Getting Started with IBM Q Experience & Jupyter Notebooks

Explore the platform

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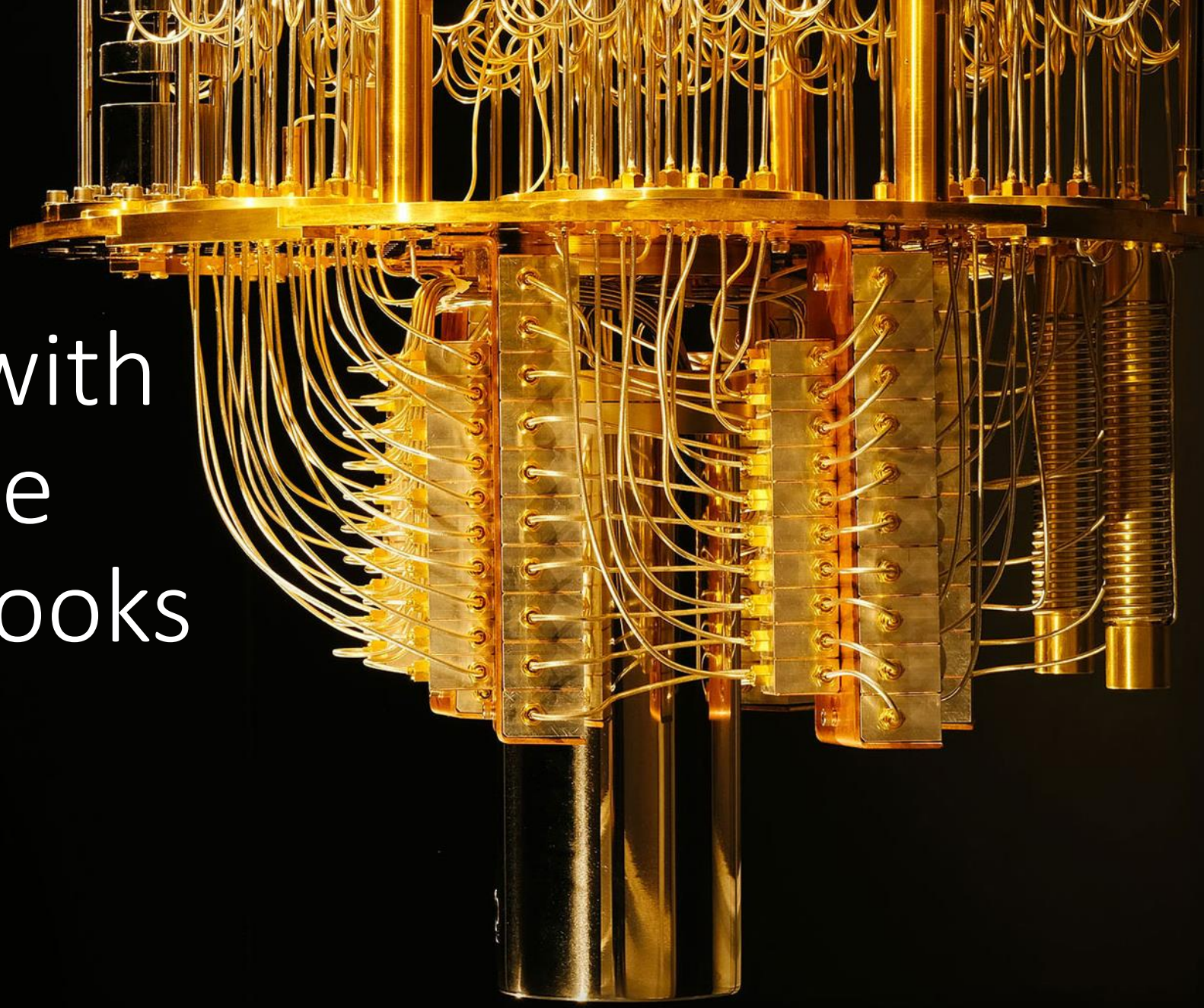
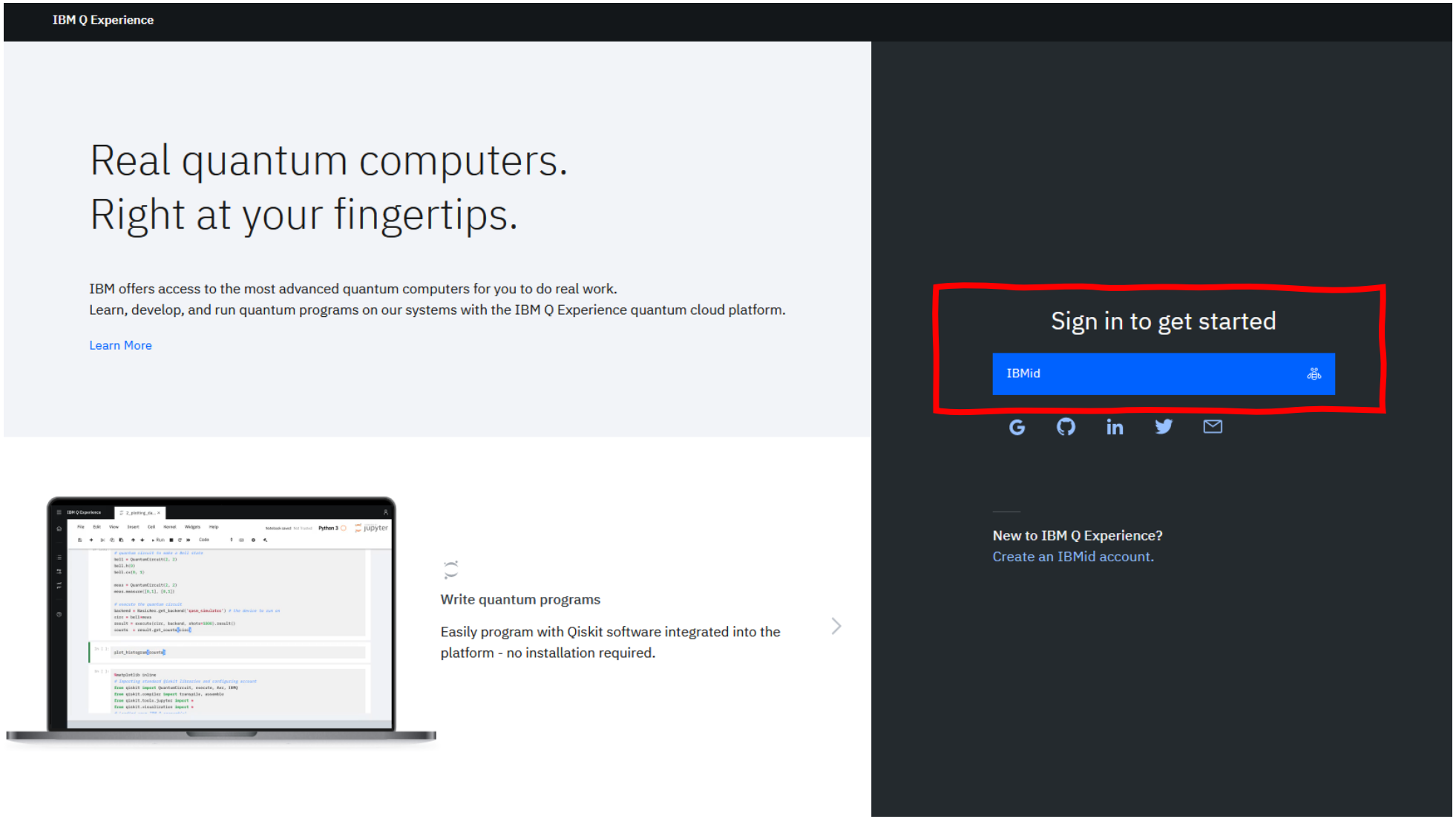
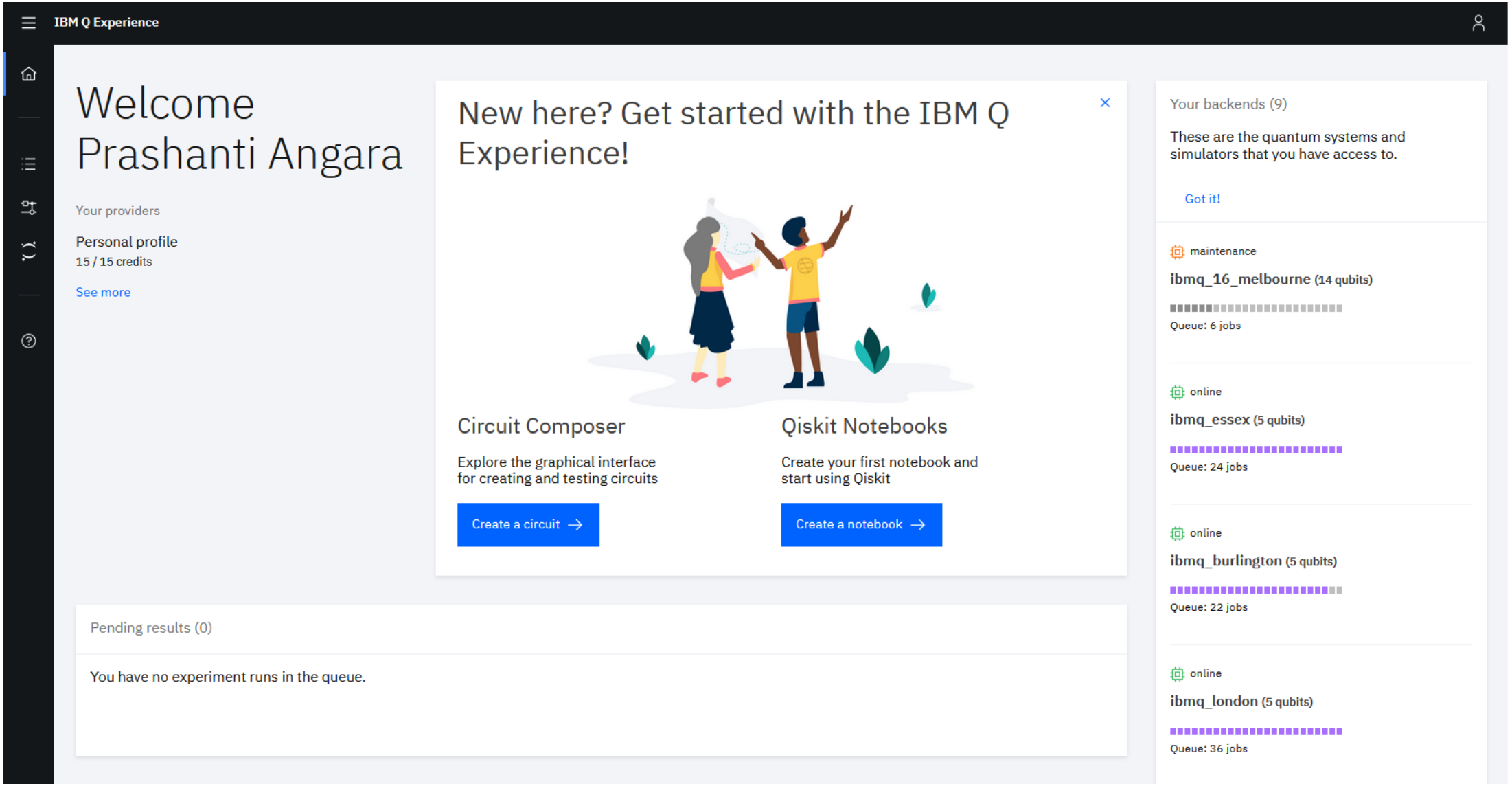


Sign in: https://quantum-computing.ibm.com/



Components


IBM Q Experience
Welcome Prashanti Angara
Your providers
Personal profile
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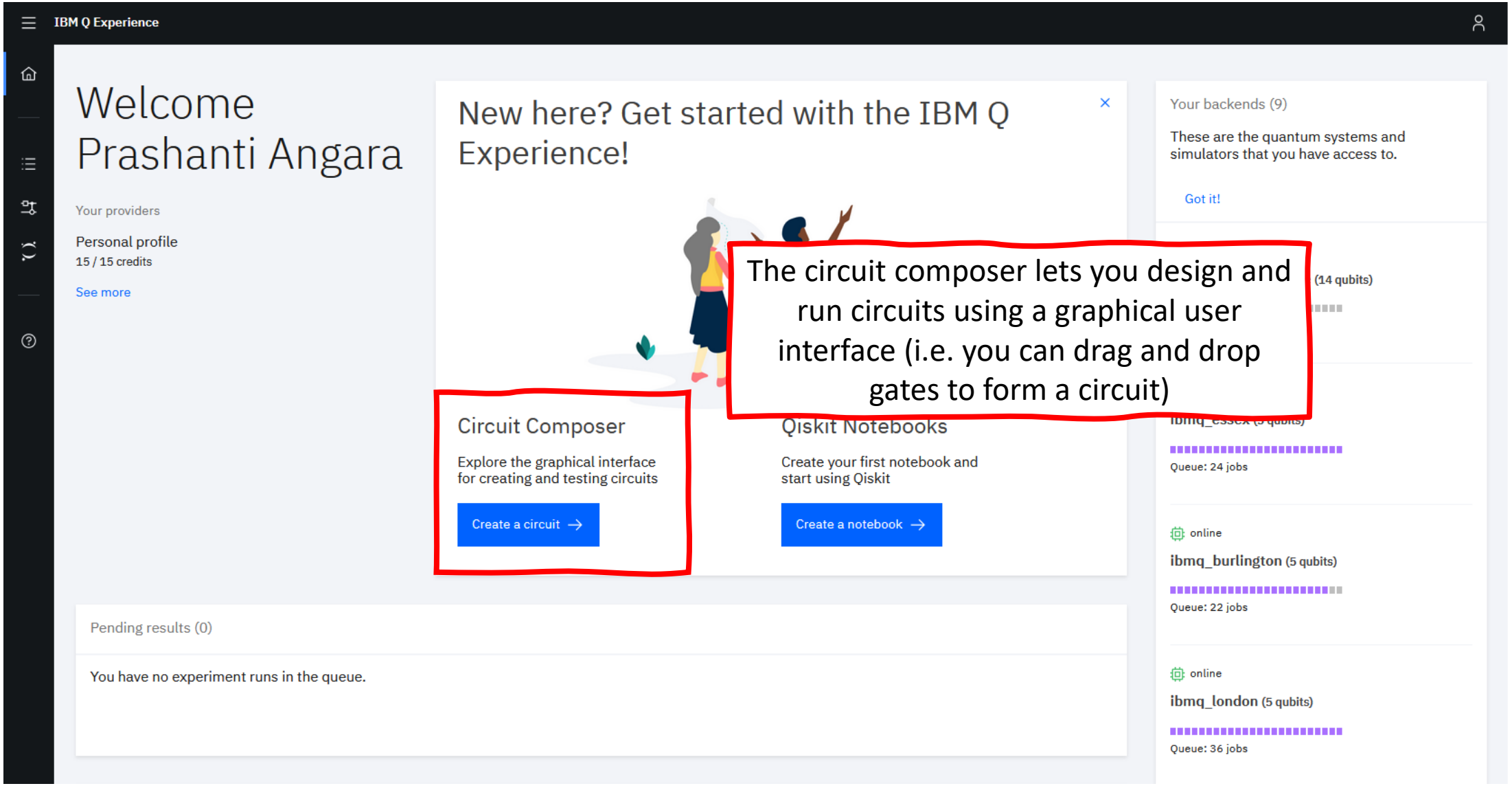
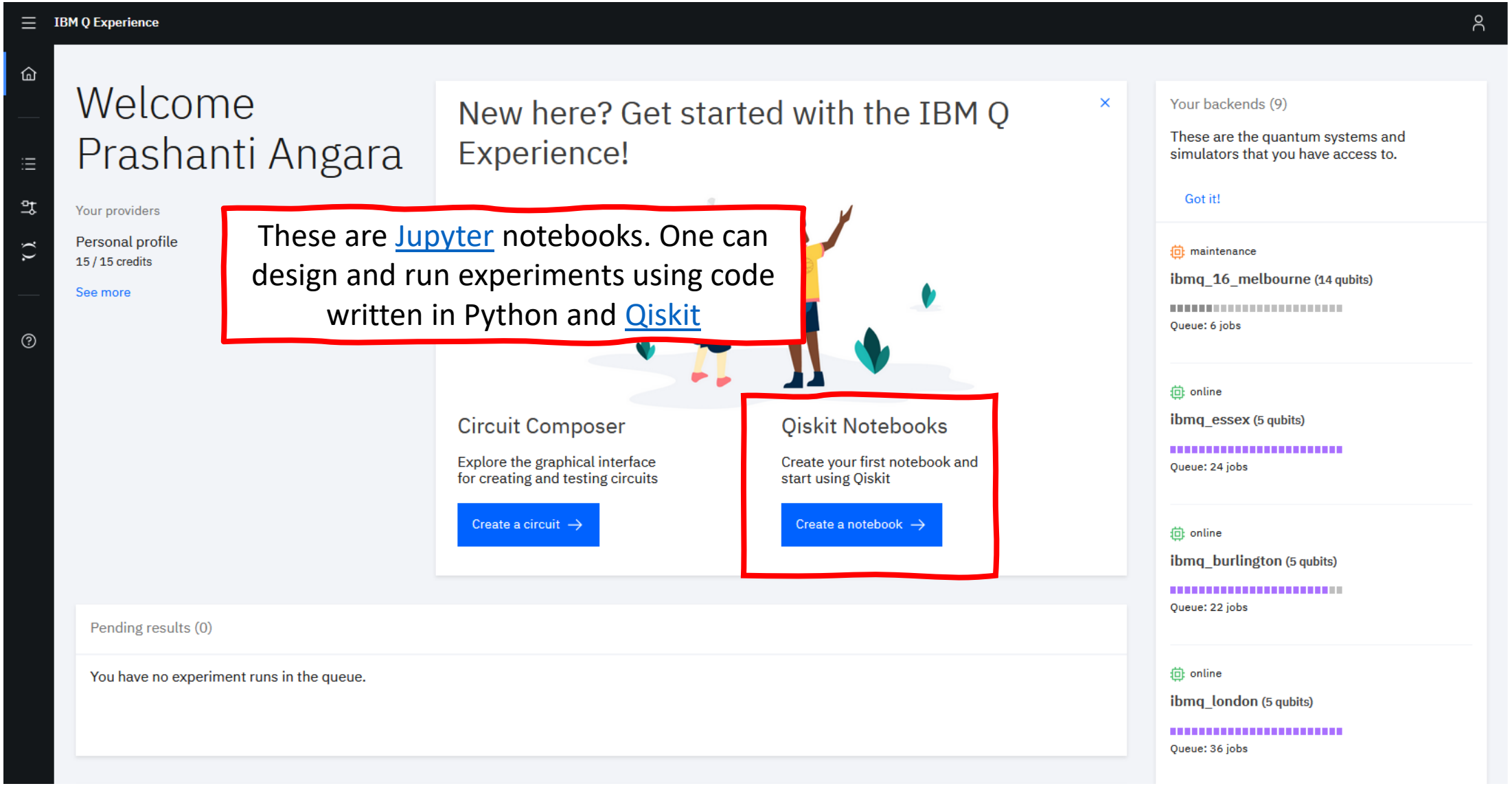
See more
New here? Get started with the IBM Q Experience!
Circuit Composer
Explore the graphical interface for creating and testing circuits
Create a circuit
Qiskit Notebooks
Create your first notebook and start using Qiskit
Create a notebook
Pending results (0)
You have no experiment runs in the queue.
Your backends (9)
These are the quantum systems and simulators that you have access to.
Got it!
maintenance
ibmq_16_melbourne (14 qubits)
Queue: 6 jobs
online
ibmq_essex (5 qubits)
Queue: 24 jobs
online
ibmq_burlington (5 qubits)
Queue: 22 jobs
online
ibmq_london (5 qubits)
Queue: 36 jobs

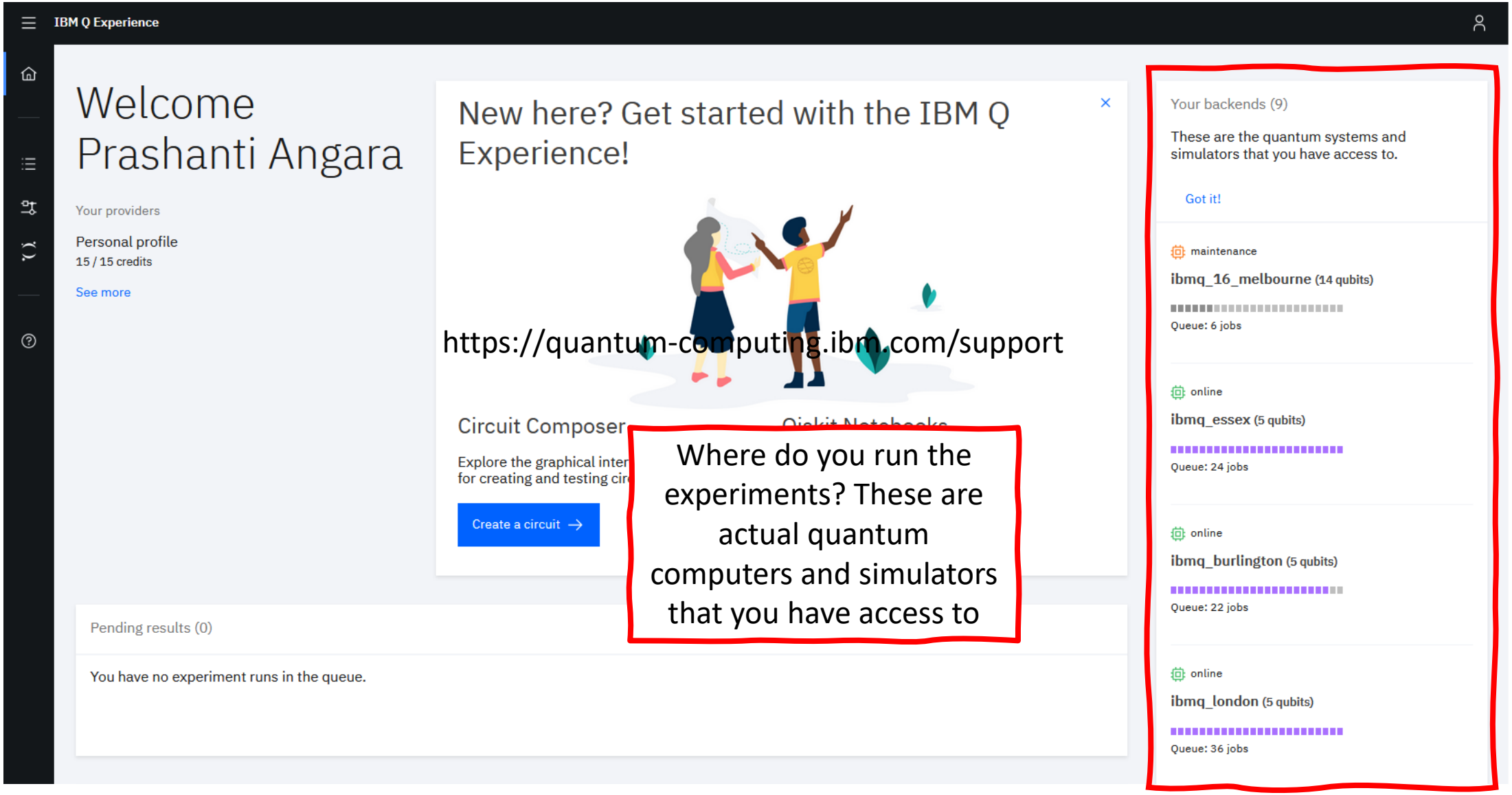
Components: Circuit Composer



Components: Qiskit notebooks

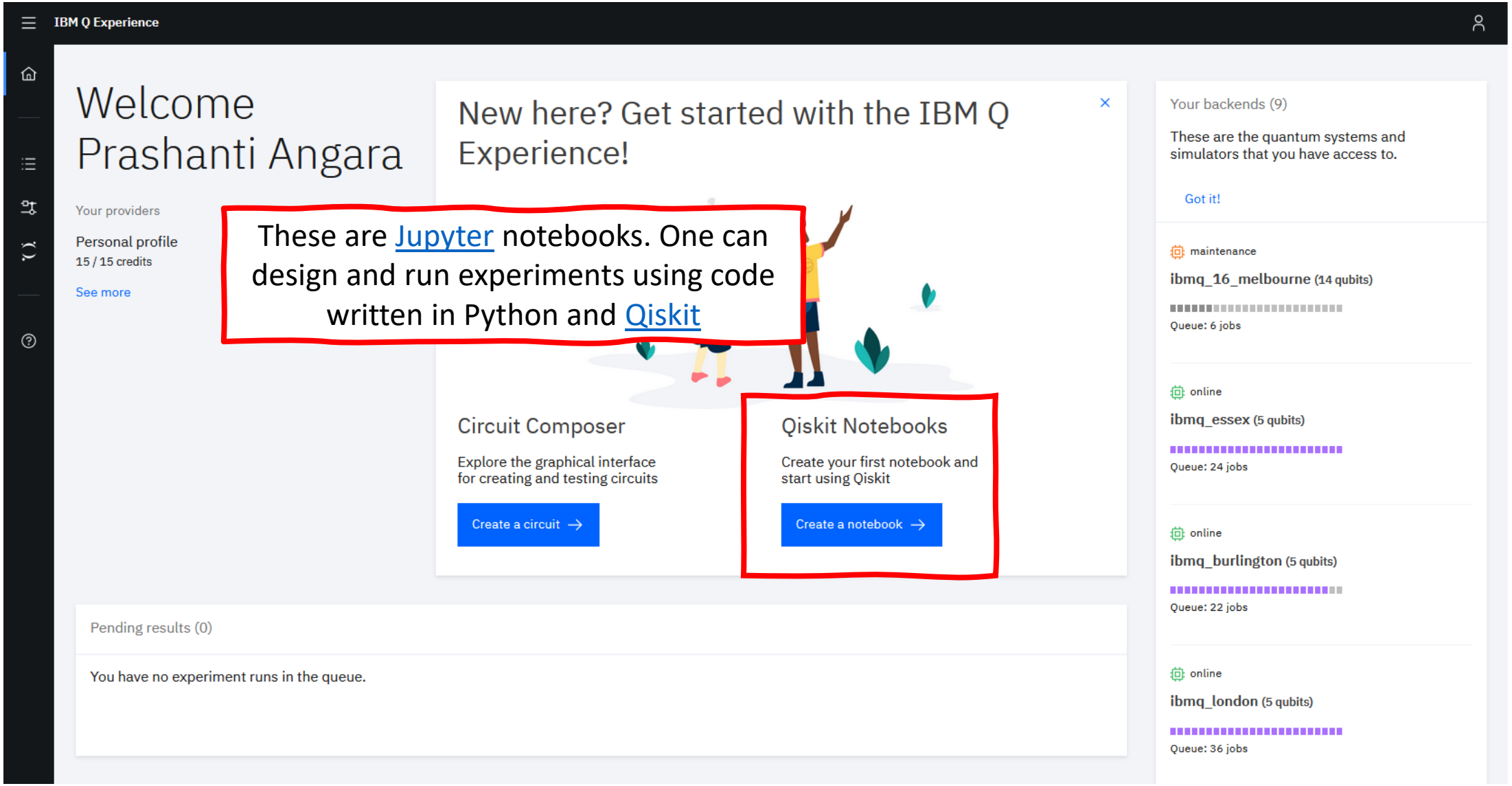


Components: Backends



Where do you run the experiments? These are actual quantum computers and simulators that you have access to

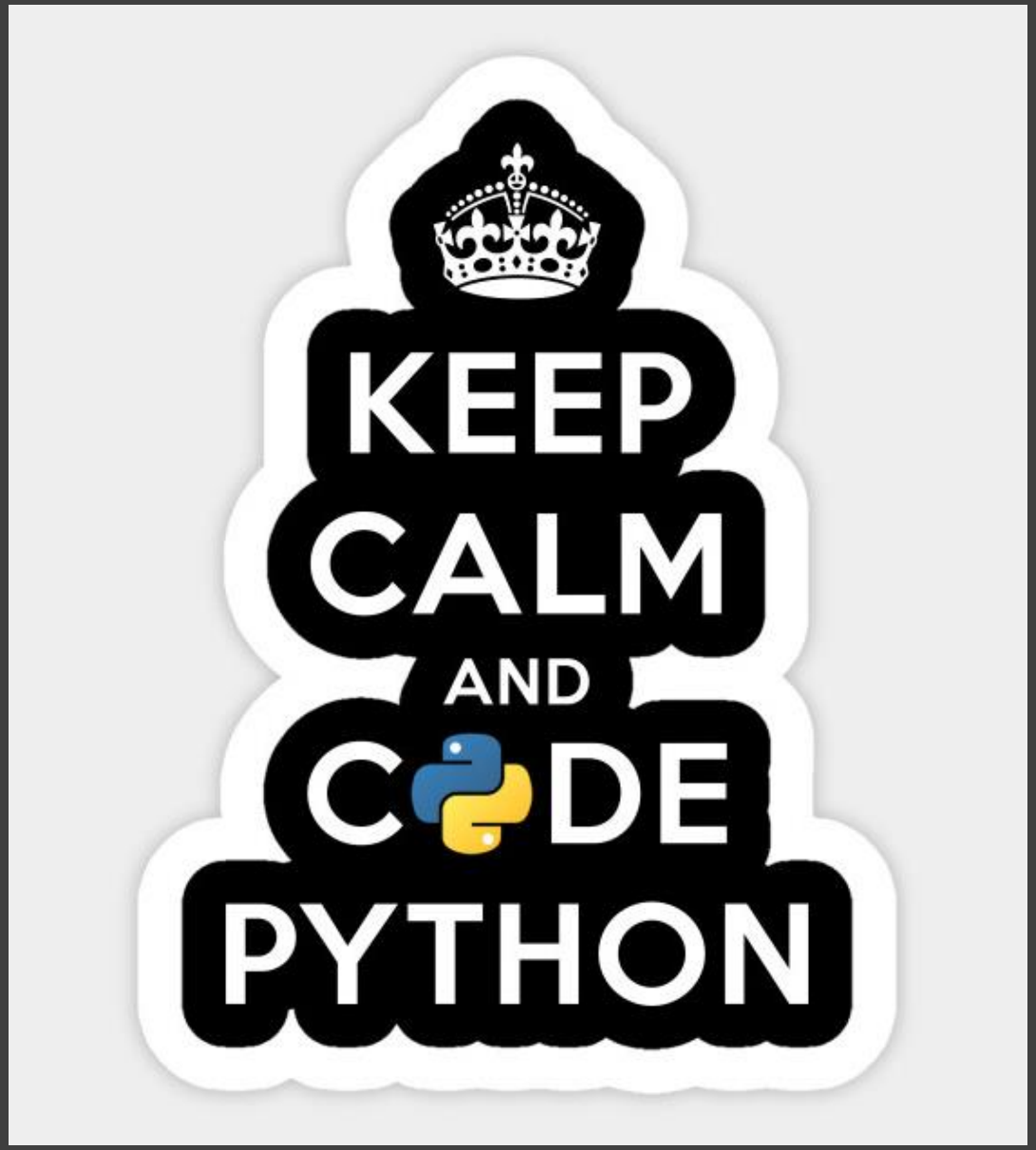
Click on Create a notebook

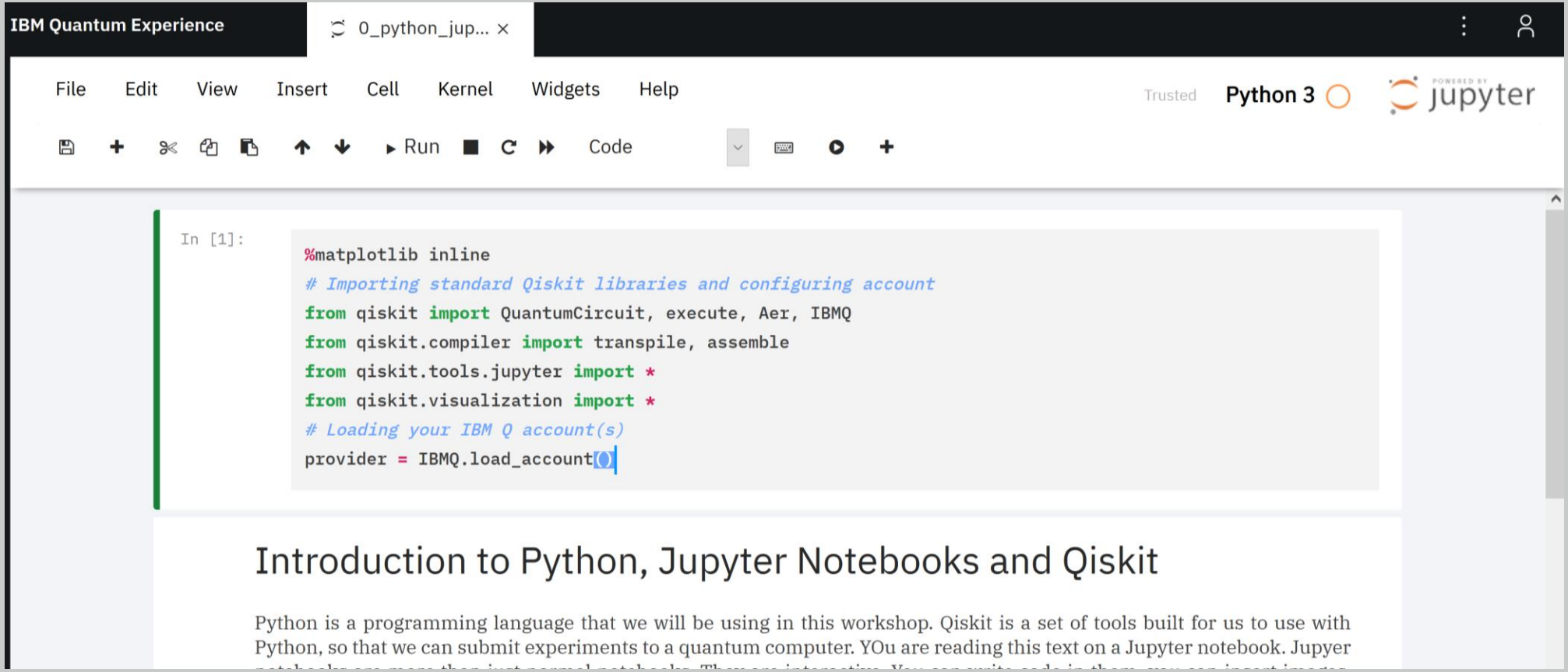


Import instructions

Working with Python, Jupyter Notebooks and Qiskit

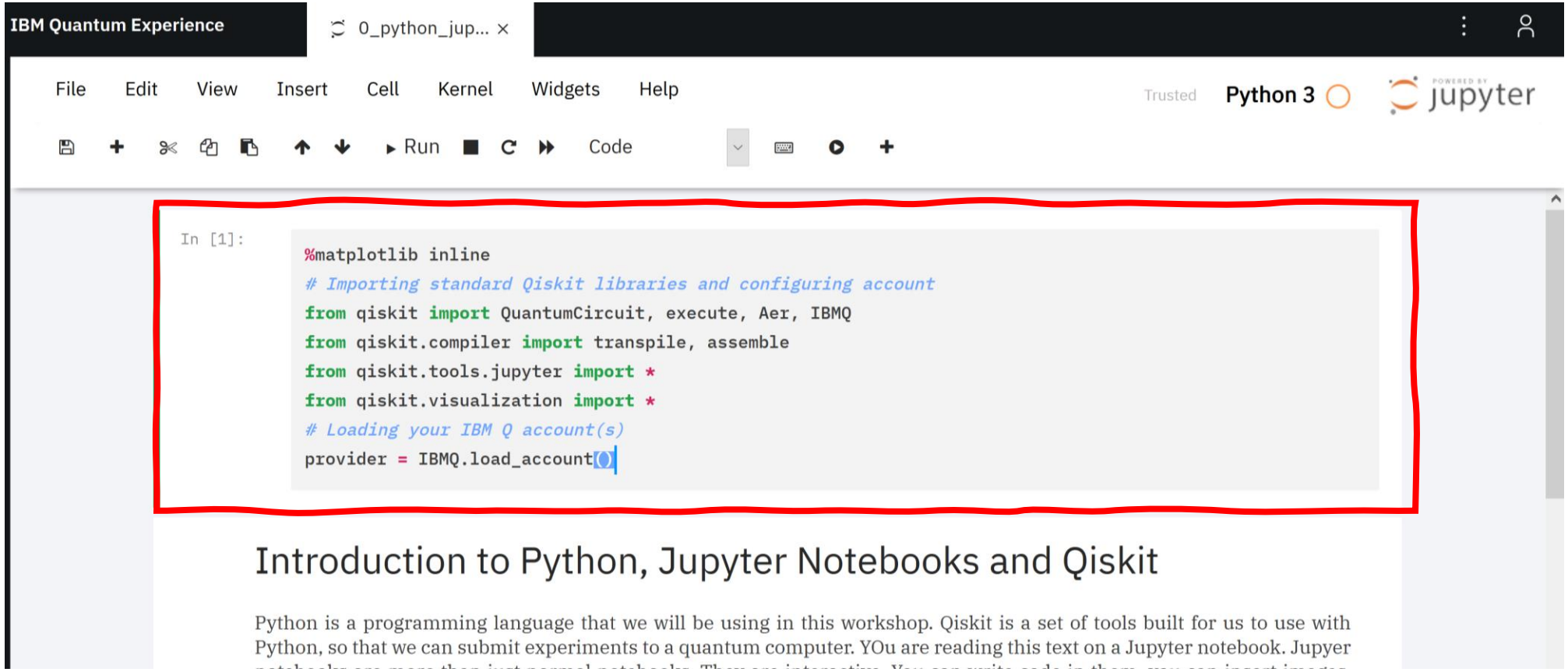
Let’s open the first jupyter notebook:
0_python_jupyter_ qiskit.ipynb





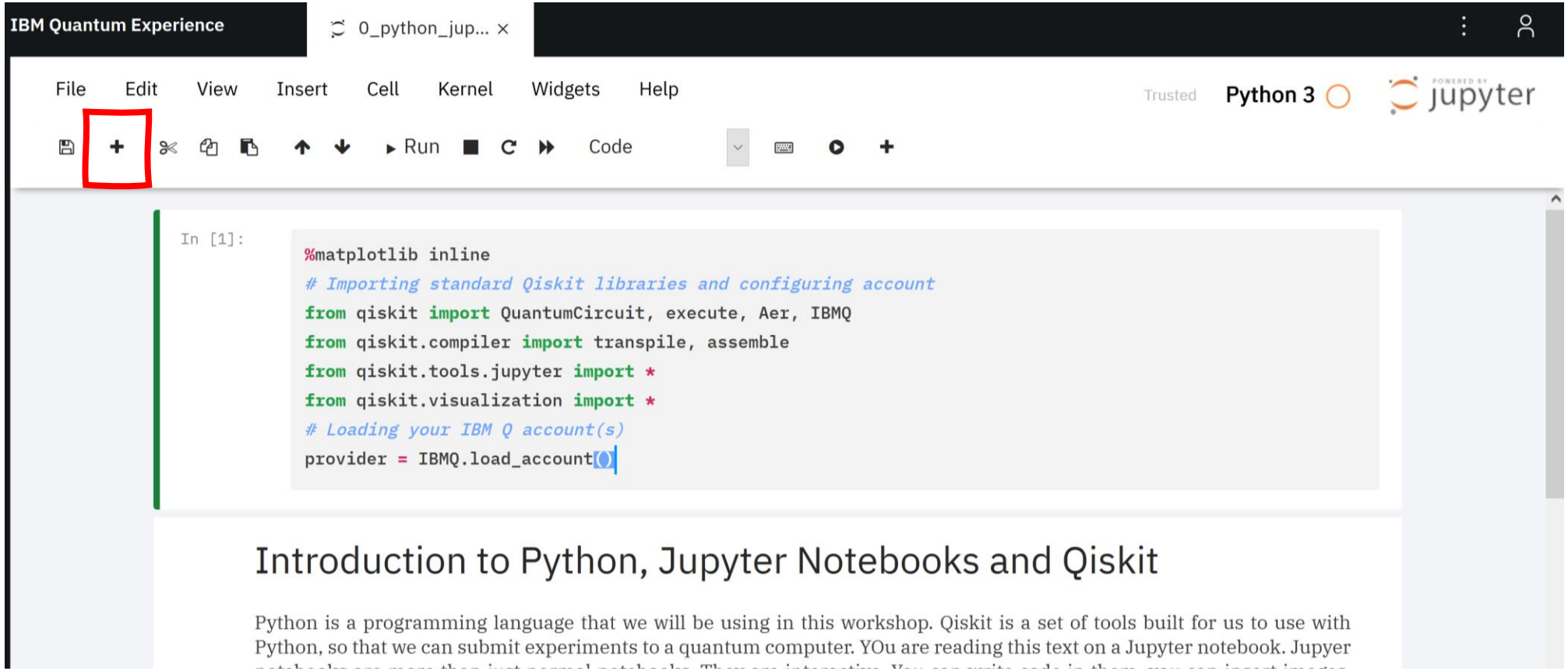
Jupyter Notebooks

- This is the interface you'll be working on.



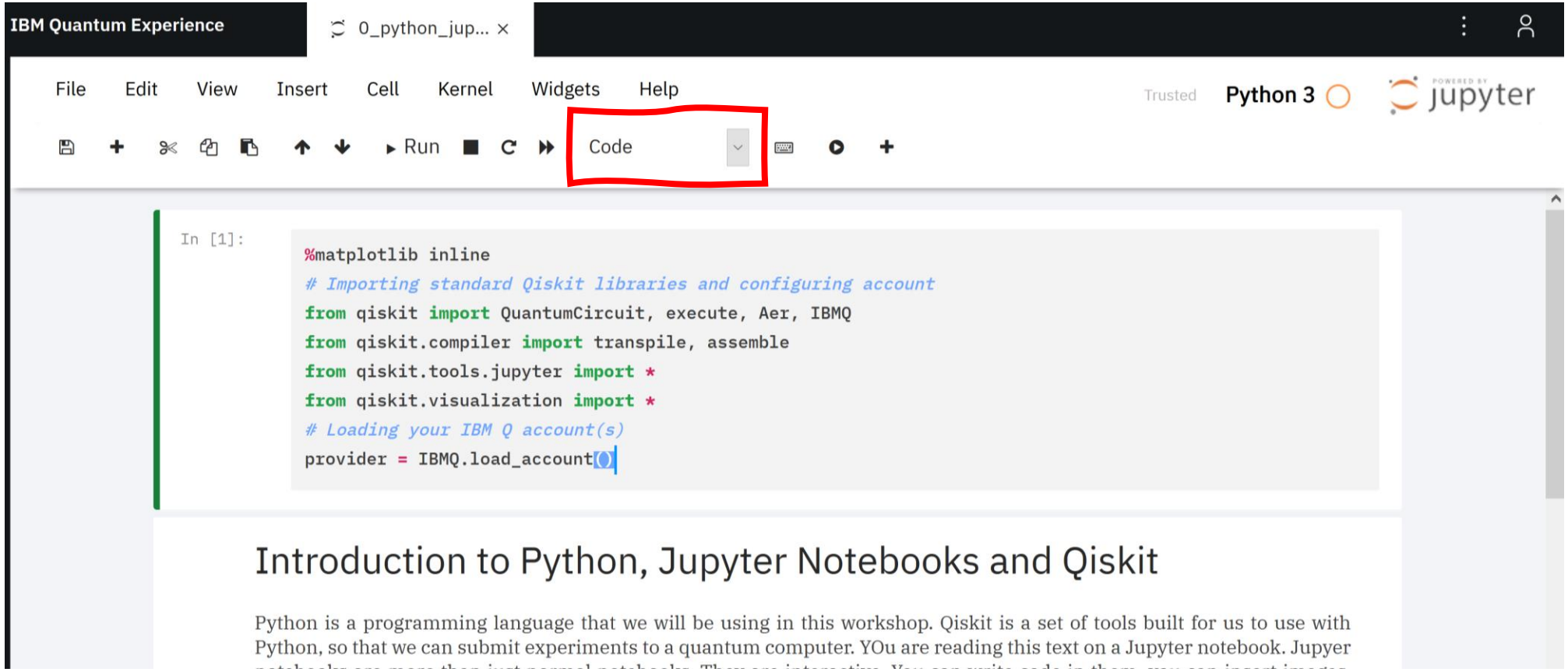
Cells

- Each of these boxes is called a cell
- Cells are run one after another
- This particular cell is a set of import statements – think of this as things that will help you with your quantum code



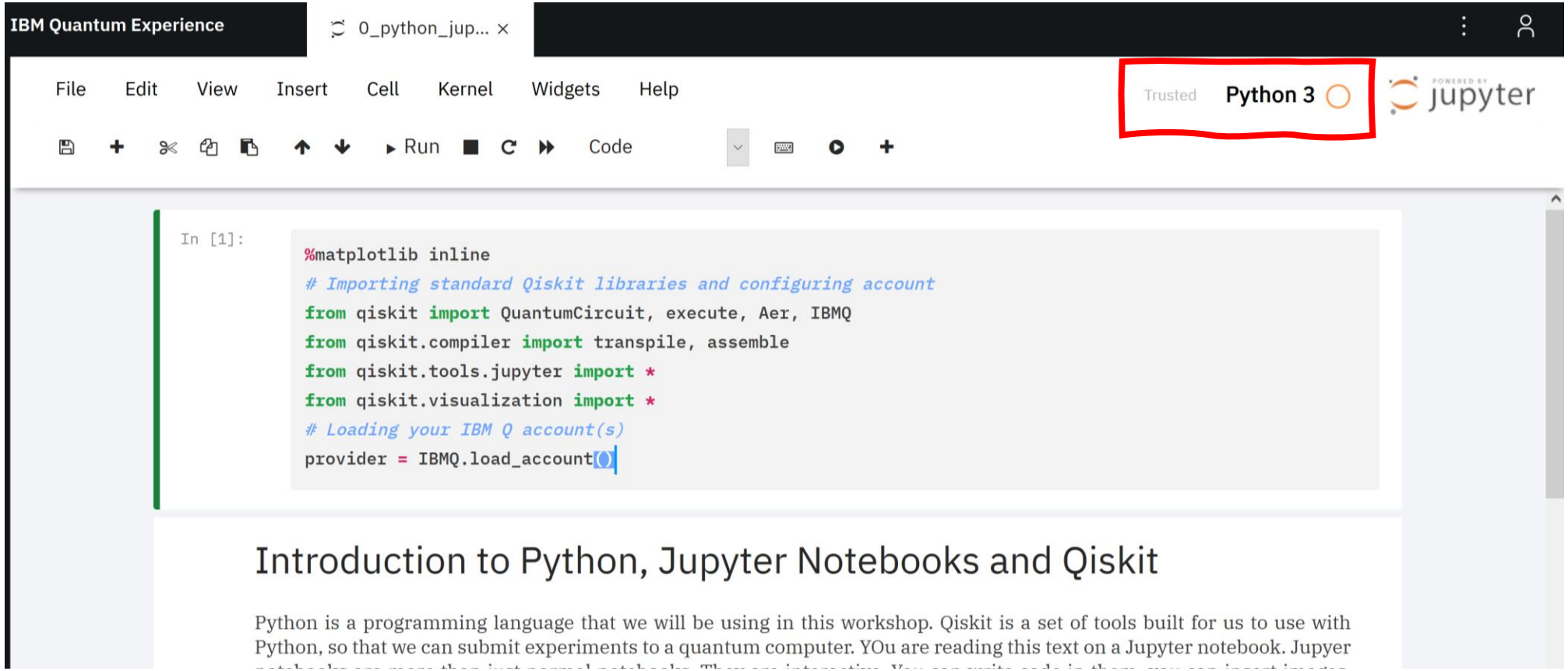
New Cell

- Click on + to create a new cell.



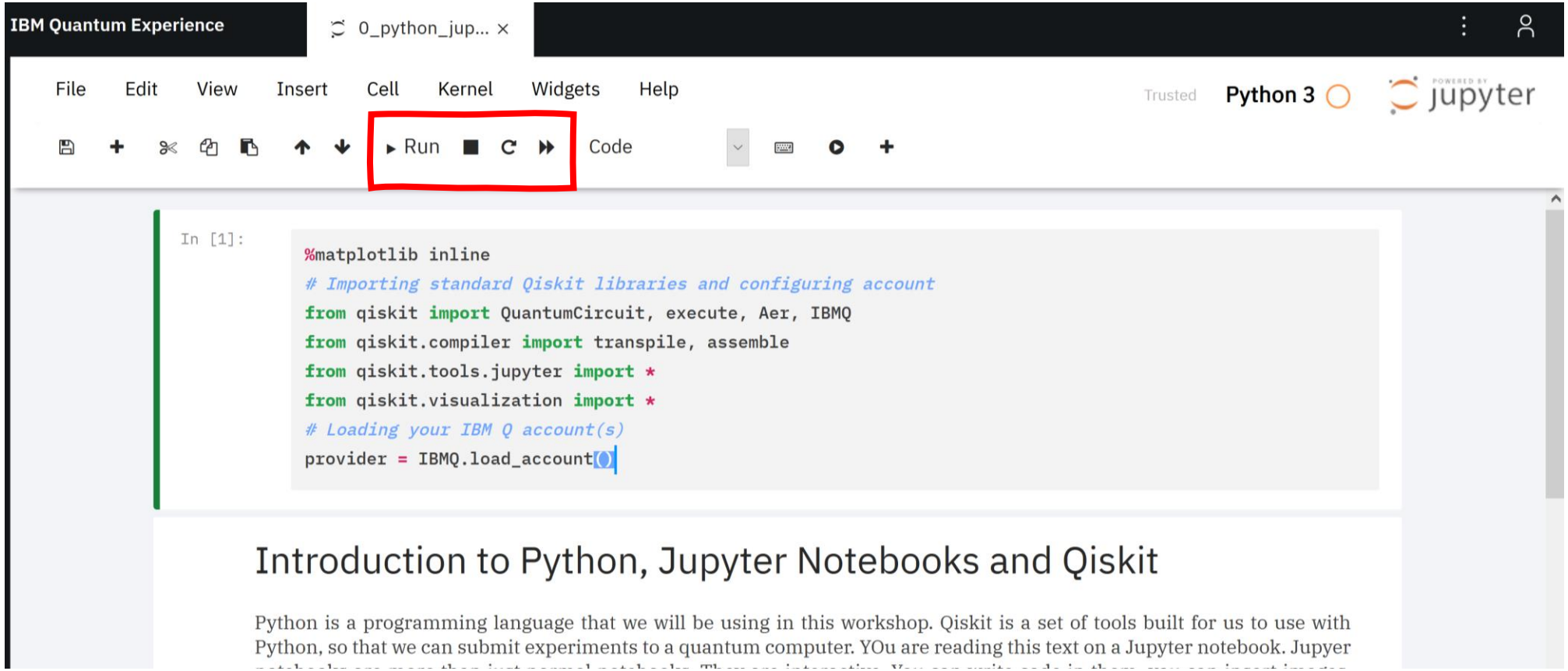
Change Cell Type

- You can change the cell type using this drop down
- A cell can be:
  - A code cell (Code)
  - A text cell (Markdown)



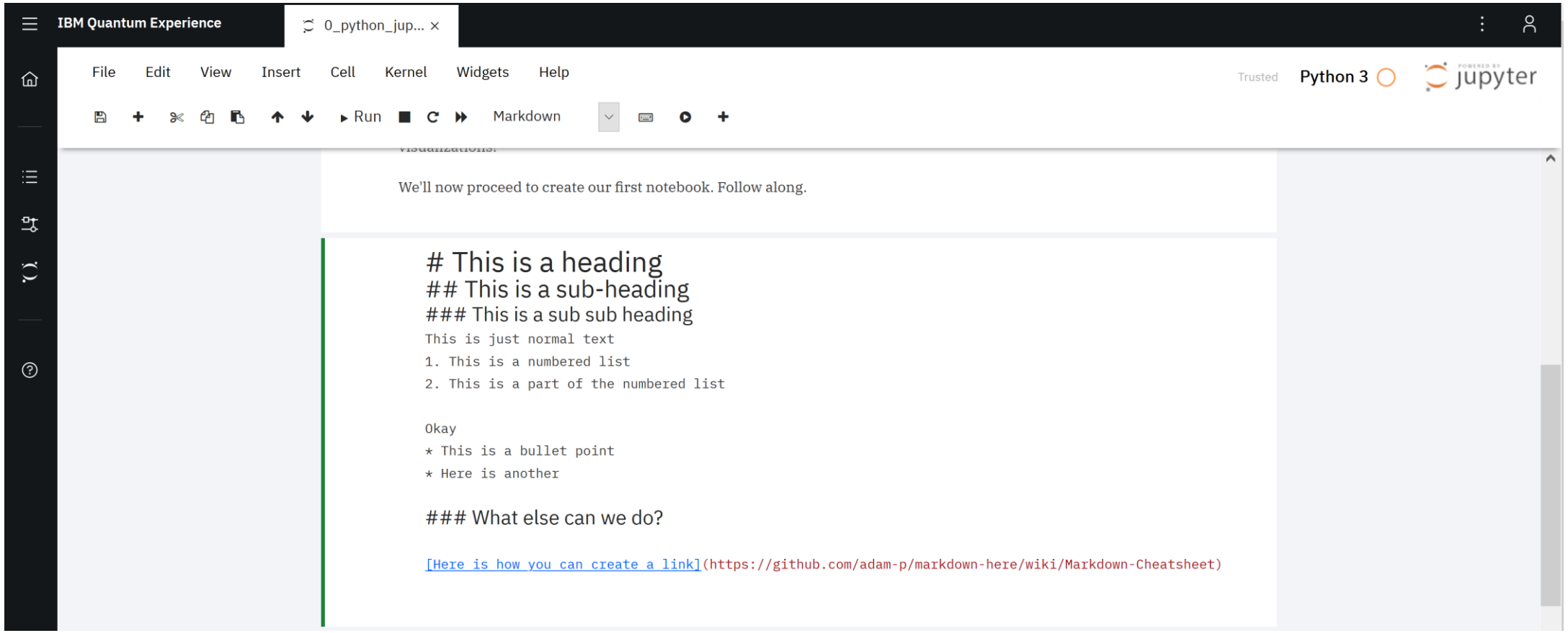
Kernel

- Think of a kernel as an environment. A fish needs to be in water, similarly, a quantum program needs to be in a quantum kernel



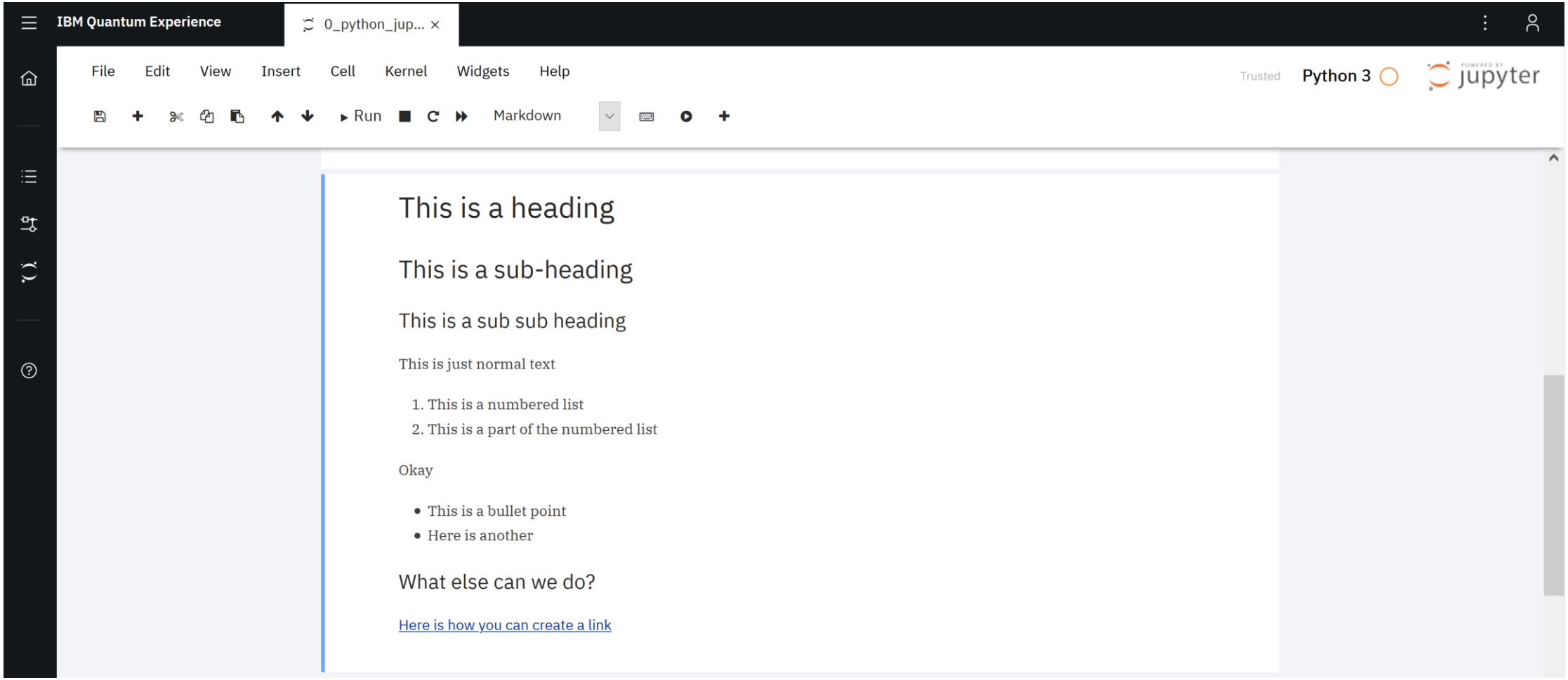
Run a cell

- You can run a cell one at a time, stop a running cell, refresh or run all cells at once



Markdown

Markdown is a fancy, but easy way to format this.



Markdown

When you run the cell, this is what we see. Looks nice?

Markdown

Resources

- https://quantum-computing.ibm.com/support
- https://qiskit.org/