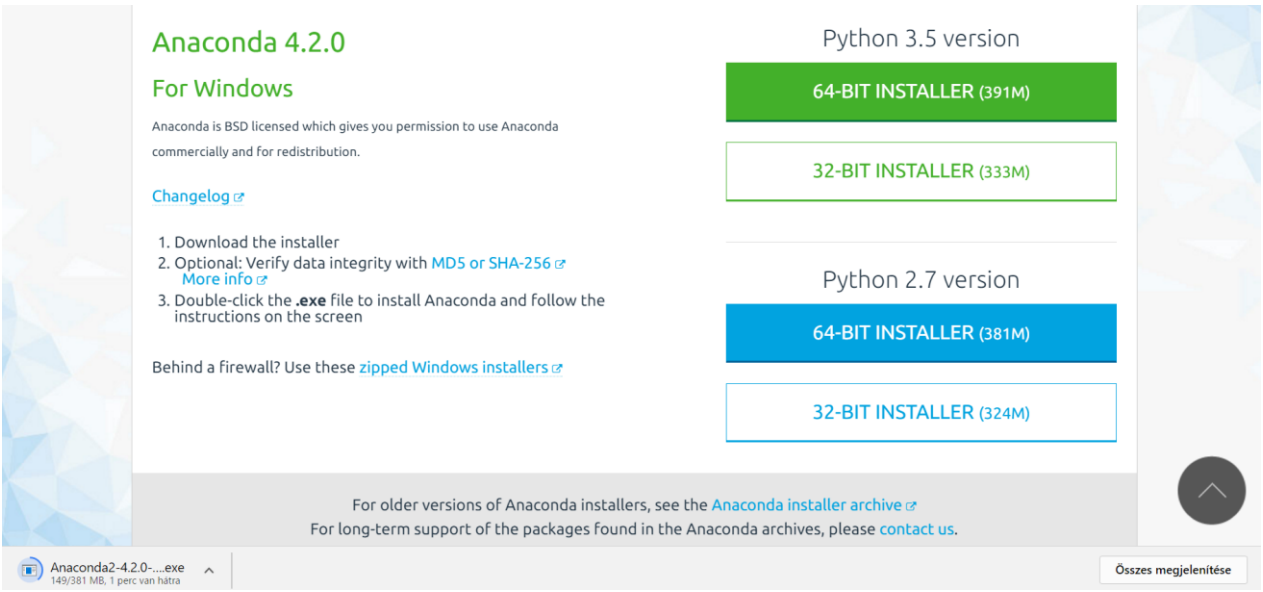
Python Installation Guide

1.) Install Anaconda: Anaconda is a distribution for Python which contains 100 widely-used packages. (Using this we can quickly install almost all packages that we need).

There are two main versions of Python, the 2.X and the 3.X version. We are currently using the 2.X version, but if one prefers to use the 3.X version, then one can simply choose the proper installer for Anaconda.

https://www.continuum.io/downloads

The following screen shows where one can find the installation .exe file and choose the appropriate one based on your system properties (32-bit/64-bit; operating system).



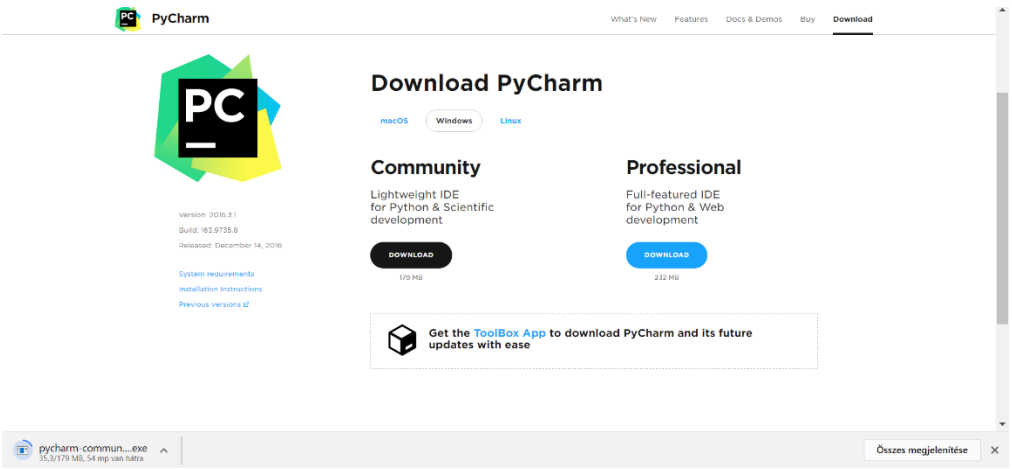
After the downloading finished, one should start the .exe file and finish the installation process in the usual way (agree on the license agreement, etc.). In the advanced options, add Anaconda to the system path and register Anaconda as the system Python 2.X. Using this other programs will recognize the Anaconda distribution as the primary Python version in the computer (See the screen about advanced options below).

2.) Install PyCharm: As a second step, we are going to install PyCharm. PyCharm is an IDE (Interactive Development Environment) for Python, and it contains many features that makes the programmer's life easier during the development of our code.

You can use the following link to download PyCharm:

https://www.jetbrains.com/pycharm/download/#section=windows

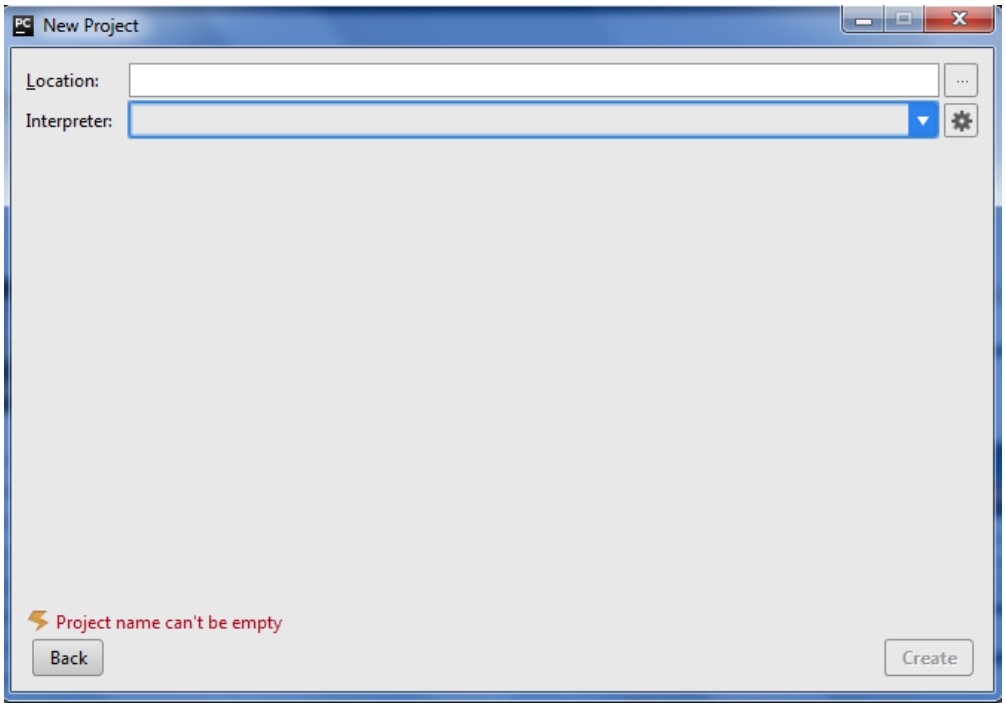
Here you should download the community version, download it and install it to your computer.



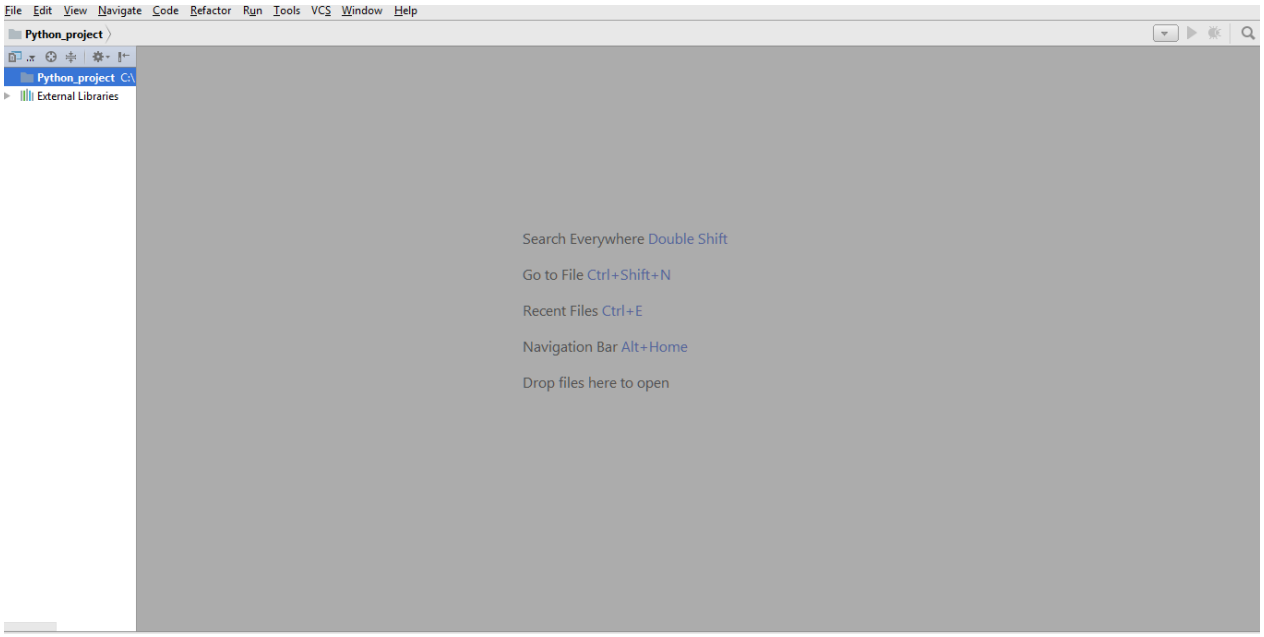
Once the installation of PyCharm is finished, you can start PyCharm from the installation window, and configure it.

First it will ask whether one would like to import their previous settings. If someone is new to PyCharm, one can just choose the other option. After this step, one can configure the editor's layout, but this is also something that one can change later, so now we can leave it with the default Keymap scheme, IDE theme and font/colour settings.

Once you set the editor's layout, you can "create a new project". There you need to set your project location in the "Location" field and the project interpreter in the "Interpreter" field (see the screen below). The project location can be any folder on your computer, where you would like to save your codes. For the setting of the project interpreter one should click on the settings button and select "Add local". In the "Select Python Interpreter" window, one should search for the "python.exe" file in the folder, where you saved the Anaconda folders, and select "python.exe" as the interpreter.

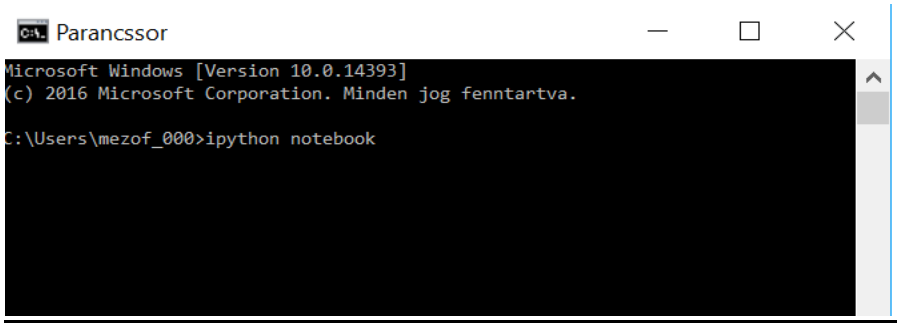


After the new project is created (it can take approximately 15-30 mins to update the project interpreter and create the project, it can change based on the computer's specifications), you will see the following screen:

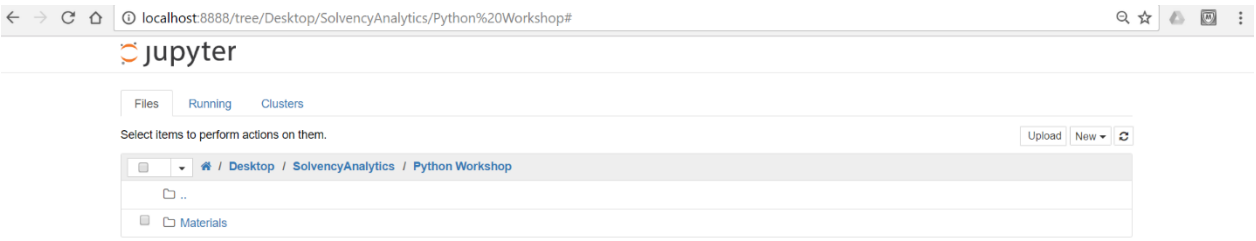


In the workshop, we will show how to work with PyCharm in more details.

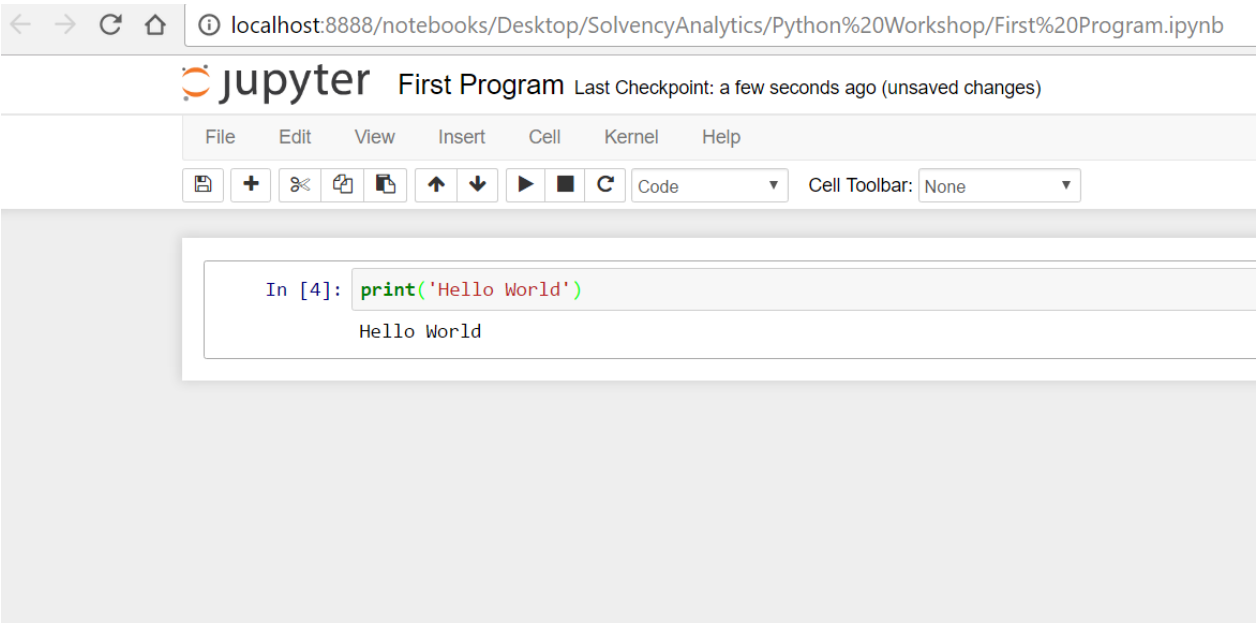
3. Try out the IPython (Jupyter) Notebook: One usually uses PyCharm for creating the core program (functions, classes, etc.), and the IPython notebook for the research and graphical analysis. In this part, we will show how to open the IPython notebook and we will create the "Hello World" program. There are many ways to open the IPython notebook, one is using the command prompt, and write: "ipython notebook" (see the attached screen).



After you run the command, a similar screen to the following screen will appear in your browser:



One can create a new notebook clicking on the “New” button and after the notebook is open, just type to the first cell, that “print(‘hello world!’)”.



If these steps are working properly, then the setup is ready, and we will continue with the programming part on the workshop.