Getting started with qBraid

Follow these instructions to open the supplied **hello_qbraid.ipynb** notebook in qBraid Lab. Once it is open, continue with the exercises in the notebook. Everything runs in your browser; you do not need to install Python on your computer.

1. Sign in and join the course workspace

You should have received an invitation to qBraid at your course email address, with **400 starting credits** for the course. If you did not receive the invitation or do not see the credits after joining the course workspace, please reach out to me.

Sign in at account.qbraid.com, or create an account if needed, using the email address that received the invitation. Accept the invitation. In the menu at the top left, switch from **qBraid Default** to **Columbia CS**. This is our course workspace, where you should see your starting credits.

2. Launch qBraid Lab

From the course workspace's dashboard, launch a **subscription CPU** instance of qBraid Lab. The first launch may take a few minutes. Use the course resources; you do not need to purchase credits, pay for a subscription, or select an on-demand CPU or GPU instance.

3. Upload and open the notebook

Download **hello_qbraid.ipynb** to your computer. In Lab's file browser, click the upload button and select the file. Double-click the uploaded notebook to open it.

4. Select the Qiskit kernel

Open **Environments** in Lab. Choose a Qiskit environment containing **qbraid 0.13 or newer** and **Qiskit 2.x**. If necessary, click **Add**, find the environment, and install it. Expand its panel and click **Add kernel**. Select that kernel for your notebook using the kernel menu at the top right. Run the notebook's first code cell with **Shift+Enter**; it should print **Hello, quantum world!**

If a package is still missing, run the following in a new code cell, restart the kernel, and rerun the notebook from the top:

```
%pip install "qbraid[qiskit]==0.13.0" "qiskit==2.5.1" matplotlib
```

5. If the hardware connection needs an API key

Lab normally supplies the credentials. If the notebook's connection cell fails, return to **Columbia CS** on the account page, open **Account > API Keys**, and create a key named **COMS4281**. Replace the notebook's `provider = QbraidProvider()` line with:

```
from getpass import getpass
provider = QbraidProvider(api_key=getpass("Course qBraid API key: "))
```

Run the cell and paste the key into the hidden prompt. Keep the key out of the notebook, screenshots, and help requests. The key must belong to the course workspace. You do not need a separate AWS or Rigetti account.

You are ready to continue in the notebook. When finished, save your work and stop your subscription Lab server from the account dashboard.