



CHARUSAT
CHAROTAR UNIVERSITY OF SCIENCE AND TECHNOLOGY



Faculty of Technology and Engineering

U & P U. Patel Department of Computer Engineering

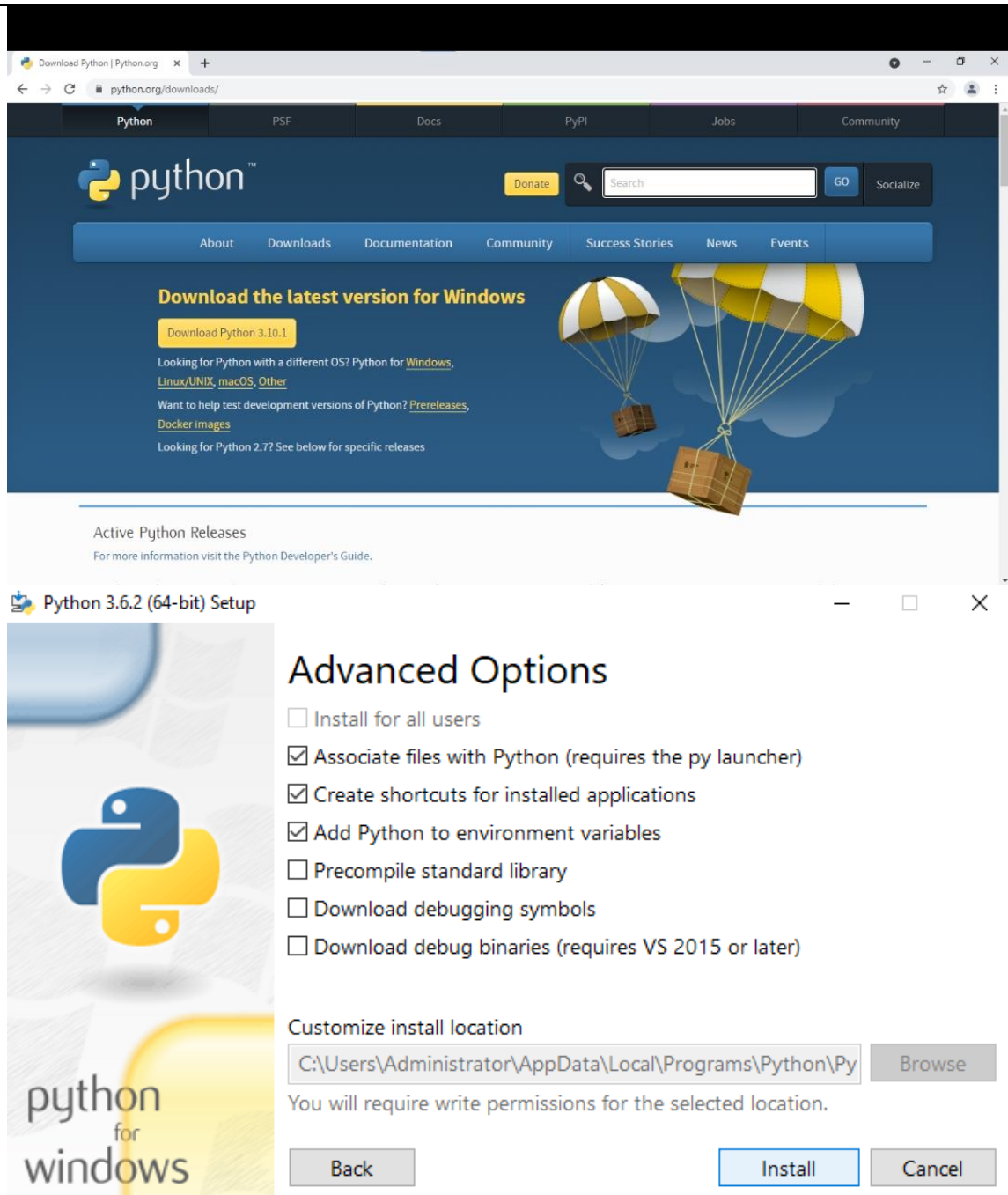
Date: 01 / 12 / 2021

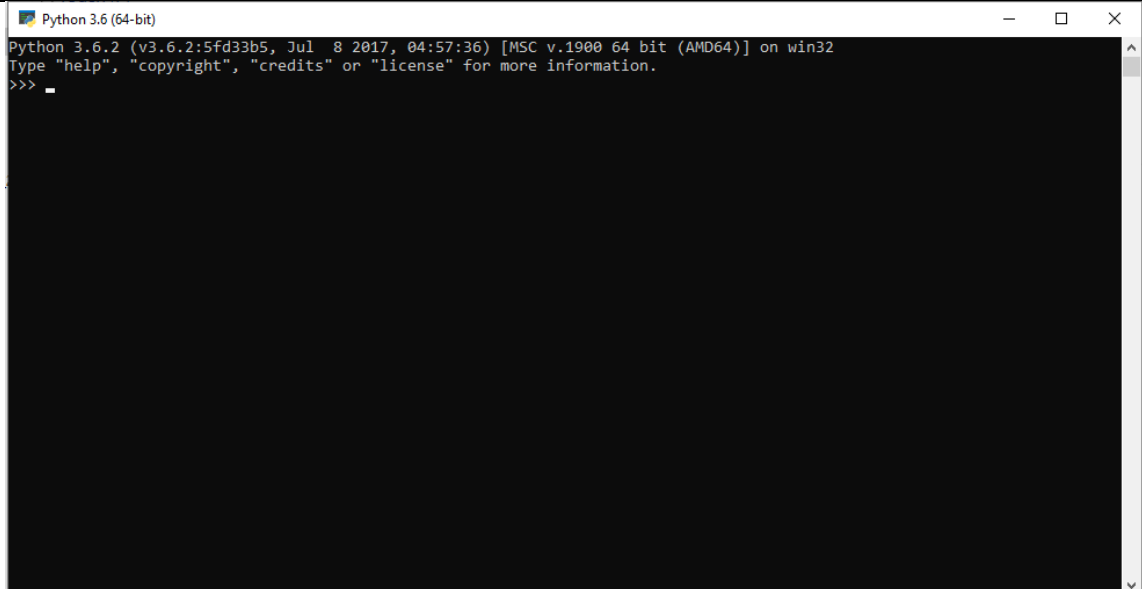
Practical List

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

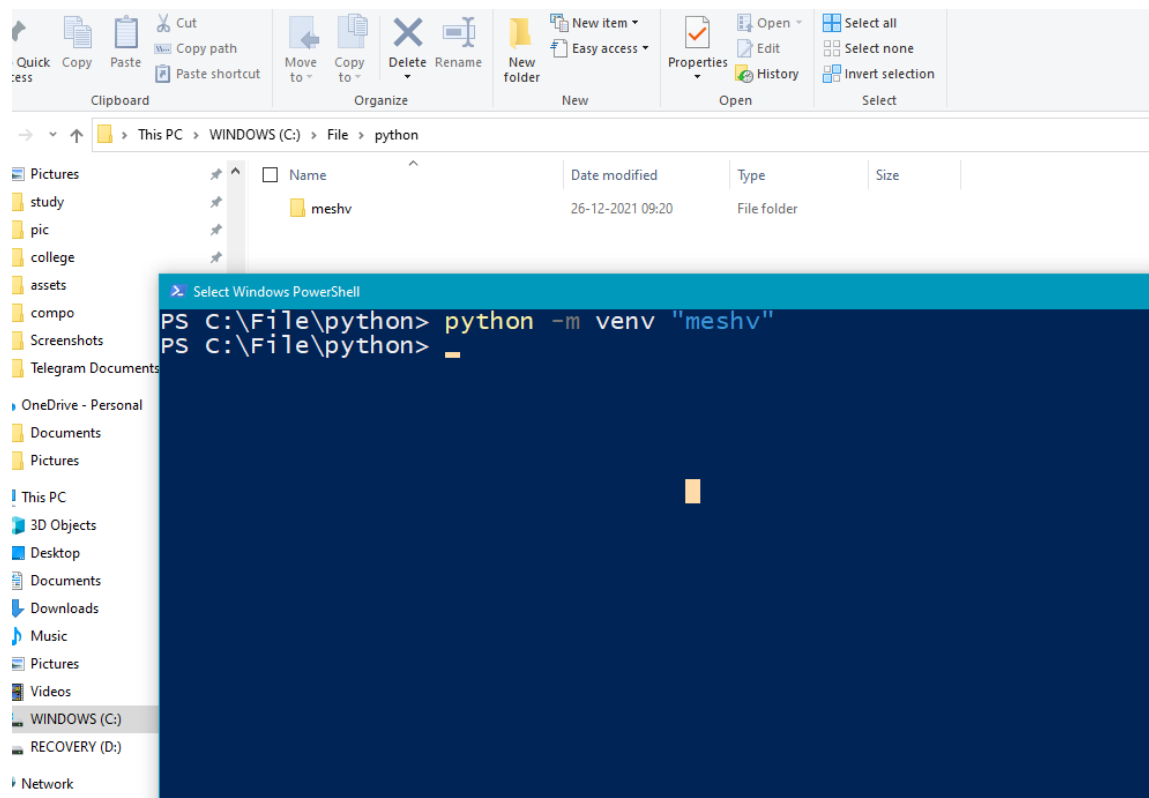
Sr. No.	Aim
1.	<p>Installation & Configuration of Python(3.6 or 3.7) and Virtual Environment. Along with its all major editors, IDLE, Pycharm, Anaconda, Jupyter, Interpreter etc.</p> <p>Note: Do not install the latest version of python due to some backward compatibility issues.</p> <p>Please take screenshots of each point mentioned in the assignment and upload .pdf file.</p>
	1. Installation & Configuration Python(3.6 or 3.7)

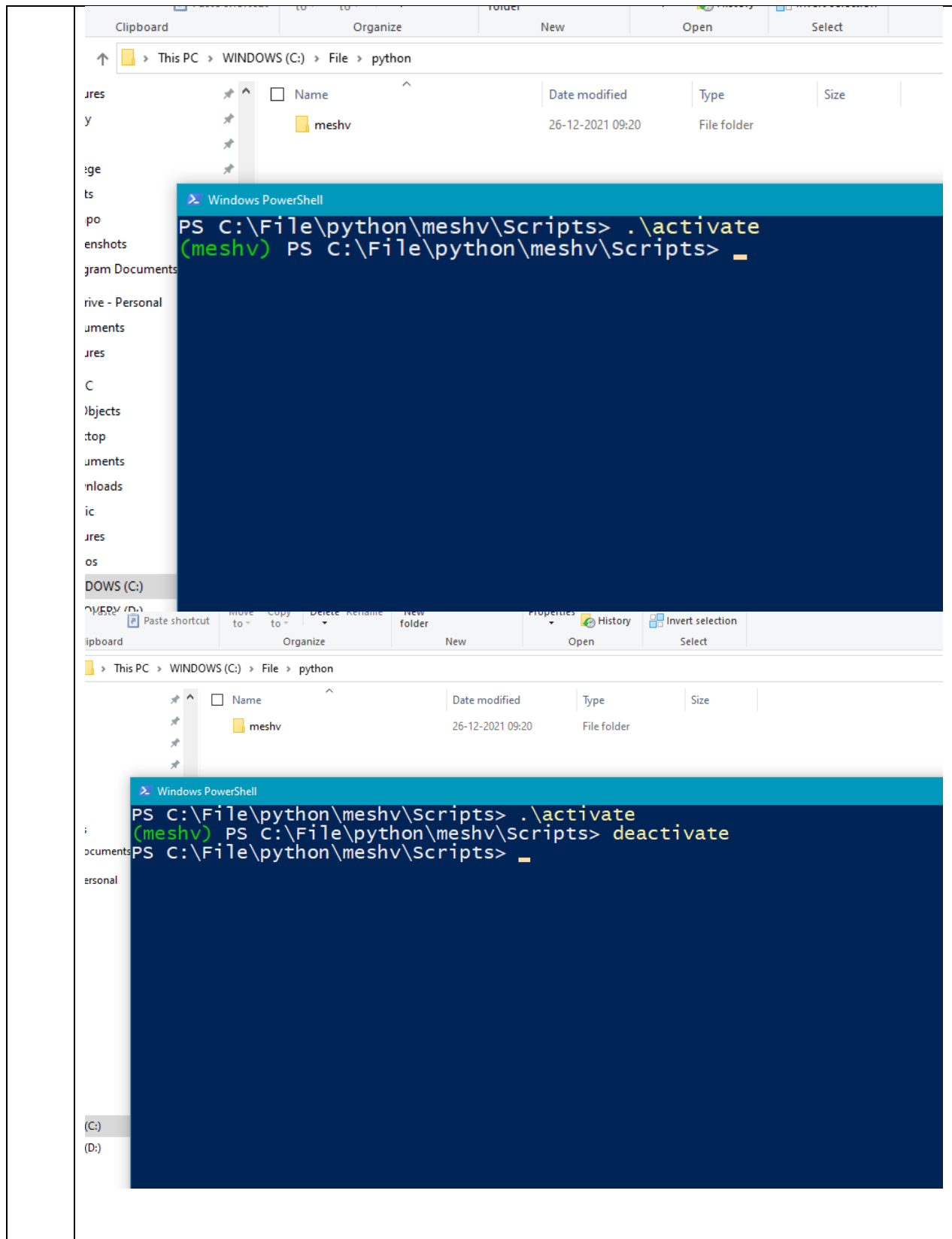


A screenshot of a Python 3.6 (64-bit) window. The title bar says "Python 3.6 (64-bit)". The window content shows the Python version and build information: "Python 3.6.2 (v3.6.2:5fd33b5, Jul 8 2017, 04:57:36) [MSC v.1900 64 bit (AMD64)] on win32". It also shows the prompt "Type 'help', 'copyright', 'credits' or 'license' for more information." and the interactive prompt ">>>".

```
Python 3.6 (64-bit)
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.
>>>
```

Create virtual Environment using python -m command





```

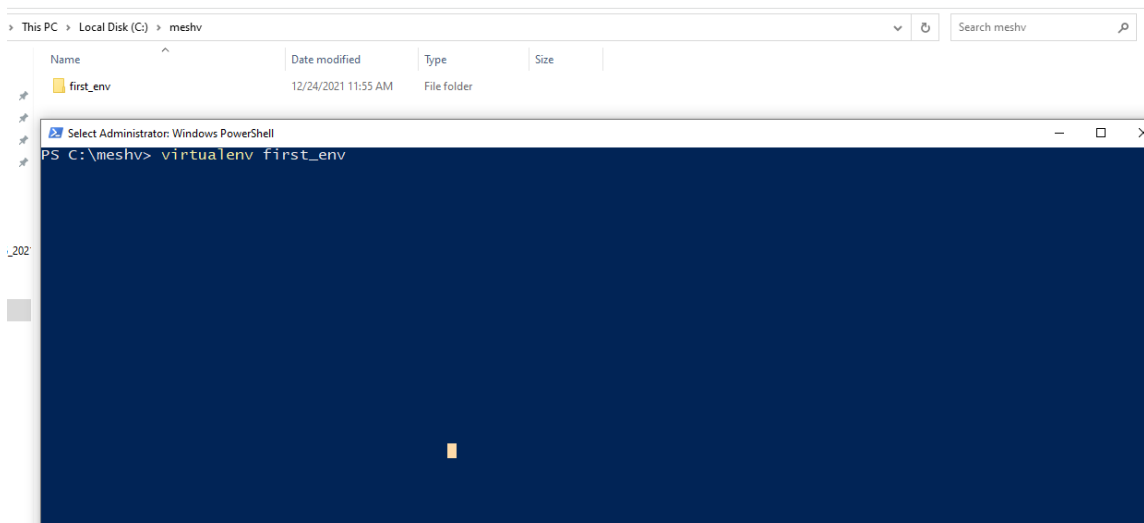
Administrator: Windows PowerShell
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Administrator> pip install virtualenv
Collecting virtualenv
  Downloading virtualenv-20.10.0-py3-none-any.whl (5.6 MB)
    |#####| 5.6 MB 656 kB/s
Collecting distlib<1,>=0.3.1
  Downloading distlib-0.3.4-py2.py3-none-any.whl (461 kB)
    |#####| 461 kB 1.1 MB/s
Collecting filelock<4,>=3.2
  Downloading filelock-3.4.0-py3-none-any.whl (9.8 kB)
Collecting platformdirs<3,>=2
  Downloading platformdirs-2.4.0-py3-none-any.whl (14 kB)
Requirement already satisfied: six<2,>=1.9.0 in c:\programdata\anaconda3\lib\site-packages (from virtualenv) (1.15.0)
Collecting backports.entry-points-selectable>=1.0.4
  Downloading backports.entry_points_selectable-1.1.1-py2.py3-none-any.whl (6.2 kB)
Installing collected packages: platformdirs, filelock, distlib, backports.entry-points-selectable, virtualenv
  Attempting uninstall: filelock
    Found existing installation: filelock 3.0.12
    Uninstalling filelock-3.0.12:
      Successfully uninstalled filelock-3.0.12
Successfully installed backports.entry-points-selectable-1.1.1 distlib-0.3.4 filelock-3.4.0 platformdirs-2.4.0 virtualenv-20.10.0
PS C:\Users\Administrator> pip install virtualenvwrapper
Collecting virtualenvwrapper
  Downloading virtualenvwrapper-4.8.4.tar.gz (334 kB)
    |#####| 334 kB 547 kB/s
Requirement already satisfied: virtualenv in c:\programdata\anaconda3\lib\site-packages (from virtualenvwrapper) (20.10.0)
Collecting virtualenv-clone
  Downloading virtualenv-clone-0.5.7-py3-none-any.whl (6.6 kB)
Collecting stevedore
  Downloading stevedore-3.5.0-py3-none-any.whl (49 kB)
    |#####| 49 kB 424 kB/s
Collecting pbr!=2.1.0,>=2.0.0
  Using cached pbr-5.8.0-py2.py3-none-any.whl (112 kB)
Requirement already satisfied: filelock<4,>=3.2 in c:\programdata\anaconda3\lib\site-packages (from virtualenv->virtualenvwrapper) (3.4.0)
Requirement already satisfied: six<2,>=1.9.0 in c:\programdata\anaconda3\lib\site-packages (from virtualenv->virtualenvwrapper) (1.15.0)
Requirement already satisfied: platformdirs<3,>=2 in c:\programdata\anaconda3\lib\site-packages (from virtualenv->virtualenvwrapper) (2.4.0)
Requirement already satisfied: distlib<1,>=0.3.1 in c:\programdata\anaconda3\lib\site-packages (from virtualenv->virtualenvwrapper) (0.3.4)
Requirement already satisfied: backports.entry-points-selectable>=1.0.4 in c:\programdata\anaconda3\lib\site-packages (from virtualenv->virtualenvwrapper) (1.1.1)
Building wheels for collected packages: virtualenvwrapper
  Building wheel for virtualenvwrapper (setup.py) ... done
  Created wheel for virtualenvwrapper: filename=virtualenvwrapper-4.8.4-py2.py3-none-any.whl size=24850 sha256=47168946e229b4c60285d282c265df2291a063faf0e40225d107a303a98def1
  Stored in directory: c:\users\administrator\appdata\local\pip\cache\wheels\47\15\3d\7a26eaf92e79f80a30f3ac5f8e0f0f5b7efdf24d313c594a44
Successfully built virtualenvwrapper
Installing collected packages: pbr, virtualenv-clone, stevedore, virtualenvwrapper
Successfully installed pbr-5.8.0 stevedore-3.5.0 virtualenv-clone-0.5.7 virtualenvwrapper-4.8.4
PS C:\Users\Administrator>

```

Create virtual Environment using python package virtualenv and virtualwrapper.

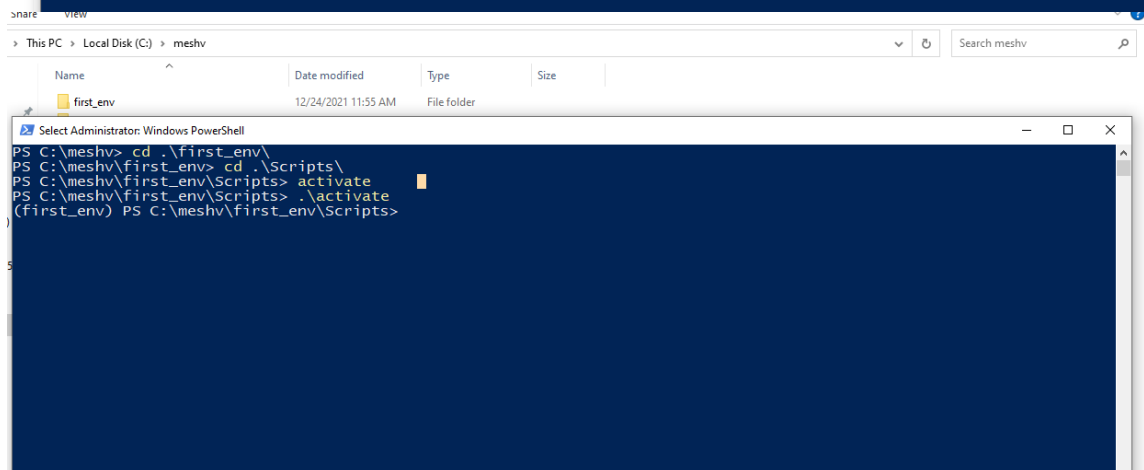


```

> This PC > Local Disk (C:) > meshv
Name      Date modified    Type    Size
first_env  12/24/2021 11:55 AM File folder

PS C:\meshv> virtualenv first_env

```



```

> This PC > Local Disk (C:) > meshv
Name      Date modified    Type    Size
first_env  12/24/2021 11:55 AM File folder

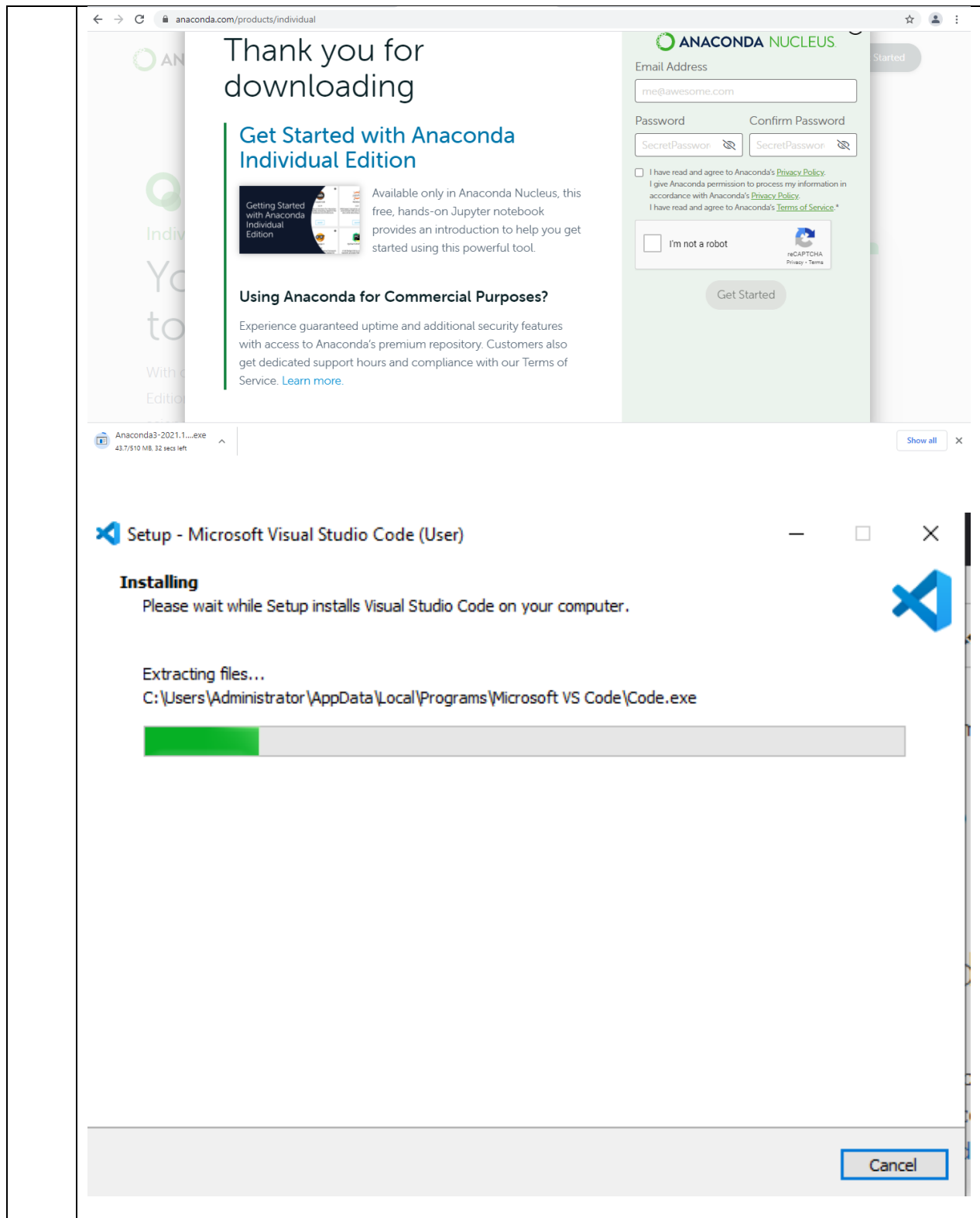
PS C:\meshv> cd .\first_env\
PS C:\meshv\first_env> cd .\Scripts\
PS C:\meshv\first_env\Scripts> activate
PS C:\meshv\first_env\Scripts> .\activate
(first_env) PS C:\meshv\first_env\Scripts>

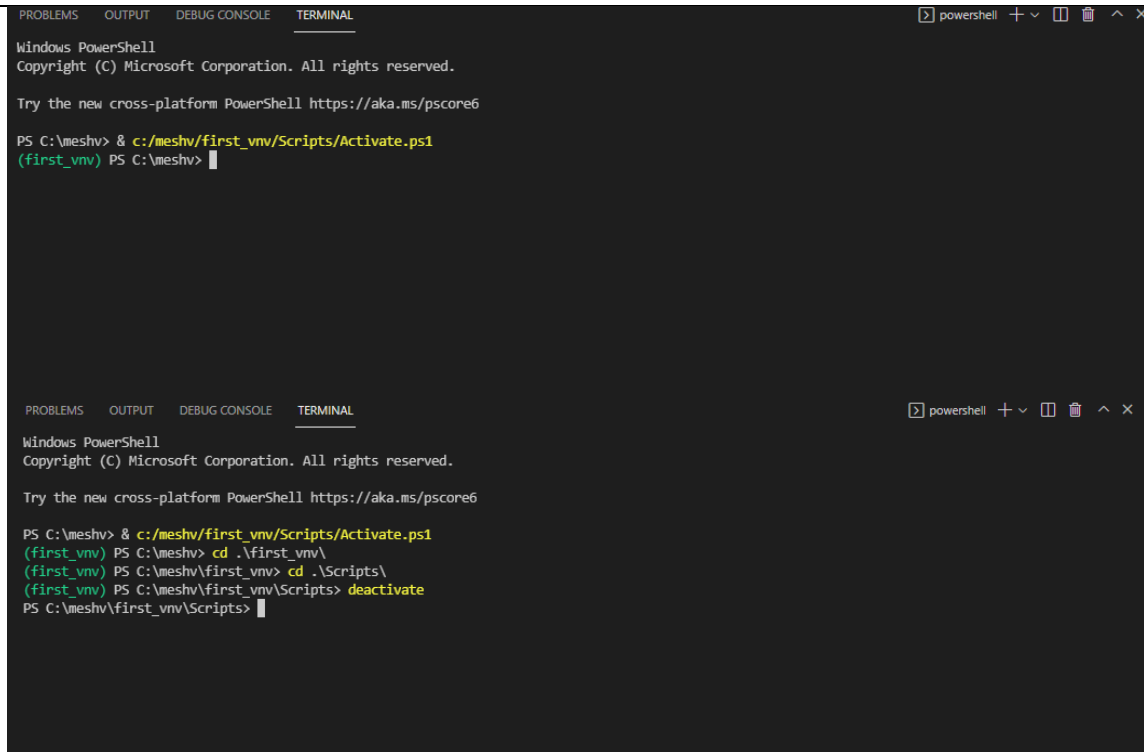
```

Create virtual environment in Anaconda, PyCharm IDE and VS Code IDE.

The screenshot shows a web browser window displaying the PyCharm download page on JetBrains.com. The page features the PyCharm logo, version information (2021.3, Build: 213.5744.248, 1 December 2021), and links for system requirements, installation instructions, and other versions. It also highlights two editions: Professional (for scientific and web Python development) and Community (for pure Python development). Both editions have a 'Download' button and are noted as being free.

Below the browser window, the PyCharm Community Edition Setup window is visible. It has a title bar with the PyCharm logo and the text 'PyCharm Community Edition Setup'. The main content area includes the PyCharm logo, the title 'Welcome to PyCharm Community Edition Setup', and a message: 'Setup will guide you through the installation of PyCharm Community Edition. It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer. Click Next to continue.' At the bottom right, there are 'Next >' and 'Cancel' buttons.





```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\meshv> & c:/meshv/first_vnv/Scripts/Activate.ps1
(first_vnv) PS C:\meshv>

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

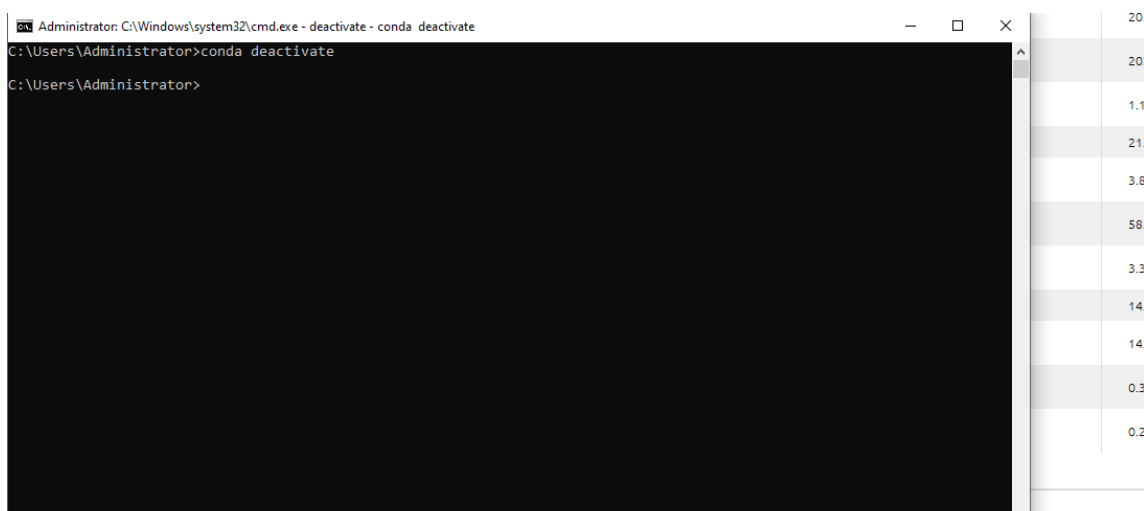
Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\meshv> & c:/meshv/first_vnv/Scripts/Activate.ps1
(first_vnv) PS C:\meshv> cd .\first_vnv\
(first_vnv) PS C:\meshv\first_vnv> cd .\Scripts\
(first_vnv) PS C:\meshv\first_vnv\Scripts> deactivate
PS C:\meshv\first_vnv\Scripts>
```

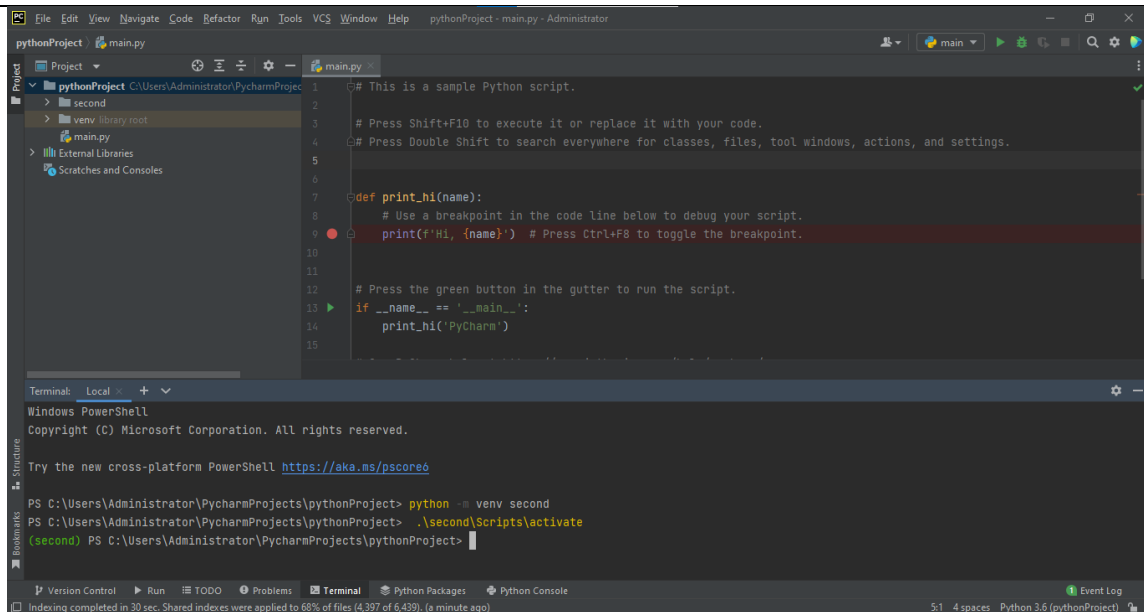


```
Administrator: C:\Windows\system32\cmd.exe

(sec_vnv) C:\Users\Administrator>
```



```
Administrator: C:\Windows\system32\cmd.exe - deactivate - conda deactivate
C:\Users\Administrator>conda deactivate
C:\Users\Administrator>
```

The screenshot shows the PyCharm IDE interface. The top toolbar includes icons for File, Edit, View, Navigate, Code, Refactor, Run, Tools, VCS, Window, and Help. The main editor window displays a Python script named `main.py` with the following content:

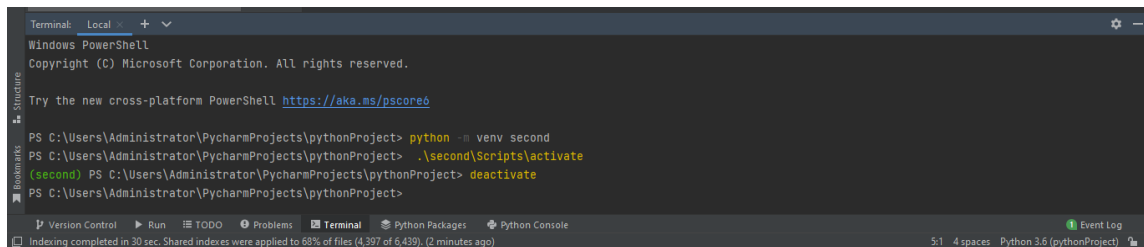
```
1 # This is a sample Python script.
2
3 # Press Shift+F10 to execute it or replace it with your code.
4 # Press Double Shift to search everywhere for classes, files, tool windows, actions, and settings.
5
6
7 def print_hi(name):
8     # Use a breakpoint in the code line below to debug your script.
9     print(f'Hi, {name}') # Press Ctrl+F8 to toggle the breakpoint.
10
11
12 # Press the green button in the gutter to run the script.
13 if __name__ == '__main__':
14     print_hi('PyCharm')
15
```

The bottom panel shows the Terminal window with the following output:

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Administrator\PycharmProjects\pythonProject> python -m venv second
PS C:\Users\Administrator\PycharmProjects\pythonProject> .\second\Scripts\activate
(second) PS C:\Users\Administrator\PycharmProjects\pythonProject>
```



The screenshot shows the PyCharm IDE interface, focusing on the Terminal window. The terminal output is as follows:

```
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\Administrator\PycharmProjects\pythonProject> python -m venv second
PS C:\Users\Administrator\PycharmProjects\pythonProject> .\second\Scripts\activate
(second) PS C:\Users\Administrator\PycharmProjects\pythonProject> deactivate
PS C:\Users\Administrator\PycharmProjects\pythonProject>
```