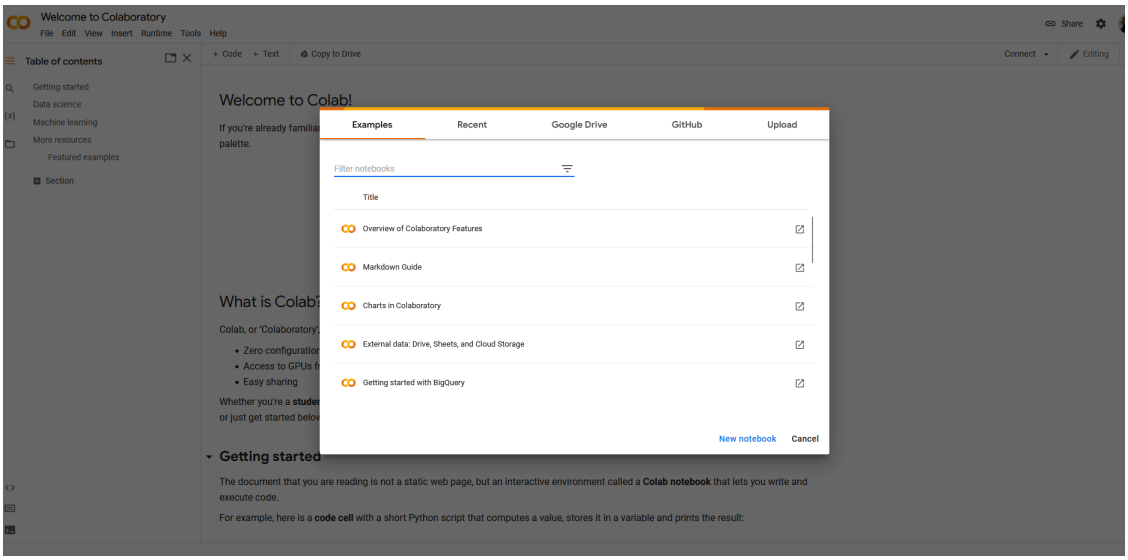
This document gives a broad description of what should be done in preparation for the first lab session.

For the present edition of **Foundations of Operations Research** we will use the `mip` package (`https://python-mip.com/`) for modeling optimization problems in Python. Python is a high-level, general-purpose programming language, while `mip` is a collection of Python tools for the modeling and solution of Mixed-Integer Linear programs (MIPs). Basic documentation for `mip` can also be found at the link: `https://python-mip.readthedocs.io/en/latest/`.

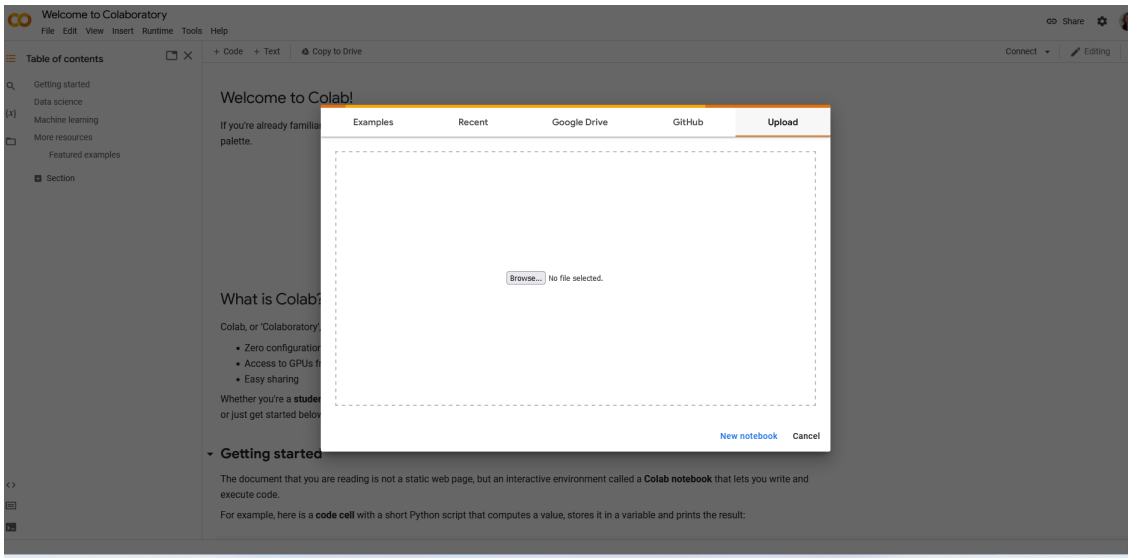
We will implement everything in Google Colab, so you will not need to install anything on your computer. The unique requirement is to have a google account. Each exercise will be carried out through a notebook. Notebooks consist of cells in which you write the code to be executed. To start working with Colab, you first need to log in to your google account and then go to this link `https://colab.research.google.com`. The following pop-up will appear when opening the website:



Each tab can be used to open a notebook in a different way:

- **Examples**: Contains several Jupyter notebooks of various examples.
- **Recent**: Jupyter notebooks you have recently worked with.
- **Google Drive**: Jupyter notebooks in your google drive.
- **GitHub**: You can add Jupyter notebooks from your GitHub but you first need toconnect Colab with GitHub.
- **Upload**: Upload from your local directory.

You can use the **Upload** tab to upload the notebook files we will provide:



It is strongly recommended that you use Colab, but if you still want to install Python on your pc, you can. Consider, however, that in some PCs (e.g., some Macs) there may be an incompatibility with a package needed to run `mip`.

Before the first computer lab session you should study and try to run on Colab the material within the `Lab0.zip` file.