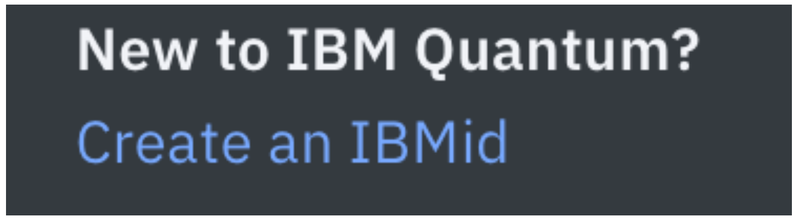
Preparation for hands-on exercise

Go to https://quantum.ibm.com/

If you don’t have IBM account, please follow the instructions to create an IBMid



Once you have the account, sign in to IBM Quantum

Koji Terashi

IBM Quantum Platform

API Token

••••••••••••••••••••••••••••••

Recent jobs

View all

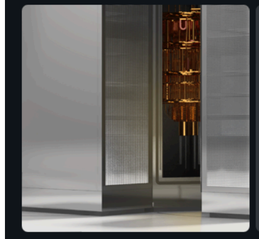
0
Pending

6705
Completed jobs

Job ID	Status	Created	Completed	Compute resource
cqdxtnjgepgg008fc860	Cancelled	About 12 hours ago	About 12 hours ago	ibm_cusco
cqdxk8xfejeg0085x230	Completed	About 13 hours ago	About 13 hours ago	ibm_cusco
cqdxeasgtagg008qrgs0	Completed	About 13 hours ago	About 13 hours ago	ibm_cusco
cqd7rpaxdecg008w5s1g	Cancelled	1 day ago	1 day ago	ibm_cusco
cqd4hfnxftxg00897bx0	Cancelled	1 day ago	1 day ago	ibm_cusco

Instance systems

12



Simulators

5

Documentation

Open app

Search docs

Hello World

Create a simple quantum program and run it on a quantum system

Qiskit Runtime

Introduction to primitives

Learning

Open app

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Explore all courses and tutorials

IBM Quantum Composer
Graphically build circuits

IBM Quantum Lab
Develop quantum experiments

What's new

- Product update
  Update to Qiskit Runtime Primitives
  12 days ago • Read more
- Product update
  Updates to Learning -- earn badges and explore the new Learning catalog!
  3 months ago • Read more
- Product update
  Introducing ibm_osaka, a new 127-qubit system
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- Product update
  Qiskit.org redirects and content migration
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  Journey toward utility: a new 127-qubit system for Open plan users
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- Product update
  New URL strategy on IBM Quantum
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API Token

••••••••••••••••••••••••••••

Recent jobs View all

0 Pending

6705 Completed jobs

Job ID	Status	Created	Complet
cqdxtnjgepgg008fc860	Cancelled	About 12 hours ago	About 12
cqdxk8xfejeg0085x230	Completed	About 13 hours ago	About 13
cqdxeasgtagg008qrgs0	Completed	About 13 hours ago	About 13
cqd7rpaxdecg008w5s1g	Cancelled	1 day ago	1 day ago
cqd4hfnxftxg00897bx0	Cancelled	1 day ago	1 day ago

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API Token

••••••••••••••••••••••••••••

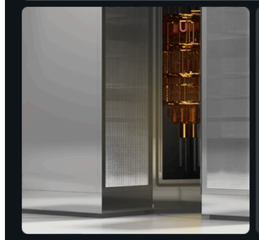
3 months ago • Read more

In case you need your API token, you can copy it here

No need to do that if you use only IBM Quantum Lab (next page)

Instance systems →

12



Simulators →

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cqdxeasgtagg008qrgs0	Completed	About 13 hours ago	About 13 hours ago	ibm_cusco
cqd7rpaxdecg008w5s1g	Cancelled	1 day ago	1 day ago	ibm_cusco
cqd4hfnxftxg00897bx0	Cancelled	1 day ago	1 day ago	ibm_cusco

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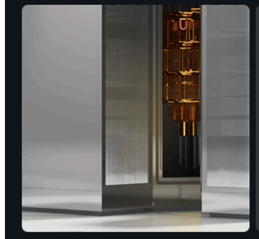

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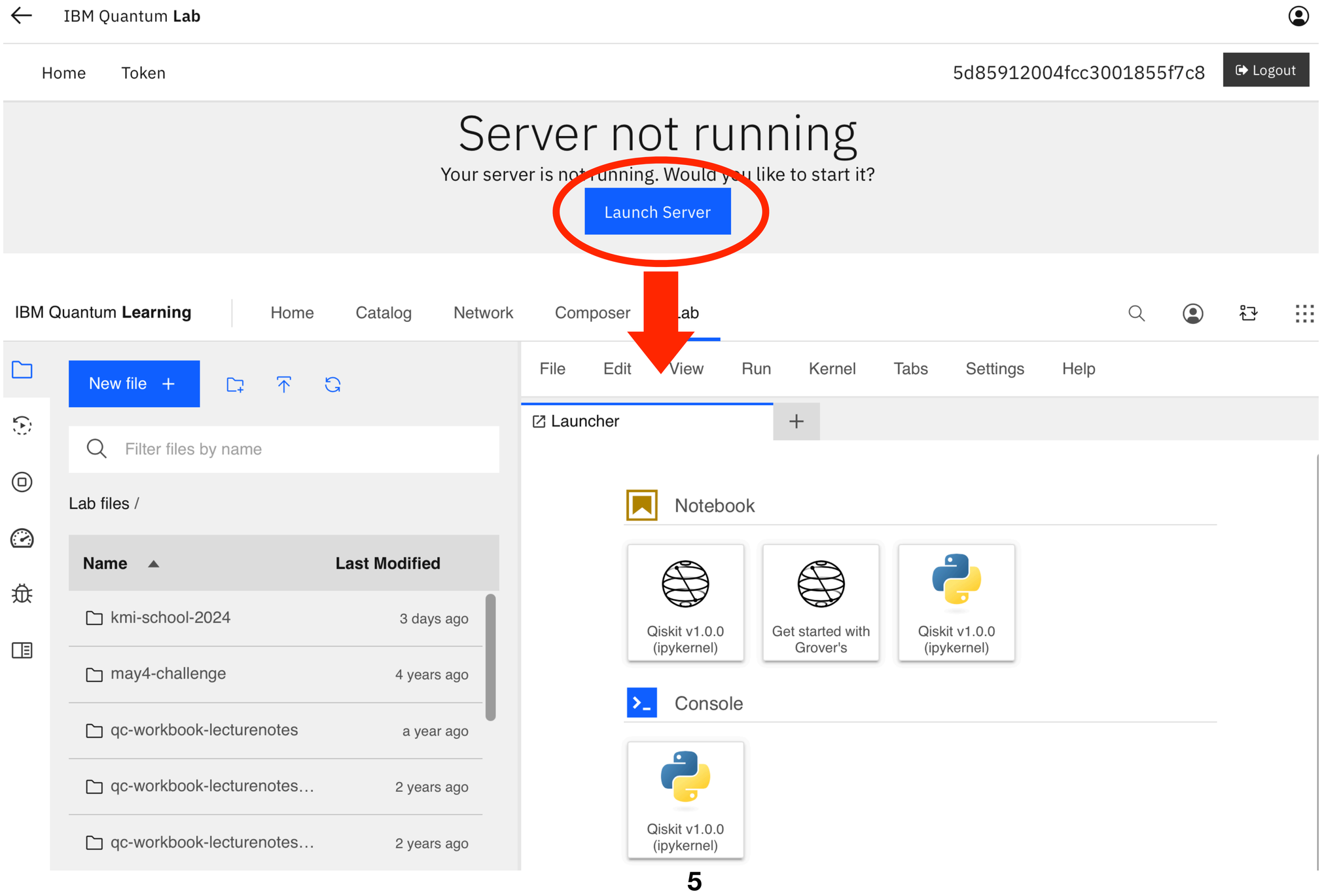
We use IBM Quantum Lab in hands-on


IBM Quantum Lab
Home
Token
5d85912004fcc3001855f7c8
Logout
Server not running
Your server is not running. Would you like to start it?
Launch Server
IBM Quantum Learning
Home
Catalog
Network
Composer
Lab
New file
Filter files by name
Lab files /
Name
Last Modified
kmi-school-2024
3 days ago
may4-challenge
4 years ago
qc-workbook-lecturenotes
a year ago
qc-workbook-lecturenotes…
2 years ago
qc-workbook-lecturenotes…
2 years ago
File
Edit
View
Run
Kernel
Tabs
Settings
Help
Launcher
Notebook
Qiskit v1.0.0 (ipykernel)
Get started with Grover's
Qiskit v1.0.0 (ipykernel)
Console
Qiskit v1.0.0 (ipykernel)

In each lecture, we will let you know a clickable link that allows you to upload the hands-on material to IBM Quantum Lab

Something like a link below:

https://bit.ly/3wvC54r

shortened from the original one:

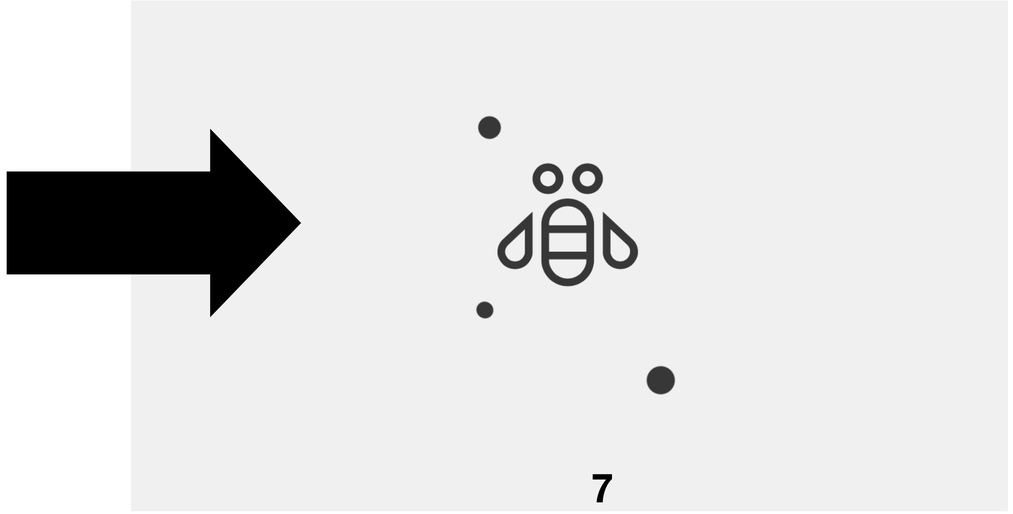
https://lab.quantum-computing.ibm.com/hub/user-redirect/git-pull?repo=https%3A%2F%2Fgithub.com%2Fkterashi%2Fkmi-school-2024&urlpath=lab%2Ftree%2Fkmi-school-2024%2FLec1.ipynb&branch=master

If you open the IBM Quantum Lab and click on the above link, then you will see…

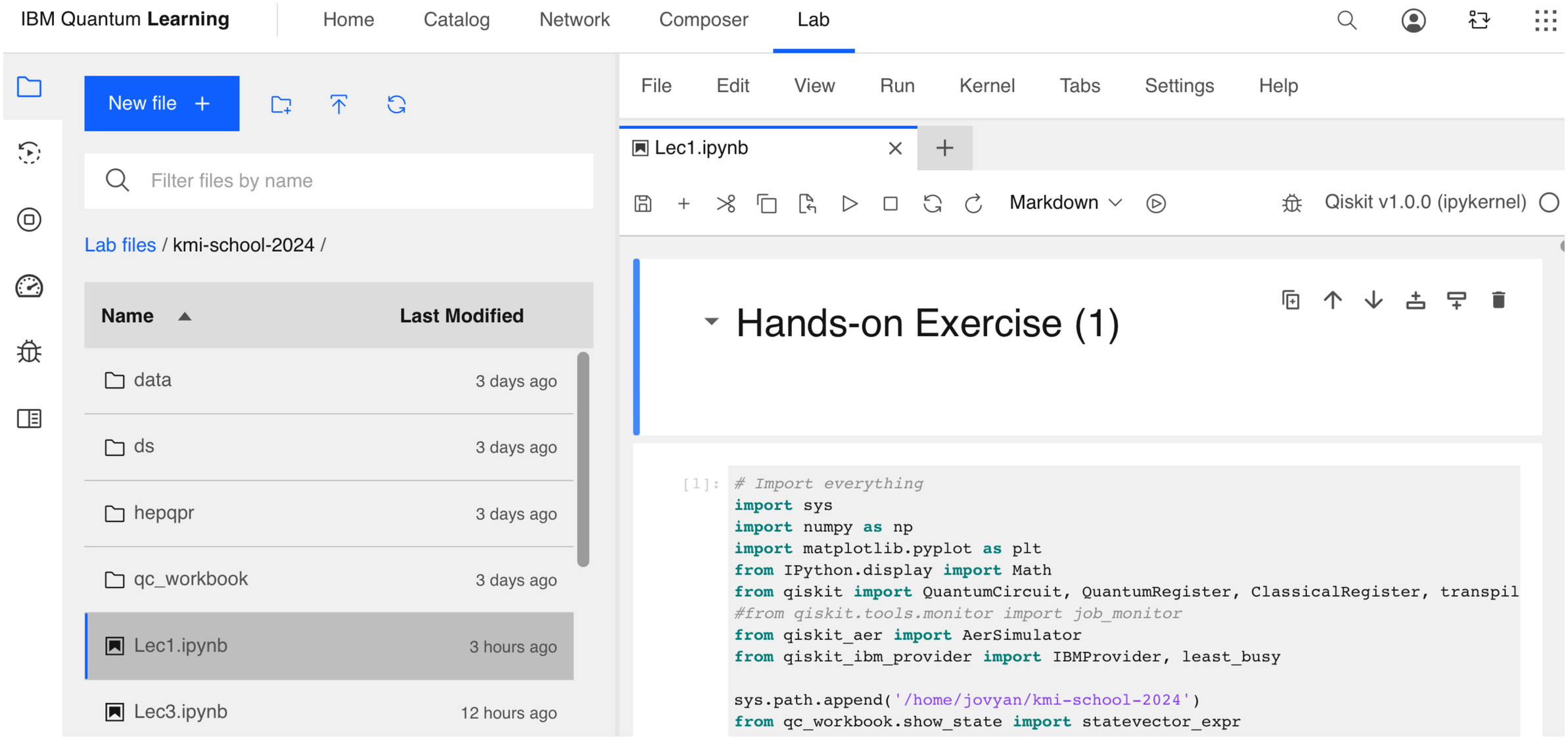
jupyter

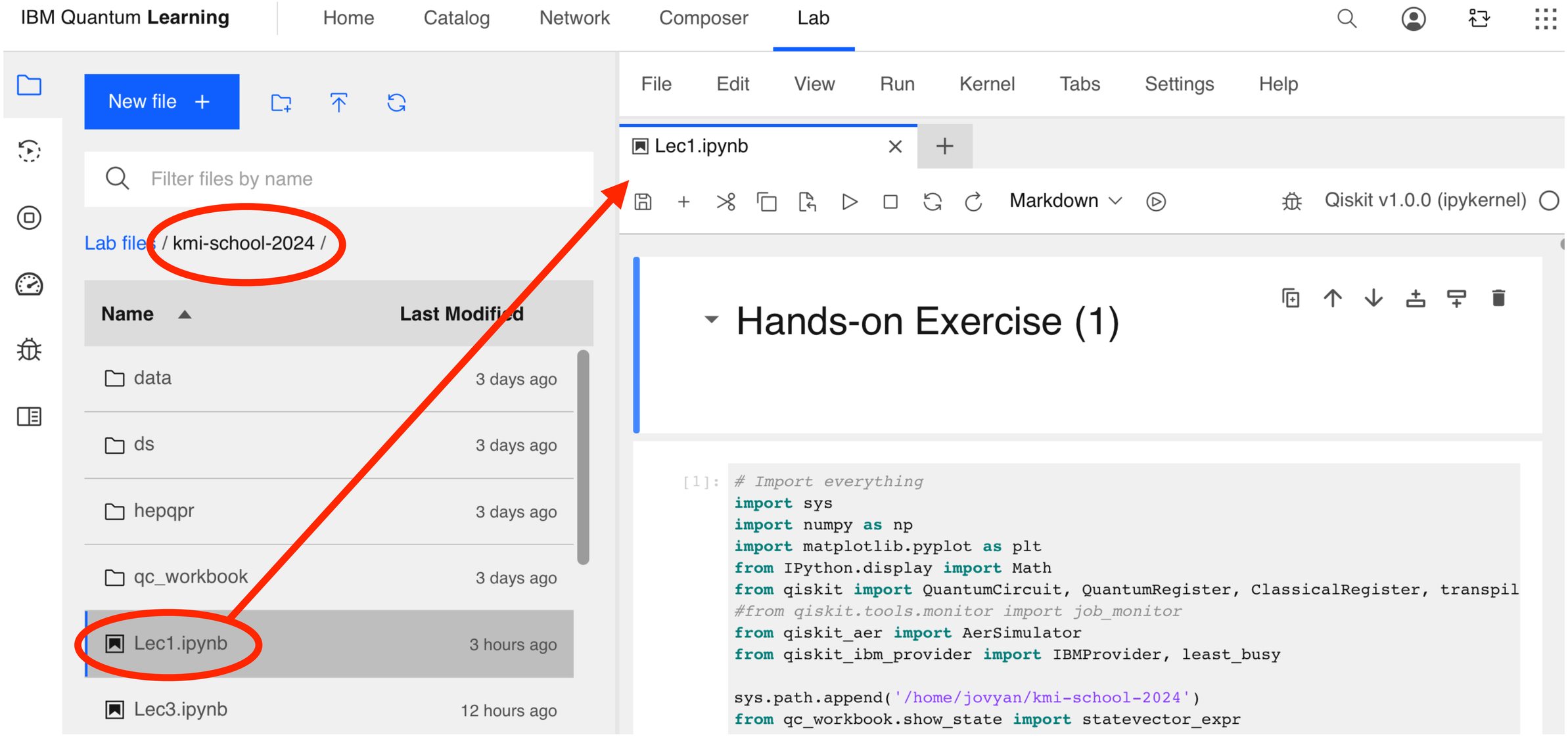
Synchronizing git repository before sending you to **lab/tree/kmi-school-2024/Lec1.ipynb...**

Click to see more details



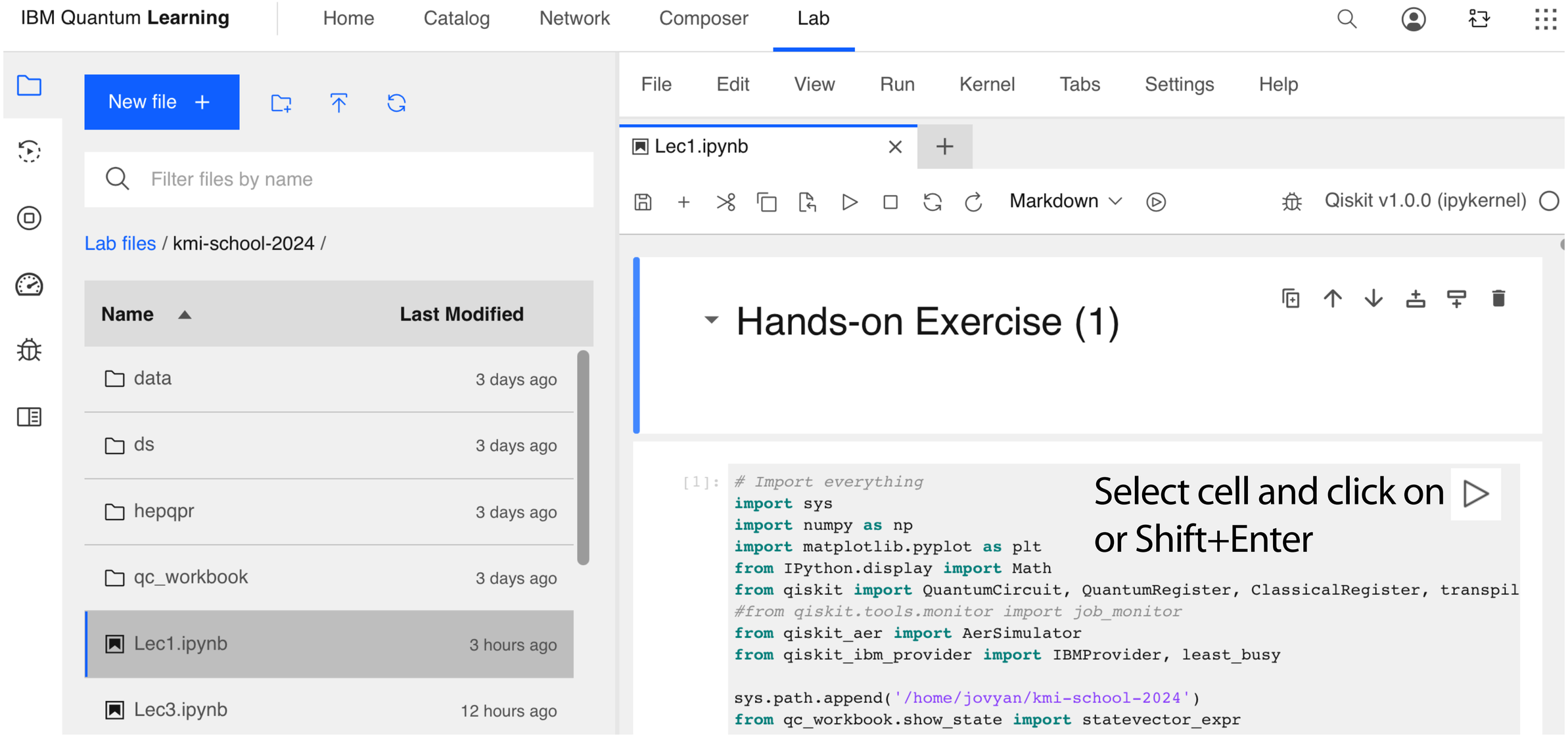
This page should appear





Jupyter notebook for hands-on

Double-click to open in the right window



If you restart the kernel, all processed information is lost, so you will have to start from the beginning

Quantum Computing Workbook

We have been preparing an English version of Quantum Computing Workbook developed by ICEPP

Go to https://utokyo-icepp.github.io/qc-workbook/en

Several topics still missing in English version
Working in progress…