Google Colab

Introduction

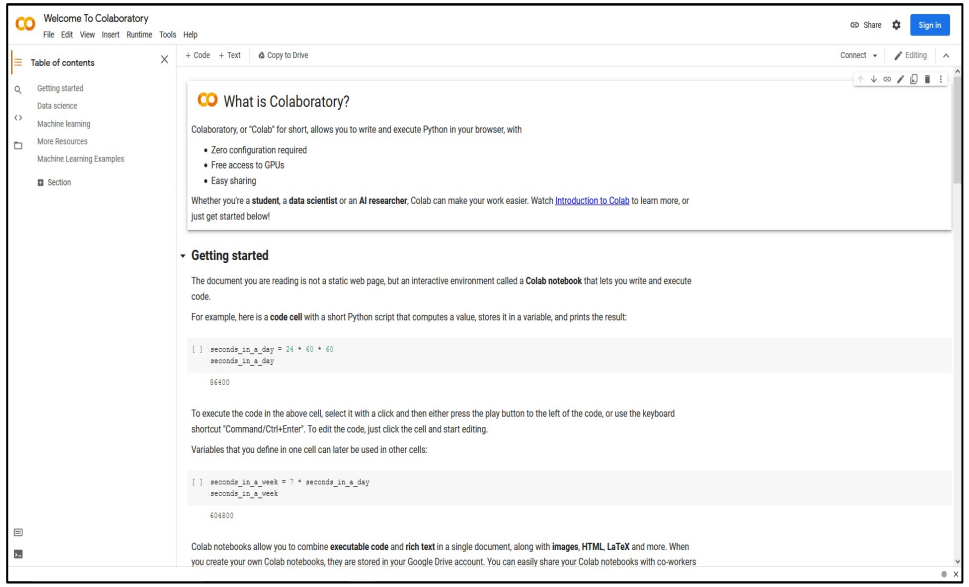
Usually to start writing Python code, we first need to meet the hardware requirements and download a Python executable and install it. Then, we must choose an IDE to run our programs and install the libraries and framework required for our project. We might also need to install Jupyter notebook to present or organize our code.

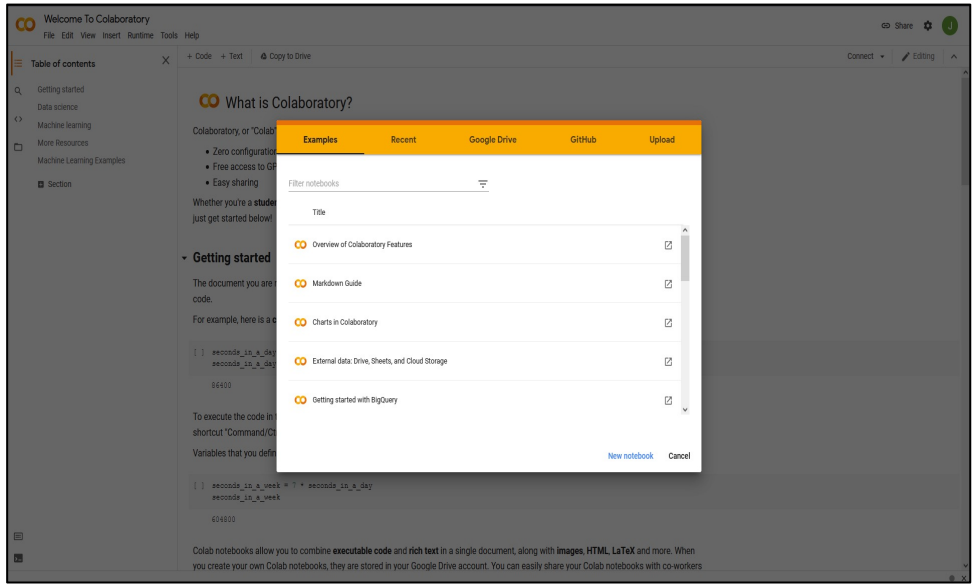
Though, once everything is configured, we don’t need to do it again. Nonetheless, this process takes time and is tedious, especially for beginners.

To avoid all this trouble and begin coding almost instantly, we can use Google Colab which is a Jupyter notebook environment, and it handles all the setup and configuration necessary for our program.

Getting Started

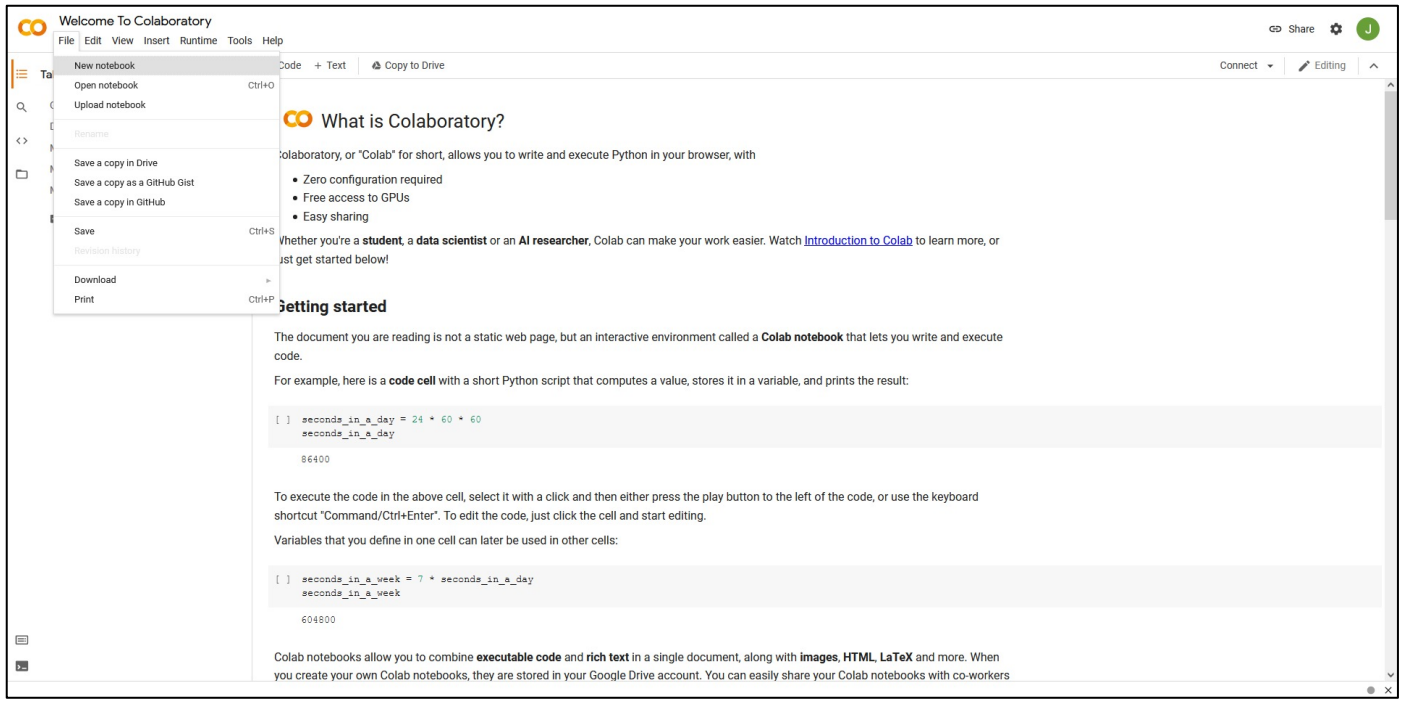
Before using Google Colab, you must first sign in at https://colab.research.google.com. After you login to Google Colab, it will give you different options to create or open a notebook: open a recently created notebook, open a notebook saved in Google Drive, clone a notebook from GitHub, upload one from the local storage, or create a new one.





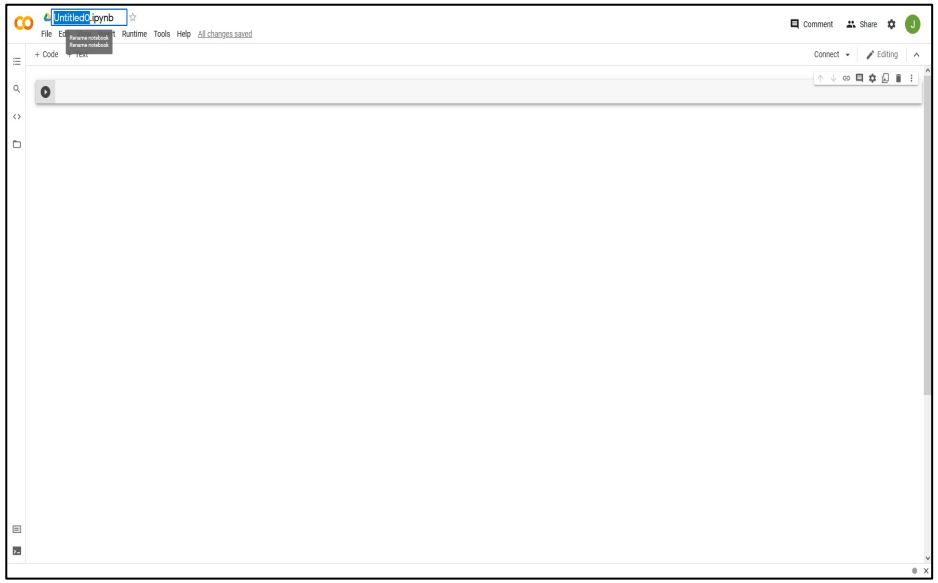
Creating a New Notebook

There two ways of creating a new notebook in Google Colab. The first one is by clicking the new notebook button in the pop-up window shown previously. The other way is to click file and then new notebook.



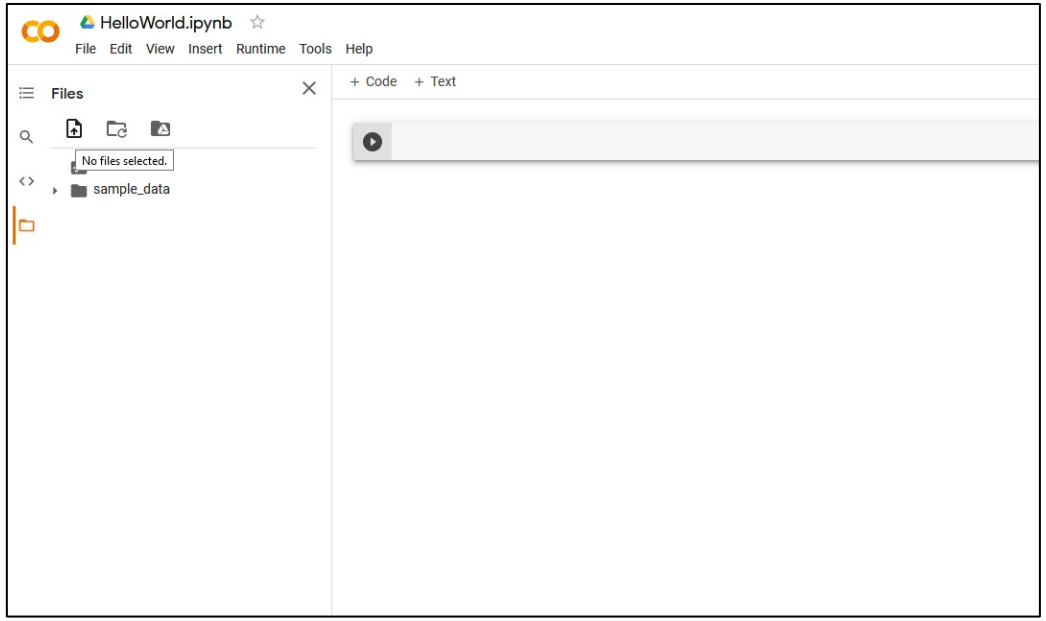
Using a Notebook

Once you have opened a notebook, you can change its name by doble clicking in the text to the right of the Drive logo in the top left corner. Though, do not change the extension because it always must be *.ipynb* for it to work. Now, you can begin coding. As you code, you can add new code cells or titles to organize your code by hovering the mouse over the top or bottom of a cell. Another way is to select cell and click + *Code* or + *Text* in the tool bar which will create a new cell under the selected one.



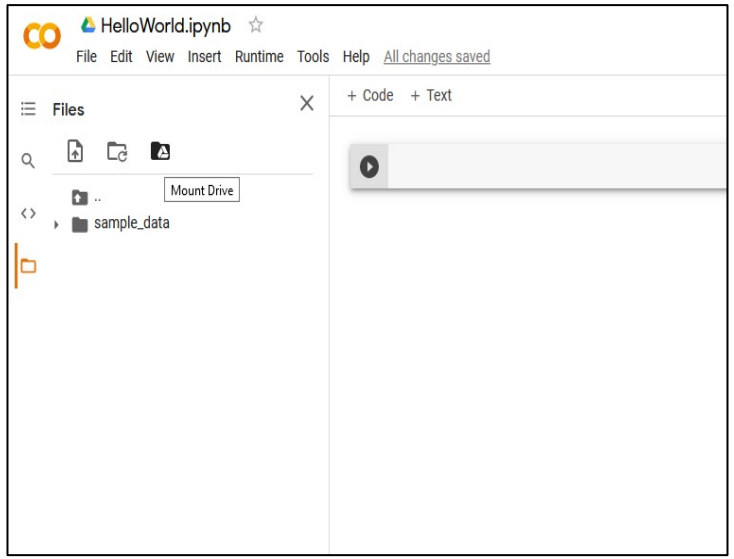
Managing Files: Runtime

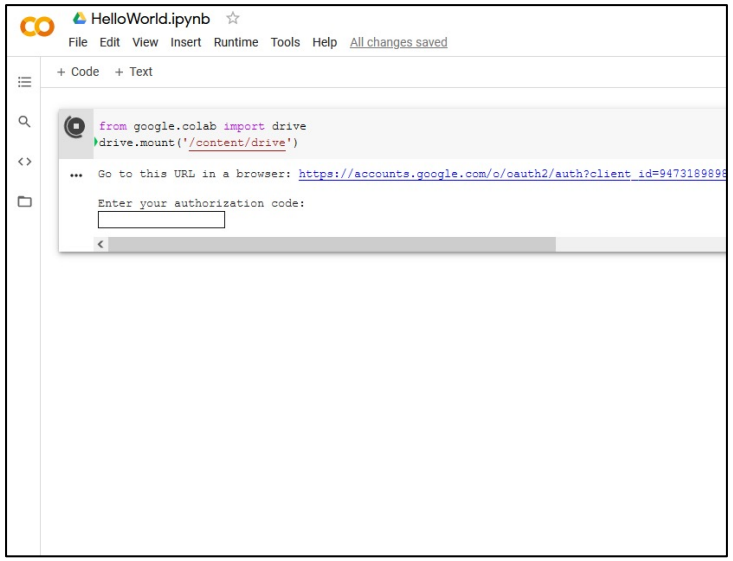
There are two ways to use files in Google Colab. The quickest way is to upload them in the current runtime machine by going to the folder icon named *Files* and clicking the icon of a file with an arrow pointing up. Though, the file is deleted when you close Colab or disconnect due to inactivity, so using this option is not recommended for long projects.

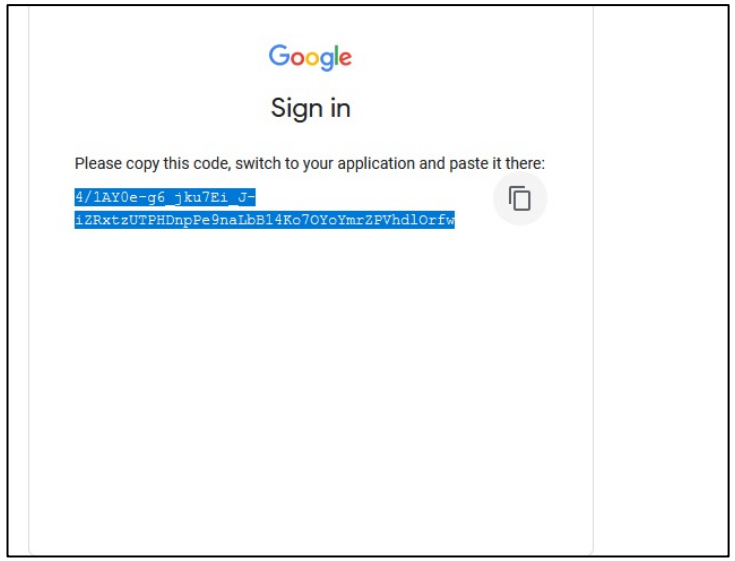


Managing Files: Google Drive

The second option is to mount Google Drive which will link your Drive storage with Colab. To do this, you can either click the Mount Drive icon or write and run two lines of code. After you run the code to mount, you will have to go to the given link and copy and enter the authentication code. Afterwards, you can access or save any file in Google Drive.







Using a GPU or TPU

If you need a GPU or TPU for data analytics, machine learning, or other similar programs, you can enable the GPU or TPU by selecting the runtime tab and clicking change runtime. Then, you can select one of the two systems.