Python Básico Aplicado

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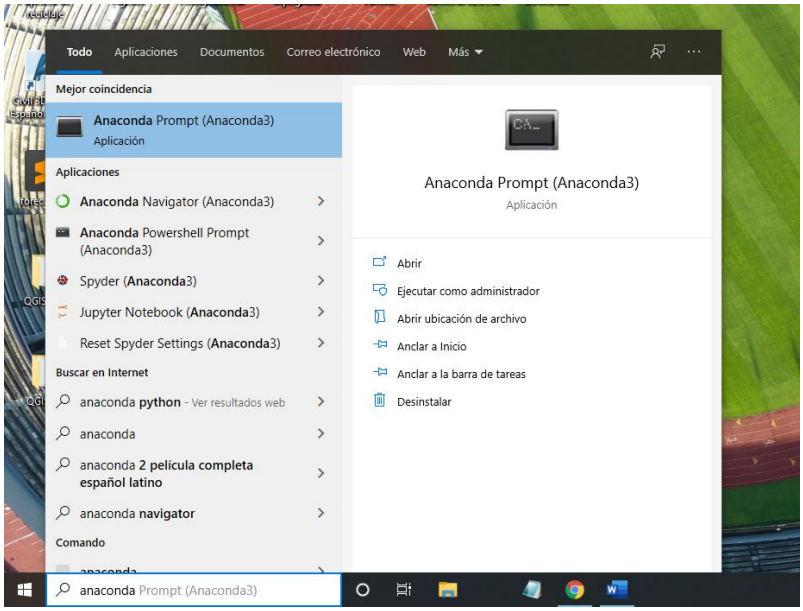
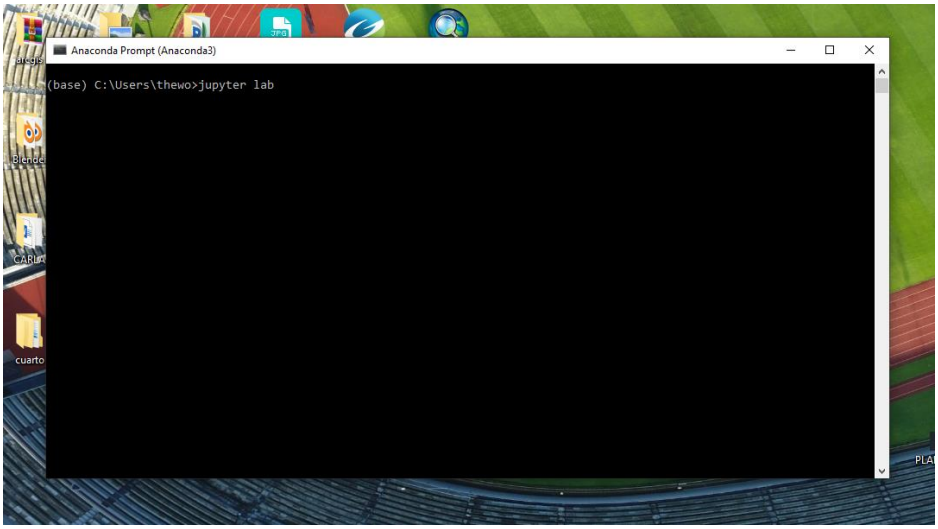
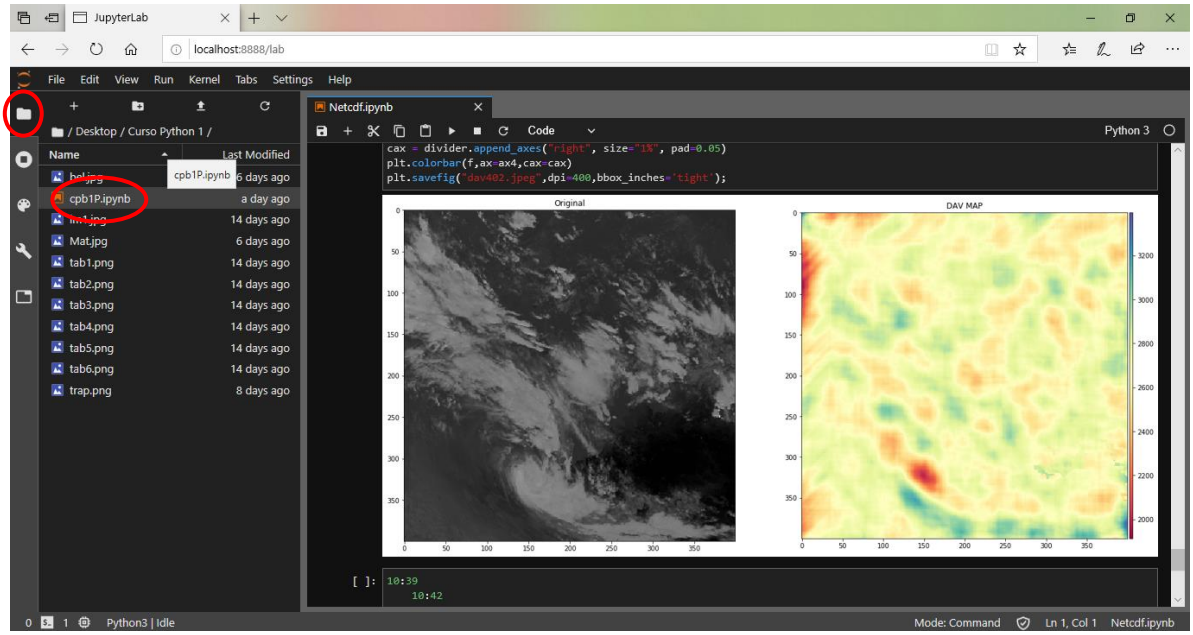
Una vez instalado Anaconda 3, iniciaremos JupyterLab desde la Anaconda Prompt



Y teclearemos el siguiente comando:



Este comando desplegará el entorno de JupyterLab, en este punto ya podemos buscar en el explorador de archivos el notebook con el que se va a trabajar o crear uno nuevo.



Durante el curso estaremos trabajando con algunas librerías que no instala por defecto la versión completa de anaconda 3, continuación enlisto las librerías que tienen que descargar para utilizarlas durante el curso, además, anexo algunas otras que podrían serles de interés. No se preocupen, hablaremos de ellas durante la primer clase, por el momento solo **es indispensable que descarguen las que están resaltadas.**

[Math](https://docs.python.org/3/library/math.html): This module provides access to the mathematical functions defined by the C standard. These functions cannot be used with complex numbers; use the functions of the same name from the cmath module if you require support for complex numbers.

[Numba](http://numba.pydata.org): Numba translates Python functions to optimized machine code at runtime using the industry-standard [LLVM](https://es.wikipedia.org/wiki/LLVM) compiler library. Numba-compiled numerical algorithms in Python can approach the speeds of C or FORTRAN.

[Os](https://docs.python.org/3/library/os.html): This module provides a portable way of using operating system dependent functionality.

[Datetime](https://docs.python.org/3/library/datetime.html): The datetime module supplies classes for manipulating dates and times.

*[GeoPy](https://geopy.readthedocs.io/en/stable/#): GeoPy makes it easy for Python developers to locate the coordinates of addresses, cities, countries, and landmarks across the globe using third-party geocoders and other data sources

*[Scikit-learn](https://scikit-learn.org/stable/): Is a free software machine learning module. It features various classification, regression and clustering algorithms including support vector machines, random forests, gradient boosting, k-means and DBSCAN, and is designed to interoperate with the Python numerical and scientific libraries NumPy, SciPy and Matplotlib.

*[GetPass](https://www.geeksforgeeks.org/getpass-and-getuser-in-python-password-without-echo/): getpass() prompts the user for a password without echoing. The getpass module provides a secure way to handle the password prompts where programs interact with the users via the terminal.

* [smtplib](https://docs.python.org/3/library/smtplib.html): The smtplib module defines an SMTP client session object that can be used to send mail to any Internet machine with an SMTP or ESMTP listener daemon.

* [imblearn](https://imbalanced-learn.readthedocs.io/en/stable/api.html#): Imbalanced-learn is a python package offering a number of re-sampling techniques commonly used in datasets showing strong between-class imbalance. It is compatible with scikit-learn and is part of scikit-learn-contrib projects.

* [GeoPandas](http://geopandas.org): The goal of GeoPandas is to make working with geospatial data in python easier. It combines the capabilities of pandas and shapely, providing geospatial operations in pandas and a high-level interface to multiple geometries to shapely. GeoPandas enables you to easily do operations in python that would otherwise require a spatial database such as PostGIS.

* [CartoPy](https://scitools.org.uk/cartopy/docs/latest/): Cartopy is a Python package designed for geospatial data processing in order to produce maps and other geospatial data analyses.

* [Random](https://docs.python.org/3/library/random.html): This module implements pseudo-random number generators for various distributions.

* [Seaborn](https://seaborn.pydata.org): Seaborn is a Python data visualization library based on matplotlib. It provides a high-level interface for drawing attractive and informative statistical graphics.

* [ipywidgets](https://ipywidgets.readthedocs.io/en/latest/):Interactive HTML widgets for Jupyter notebooks and the IPython kernel. Widgets are eventful python objects that have a representation in the browser, often as a control like a slider, textbox, etc.

* [ffmpeg](https://www.ffmpeg.org/about.html): FFmpeg is the leading multimedia framework, able to decode, encode, transcode, mux, demux, stream, filter and play pretty much anything that humans and machines have created.

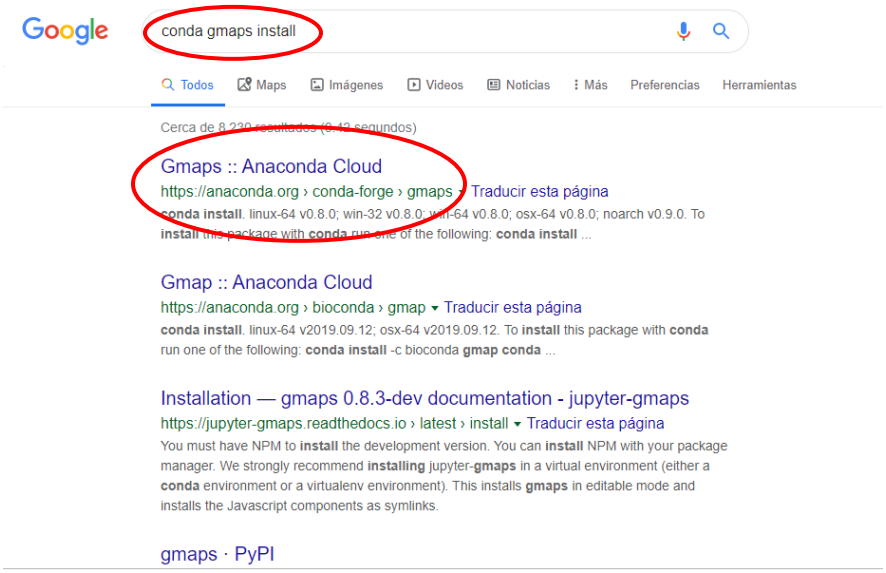
* [warnings](https://docs.python.org/3/library/warnings.html): Warning messages are typically issued in situations where it is useful to alert the user of some condition in a program, where that condition (normally) doesn't warrant raising an exception and terminating the program. For example, one might want to issue a warning when a program uses an obsolete module.

* [mpl_toolkits](https://matplotlib.org/mpl_toolkits/index.html):Toolkits are collections of application-specific functions that extend Matplotlib.

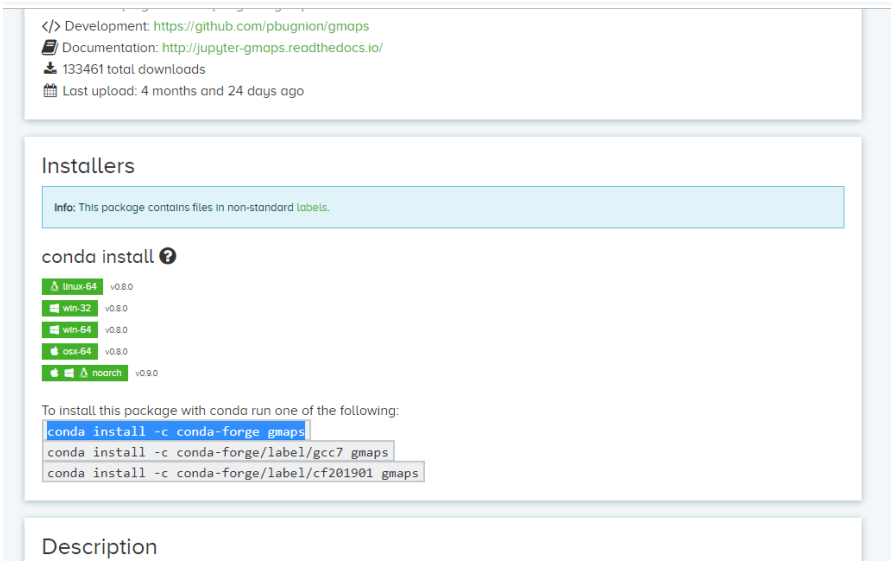
* [Gmaps](https://jupyter-gmaps.readthedocs.io/en/latest/tutorial.html): gmaps is a plugin for Jupyter for embedding Google Maps in your notebooks. It is designed as a data visualization tool.

* [OpenCV](https://docs.opencv.org/master/d1/dfb/intro.html): OpenCV (Open Source Computer Vision Library) is an open-source BSD-licensed library that includes several hundreds of computer vision algorithms.

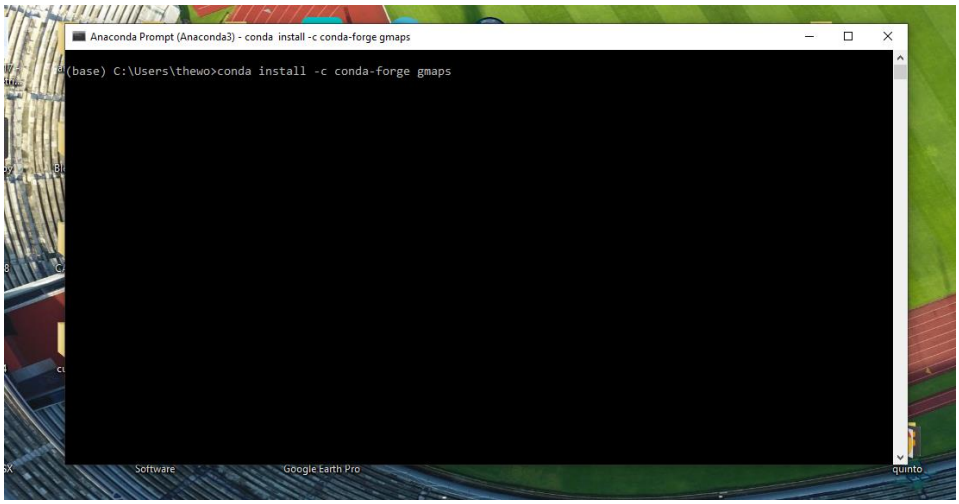
Para instalar librerías haremos uso de la Anconda Prompt por lo tanto, hay que inicializarla como se indica al inicio del documento. Ahora, supongamos que queremos instalar *Gmaps***,** lo primero que se debe hacer es buscar el comando *conda* de instalación y ubicar la pagina oficial de Anaconda Cloud.



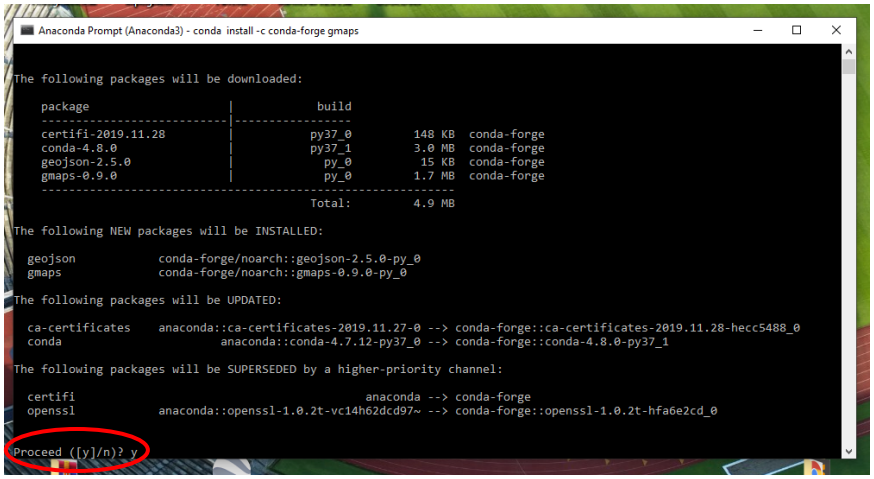
Entramos al sitio seleccionado y nos dirigimos al final de la página, ahí encontraremos la línea de comando necesaria, seleccionamos y copiamos la primer opción propuesta.



Pegamos el comando en nuestra Anaconda Prompt y esperamos a que se instale



Finalmente, cuando aparezca la petición para proceder basta con teclear la letra “y” y dar enter.



Siguiendo estos simples pasos ya pueden instalar cualquier librería compatible la Anaconda Prompt.