Inspiring Excellence

Course Title: Programming Language II

Course Code: CSE 111

Semester: Summer 2020

Topic: IDE Installation for Python

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1. Integrated Development Environment (IDE)

An integrated development environment (IDE) is a software suite that consolidates basic tools required to write and test software.

Developers use numerous tools throughout software code creation, building and testing. Development tools often include text editors, code libraries, compilers and test platforms. Without an IDE, a developer must select, deploy, integrate and manage all of these tools separately. An IDE brings many of those development-related tools together as a single framework, application or service. The integrated toolset is designed to simplify software development and can identify and minimize coding mistakes and typos.

In short, you will write your codes and projects in IDEs, compile and run the codes to verify your desired output.

There are several popular IDEs for writing Python programs like PyCharm, Jupyter Notebook, Spyder, Google colab etc. For this course we will be using Spyder as we think the interface of Spyder is easier to grasp. You can use any IDE you prefer. Even you can choose not to use any IDE at all. You can simply write your Python code in a text file and save it with .py extension. Then you can run it from command prompt. Do not worry about it right now and just follow the note.

1.1 IDE Installation

Step 1: Anaconda Installation: Anaconda is the most popular Python distribution Platform. It accommodates many open-source Conda, R, Python packages as well IDEs such as Jupyter Notebook and Spyder. So if you install Anaconda, you will get both Spyder and Jupyter Notebook installed.

Anaconda Installation Tutorial: https://medium.com/@GalarnykMichael/install-python-anaconda-on-windows-2020-f8e188f9a63d

Anaconda Installation Video Tutorial:
https://www.youtube.com/watch?v=uOwCiZKj2rg&fbclid=IwAR1709CHJsNuD1dMfK3AT-ufxiJy7LpVWwABIBI8BREyF9spvdmbP_pIQ8s

Anaconda Download Link: https://www.anaconda.com/products/individual
(It requires a handy amount of space, so make sure you have enough free space in your hard drive)
Getting started with Anaconda: https://docs.anaconda.com/anaconda/user-guide/getting-started/

If you have finished the above step, you are done with the installation process.

Step 2: Getting Familiar with Spyder:

Now it's time to get used to Spyder IDE and write your first program in Python.

Introduction to Spyder IDE:

https://www.youtube.com/watch?v=zYNRqVimU3Q&fbclid=IwAR1hycVW7WllC4H6UV1sFxCPp0q6fj1qf9tApfAZp3liNf9TzJ7-jafZr0c

In this tutorial you will find everything required to get familiar with Spyder. Starting from creating files, to running and debugging your Python program.

2. Running Python Script from Command Line

This approach **does not require any IDE** but it is suitable for writing small Python scripts. If you have several Python programs files linked together this is probably not a suitable approach.

Step 1: Installing Python

Python Installation Tutorial: https://datatofish.com/install-python/

Just follow the **"Download and Install Python 3.8 for Windows"** section, do not need to follow **"Run a code in Python"** section.

Another thing, you will get a window like below in the very first step of the installation process. **Remember to put a check mark in the check box as given in the image below**. Otherwise you will have to add Python path to Windows environment variable manually.

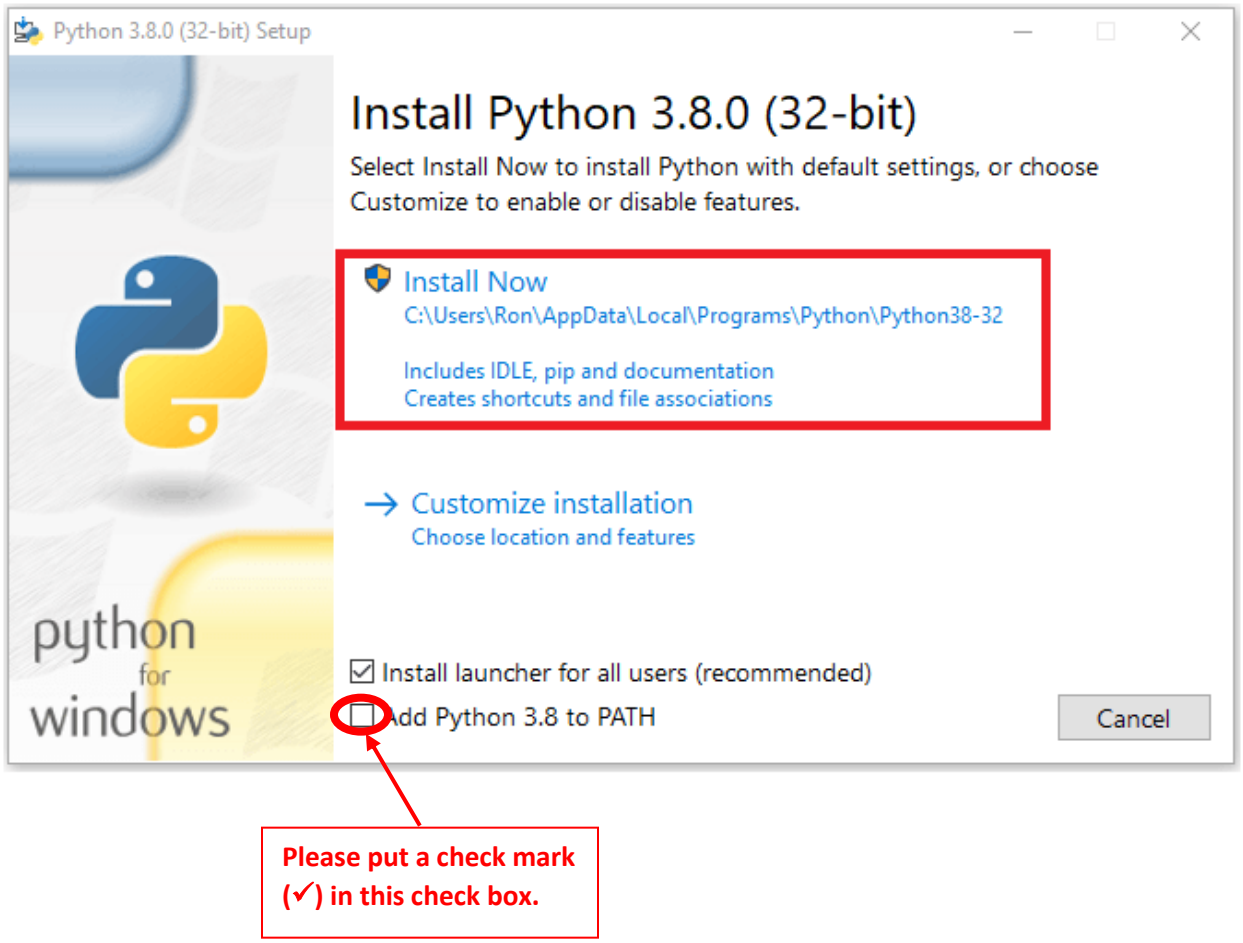

Figure 1: Python Installation Window

Step 2: Running Python script from Command prompt:

Please follow the link given below to run a Python script from command prompt:
https://thepythonguru.com/running-python-programs/

If you find running codes from command prompt a bit troublesome, do not worry. You can just use Spyder IDE to write your code.

That will all on IDE and Python installation process.