google-colab-guide.md

Getting Started with Google Colab

Introduction

For this course, we will be using an online application known as Google Colab for completing Python assignments. Google Colab will allow us to write and edit Jupyter Notebooks for Python. Essentially, a Jupyter Notebook is a interactive and user-friendly way of writing and sharing Python code.

One of the major benefits for using Google Colab is that it doesn't require any setup on your personal computer. Installing and setting up a Python environment can sometimes be a frustrating and time-consuming experience. Google Colab avoids this by having a Python environment already setup for you to use in a web browser. So there is no need to do any installation. All you have to do is go to this website.

The other major benefit is that you are using Google's powerful servers. While none of the tasks we will complete in this course are particularly resource intensive, it is still convenient to offload the work onto Google's servers. Depending on what you are trying to achieve, this may result in your code running faster.

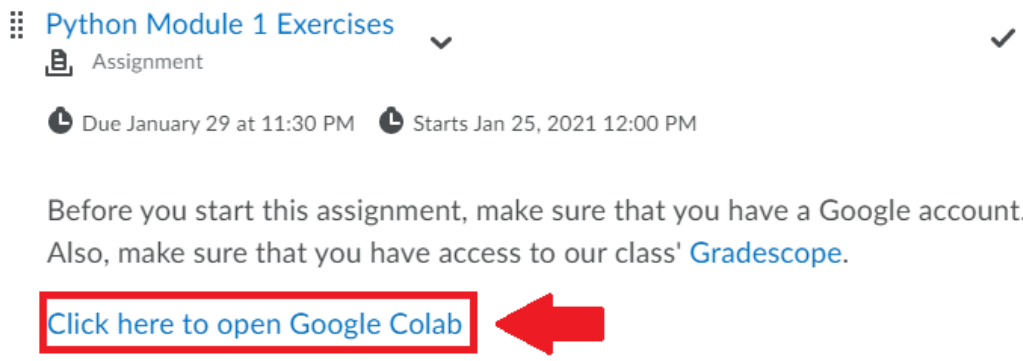
Setup

The only requirement to use Google Colab is to have a Google account. If you already have a personal Google account, you can go ahead and use it. If you don't have a Google account, **you must create one for this course.** If there is some issue that prevents you from creating a Google account, please send Dr. Waltenburg an email at ewaltenb@purdue.edu.

Getting Started

Step 1: Open the Google Colab link on Brightspace

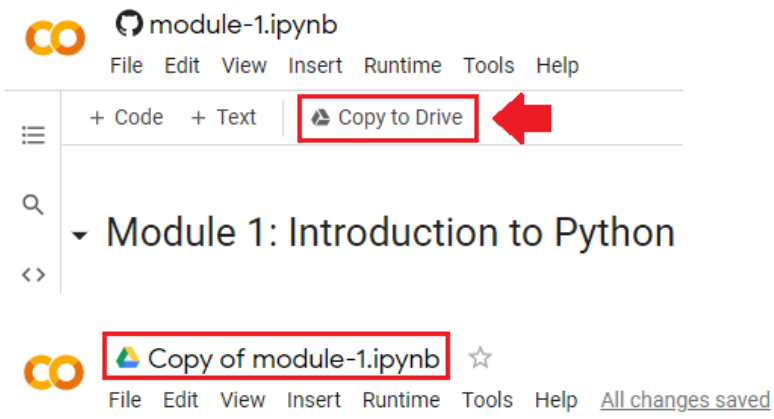
Navigate to the POL 300 class on Brightspace. Find the Python assignment you want to work on. There will be a link listed the read "Click here to open Google Colab." This will automatically open the correct assignment in Google Colab.



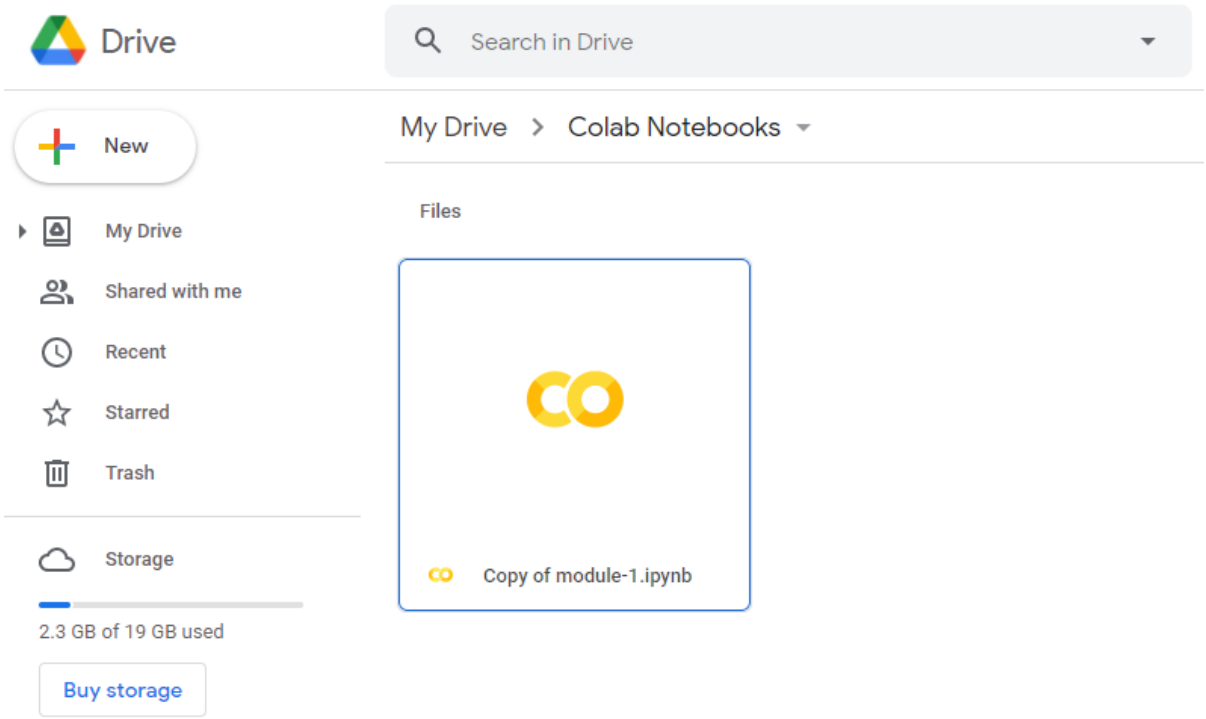
Step 2: Create a Copy on Google Drive

Next, we are going to create a copy on your Google Drive. This will ensure that all your changes are saved. This will especially be useful if you need to reference this notebook down the line to complete another assignment.

To make a copy to your Google Drive, click the "Copy to Drive." This will open a new tab with your personal copy of the notebook. You can tell because your personal copy will have the Google Drive logo and start with "Copy of" in the title.



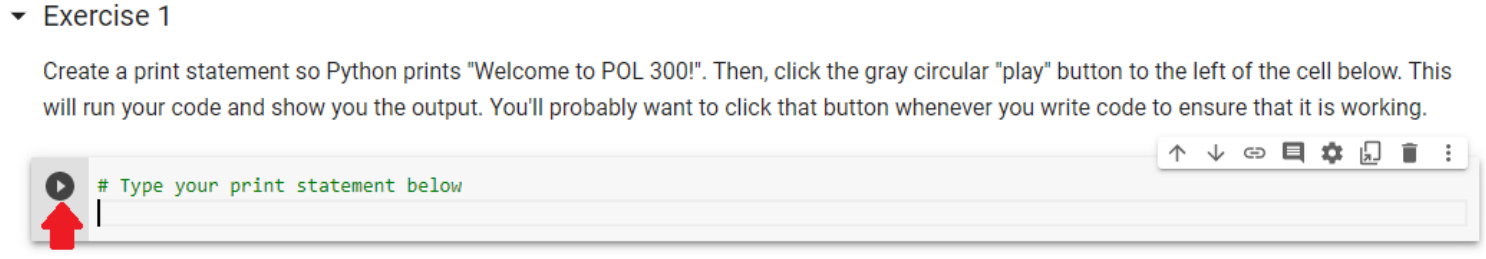
All of your Google Colab assignments will be saved in a folder on Google Drive called "Colab Notebooks." You can open your notebooks again directly in Google Drive.



Step 3: Complete the Notebook

Each of the notebooks will have a few exercises we will ask you to complete.

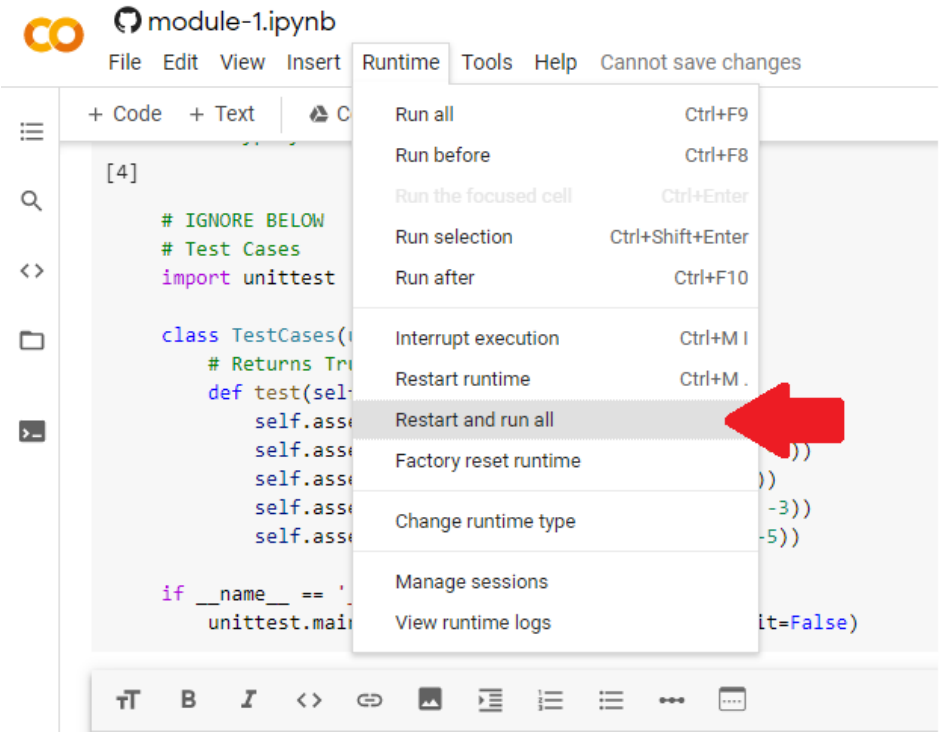
In the cells that ask for answers, type your answers below where stated. To run your code, click the circular play button on the left.



If you are having issues, there is nothing wrong with trying to use Google to debug. Remember that we are using Python 3, not Python 2, when looking for Python help online. Also, we highly encourage you to post your questions on the Brightspace discussion boards. If you have a question, there is a good chance that another student has the same exact question. Also, if you know the answer to someone's question, feel free to answer it! **We only ask that you try to avoid directly posting answers on the discussion board.**

Step 4: Restart and Run All

After completing all of the exercises in the notebook, we need to restart and run all the cells. This will ensure that all your code has ran. To achieve this, in the menu bar, select "Runtime", then click "Restart and run all."

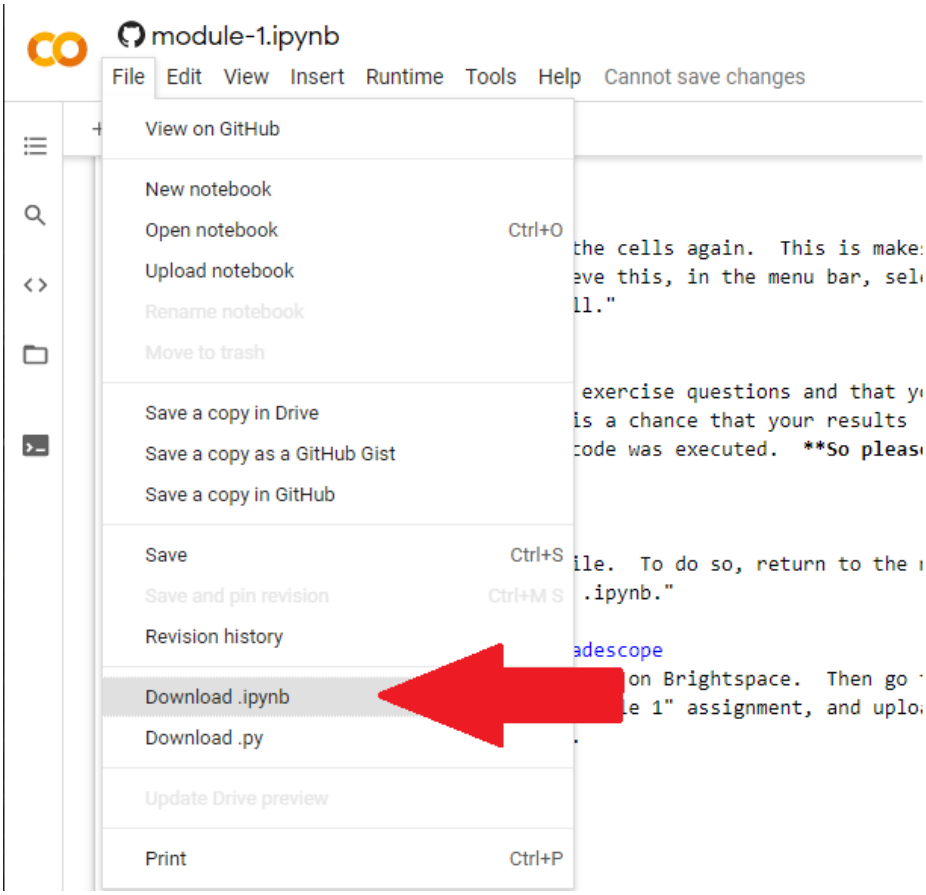


Step 5: Double check all your exercise answers

Make sure that you have answered all the exercise questions and that you are getting the correct results. There is a chance that your results could have changed after step 4 due to the order the code was executed. **So please double check!**

Step 6: Download the .ipynb

After completing all the exercises in the Python notebook, download the .ipynb file to your computer. In the menu bar, select "File", then click "Download .ipynb."



Step 7: Upload to Gradescope

Now you can upload your .ipynb file to Gradescope. You can use this link to access Gradescope. Find the appropriate assignment and upload the .ipynb file that you downloaded in step 6.

Step 8: Now you're done! 🎉