*prepared by Claudia Zendejas-Morales*

# How to Run the Notebooks

In order to access the content of the QBook101, you have two main options: through Google Colab or by installing a local Jupyter environment; both options are described below, as well as the use of alternative platforms/tools.

An overview of how Jupyter notebooks work can be found in *appendix A* of QBook101.

- Google Colab
- Local Environment
- Other Platforms

## ▼ Google Colab

The notebooks that constitute the QBook101 are ready to be used on the Google Colab platform; the links to access each of them can be found on this webpage that shows the content: https://qworld.net/qbook101/

Once you choose the notebook you want to study, a window like the following will open:
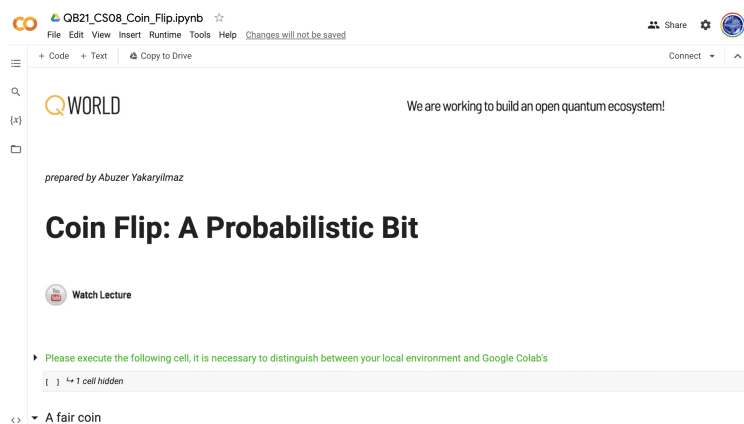


We strongly recommend that you keep a copy of the notebook in your personal account, for that choose the option `Save a copy in Drive` (note that you need a Gmail account for doing this):
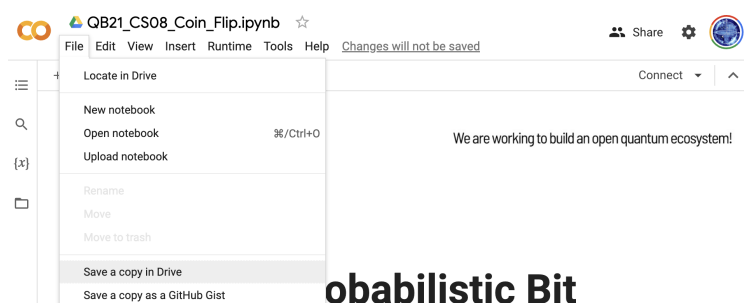
If you decide to run the notebook's contents without saving a copy, you will get the following warning: it is entirely safe to click `Run anyway`; if in doubt, check the code that will be executed carefully.

**Warning: This notebook was not authored by Google**

This notebook was authored by **qworldbook@gmail.com**. It may request access to your data stored with Google, or read data and credentials from other sessions. Please review the source code before executing this notebook. Please contact the creator of this notebook at qworldbook@gmail.com with any additional questions.

Cancel    Run anyway

Several of the notebooks contain a preamble cell, which indicates in green letters that it is necessary to run it to establish the environment to run the rest of the notebook; it is defined if the notebook is being run from Google Colab or a local environment, and if it is in Colab, it could also download files or do necessary installations (like Qiskit or Cirq):

Please execute the following cell, it is necessary to distinguish between your local environment and Google Colab's

↳ 1 cell hidden

Now, you can continue with the rest of the notebook content and run the sample code.

To open the solution of a task, you must execute the corresponding cell:

To check out our solution, run the next cell:

```
[ ]  SolutionToTask1()  # show solution for task 1
```

## Local Environment

To run QBook101 notebooks locally (on your computer), you must install [Python](#) and [Jupyter](#) and optionally (although highly recommended) [Anaconda](#); the latter to have an environment dedicated to the QBook101 notebooks.

The content of QBook101 is in the repository: [https://gitlab.com/qworld/qeducation/qbook101](https://gitlab.com/qworld/qeducation/qbook101) (the starting point is the notebook **START.ipynb**)

You can download it as a compressed file:

**Download**

Find file    Edit ∨    ⬇ ∨    Clone

**Download source code**

zip    tar.gz    tar.bz2    tar
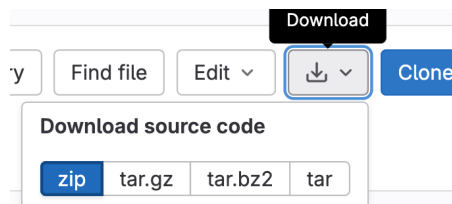
or by doing clone with git (it can be from your [fork](#)) in your command line:

```
git clone https://gitlab.com/qworld/qeducation/qbook101.git
```

For details of the installation of Anaconda, the creation of a dedicated environment, and the subsequent execution of the notebooks, you can watch [this video](#).

# ▾ Other Platforms

We recommend running the QBook101 notebooks in either of the abovementioned ways.

You can run the notebooks on other platforms, but in most cases, the directory structure is not taken into account by other platforms, which leads to confusion when finding the notebooks you want to study, so please be careful.

Alternatives like *VS Code* can cause issues in the rendering of LaTeX code. Other online platforms like *IBM Quantum* have shown problems with the links between notebooks. Also note that if you want to upload the notebooks from your local copy to Google Colab, the internal links will send you to the notebooks residing in the QBook101/QWorld account, as they are written within the files.