47
26-12-2021 14:47
                     <DIR>
                    <DTR>
26-12-2021 14:47
26-12-2021 14:47
                             2,207 activate
                             1,047 activate.bat
26-12-2021
           14:47
                             3,088 activate.fish
26-12-2021
           14:47
                             1,413 activate.nu
26-12-2021 14:47
                             1,758 activate.ps1
26-12-2021 14:47
26-12-2021 14:47
                             1,193 activate_this.py
                               510 deactivate.bat
26-12-2021 14:47
                               333 deactivate.nu
26-12-2021 14:47
26-12-2021 14:47
                           106,928 pip-3.6.exe
                           106,928 pip.exe
26-12-2021 14:47
                           106,928 pip3.6.exe
26-12-2021 14:47
                           106,928 pip3.exe
                               24 pydoc.bat
26-12-2021 14:47
26-12-2021
           14:47
                           196,248 pyexpat.pyd
26-12-2021 14:47
                           100,504 python.exe
                            58,008 python3.dll
26-12-2021
           14:47
26-12-2021 14:47
                          3,567,256 python36.dll
26-12-2021 14:47
                            98,968 pythonw.exe
26-12-2021
           14:47
                            26,776 select.pyd
```

```
6-12-2021
                                   1,124,504 sqlite3.dll
                                   1,666,048 tcl86t.dll
26-12-2021 14:47
26-12-2021 14:47
                                  1,967,104 tk86t.dll
                                   905,880 unicodedata.pyd
26-12-2021 14:47
                                     87,888 vcruntime140.dll
106,915 wheel-3.6.exe
26-12-2021 14:47
26-12-2021
               14:47
                                     106,915 wheel.exe
26-12-2021 14:47
26-12-2021
                                     106,915 wheel3.6.exe
               14:47
                                   106,915 wheel3.exe
26-12-2021 14:47
                                    27,800 winsound.pyd
60,568 _asyncio.pyd
26-12-2021 14:47
26-12-2021 14:47
26-12-2021 14:47
26-12-2021 14:47
                                     94,360 _bz2.pyd
                                   129,688 _ctypes.pyd
                                  31,384 _ctypes_test.pyd
267,928 _decimal.pyd
168,600 _elementtree.pyd
26-12-2021 14:47
26-12-2021
               14:47
26-12-2021 14:47
                               108,000 _elementtree.pyd

1,450,648 _hashlib.pyd

254,104 _lzma.pyd

38,040 _msi.pyd

29,336 _multiprocessing.pyd

42,648 _overlapped.pyd

72,344 _socket_pyd
26-12-2021 14:47
26-12-2021 14:47
26-12-2021 14:47
26-12-2021 14:47
26-12-2021 14:47
                                    72,344 _socket.pyd
85,144 _sqlite3.pyd
26-12-2021 14:47
26-12-2021 14:47
                               2,060,952 _ssl.pyd
51,864 _testbuffer.pyd
91,288 _testcapi.pyd
23,704 _testconsole.pyd
26-12-2021 14:47
26-12-2021 14:47
26-12-2021 14:47
26-12-2021 14:47
                                     22,168 _testimportmultiple.pyd
26-12-2021 14:47
                                      30,360 _testmultiphase.pyd
69,272 _tkinter.pyd
15,768,329 bytes
26-12-2021
                14:47
26-12-2021 14:47
                  49 File(s)
                   2 Dir(s) 21,643,890,688 bytes free
```

Step 4: Move out of the folder and into the Scripts file to activate the environment created

```
C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1\Scripts>cd ..

C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1>cd ..

C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>env1\Scripts\activate

(env1) C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>pip install numpy

Collecting numpy

Using cached numpy-1.19.5-cp36-cp36m-win_amd64.whl (13.2 MB)

Installing collected packages: numpy

Successfully installed numpy-1.19.5
```

## Step 5: Now numpy is installed in env1. Similarly create env2 where numpy is not installed

```
C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>virtualenv env2
created virtual environment CPython3.6.2.final.0-64 in 1985ms
creator CPython3windows(dest-c:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env2, clear=False, no_vcs_ignore=False, global=False)
seeder FromAppData(download=false, pip=bundle, setuptools=bundle, wheel=bundle, via=copy, app_data_dir=C:\Users\admin\AppData\Local\pypa\virtualenv)
added seed packages: pip==21.3.1, setuptools==59.3.0, wheel==0.37.0
activators BashActivator,BatchActivator,FishActivator,NushellActivator,PowerShellActivator,PythonActivator
C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>
```

#### Step 6: Now try switching from env1 and env2 using activate and deactivate commands

```
C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>cd env1\Scripts

C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1\Scripts>activate

(env1) C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1\Scripts>
(env1) C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1\Scripts>deactivate
```

Here in env1 numpy is already installed that is why it shows 'requirement already fulfilled'

Whereas in env2 numpy is not installed so it installs numpy as specified.

**Dhwani Suthar** 20CE140

..
Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env2\Scripts>cd

:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env2>cd ...

:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>cd env1\Scripts

:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1\Scripts>activate

(env1) C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1\Scripts>pip install numpy Requirement already satisfied: numpy in c:\users\admin\desktop\books\sem 4\pip\practicals\practical 1\task2\dhwani\envs\env1\lib\site

env1) C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1\Scripts>cd ..

env1) C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env1>cd ...

env1) C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs>cd env2\Scripts

(env1) C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env2\Scripts>activate

(env2) C:\Users\admin\Desktop\Books\Sem 4\PIP\Practicals\Practical 1\task2\dhwani\envs\env2\Scripts>pip install numpy ollecting numpy

Using cached numpy-1.19.5-cp36-cp36m-win\_amd64.whl (13.2 MB)
Installing collected packages: numpy
Successfully installed numpy-1.19.5

Page **21** of **21**