Workshop 4

2023.11.14(화) 19:00

Qiskit | Fall Fest 2023

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Challenge 예시 문제

Challenge 예시 문제

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문제 1

해야할 일: 방금 배운 것들을 이용해서 2개의 qubits와 2개의 classical bits를 가지는 양자회로를 만들고 `qc` 라는 변수에 저장하세요. 그 후, 각각의 qubit를 측정하여 그 결과를 각각의 classcial bit에 저장하세요. 이 과정을 아래의 코드 셀에서 작성하시면 됩니다.

그 다음 셀에서는 여러분의 회로를 시뮬레이터에서 실행시키는 코드를 제공해드립니다. 하지만, 시뮬레이터에서 여러분이 작성한 양자회로를 실행시키고, 결과를 보는 과정을 스스로 작성해보시는 것도 좋을 것 같습니다.

힌트: 방금 위에서 배웠던 코드들을 활용하면 됩니다!

In [ ]:
```
from qiskit import QuantumCircuit
from qiskit.providers.aer import AerSimulator


## Write your code below here ##



## Do not modify the code under this line ##

qc.draw('mpl')
```

In [ ]:
```
sim = AerSimulator()   # make a new simulator object
job = sim.run(qc)      # run the experiment
result = job.result()  # get the results

answer1 = result.get_counts()
```

In [ ]:
```
# Grader Cell: Run this to submit your answer

from qff_ku_grader import grade
grade_hahala(answer1, "Challenge1")
```

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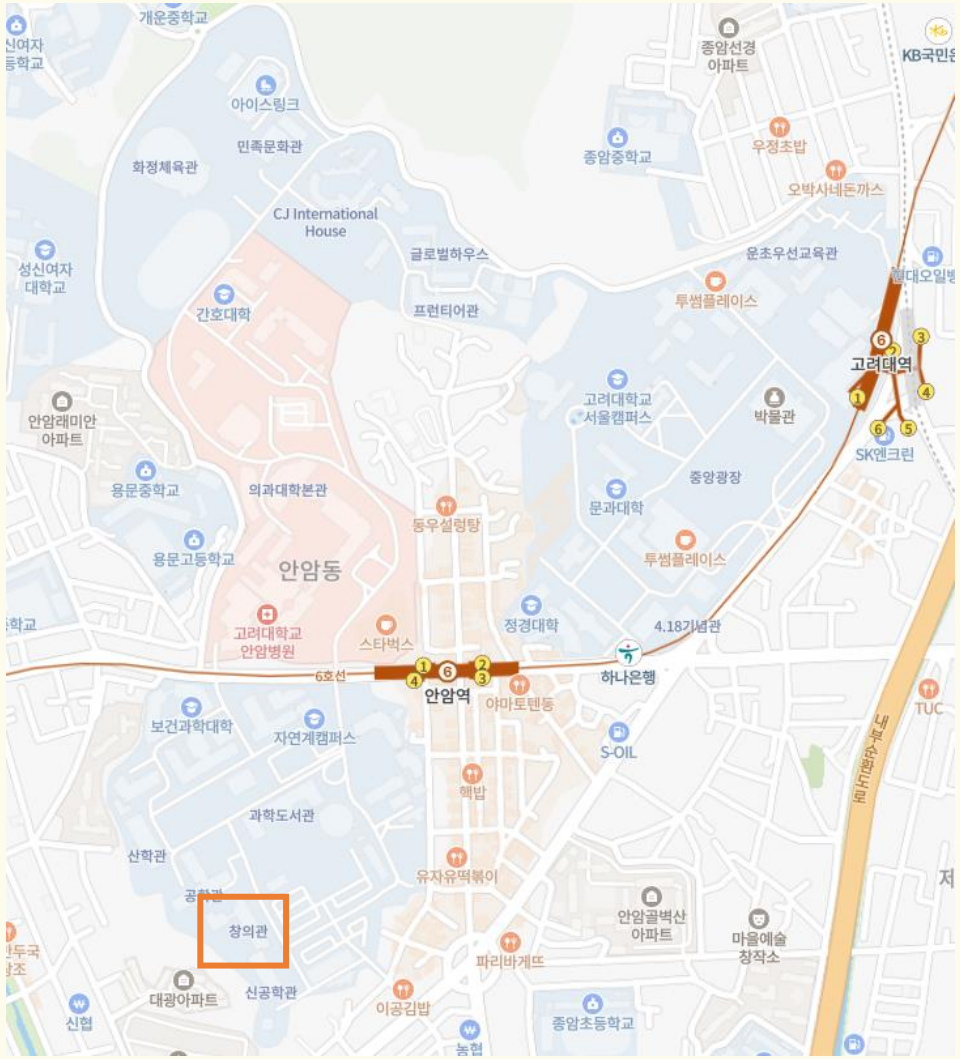
행사 일정 및 장소

행사 장소

Challenge: 창의관 127호

창의관 1층 정문으로 들어왔을 때
계단 우측으로 쭉 가야함



행사 일정

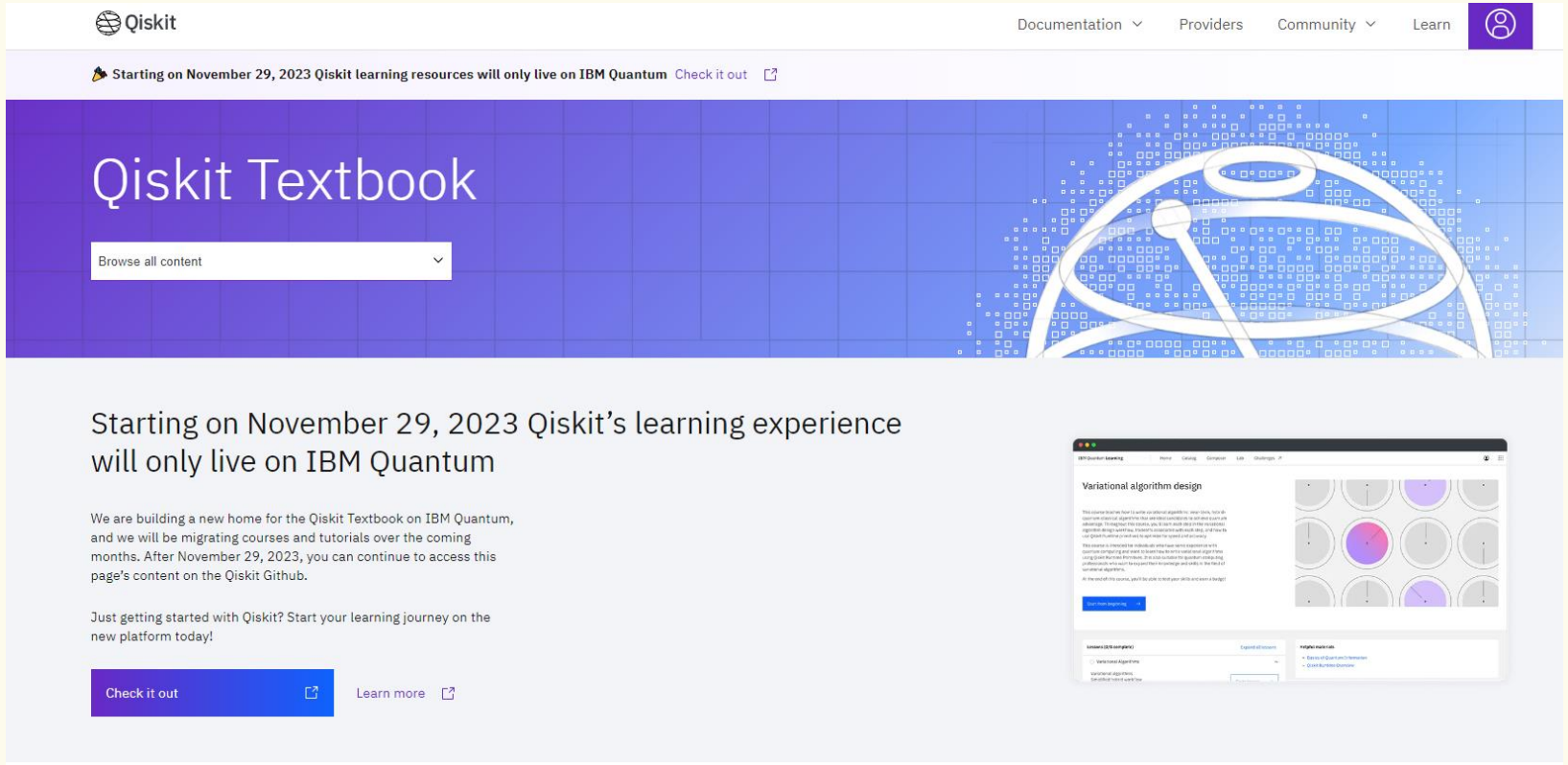
- Opening 연사: 물리학과 김요셉 교수님
- 시상자: 물리학과 김민혁 교수님

time	content
10:00~10:30	개회
10:30~11:00	도전 문제 공개 및 개발 환경 세팅
11:00	도전 문제 풀기 시작
12:30	점심식사 제공
17:30	도전 문제 풀기 마감
17:30~18:00	시상식
18:00~18:30	행사 후 설문 및 마무리

Qiskit 공부자료 추천

Qiskit 공부 자료 추천

- Qiskit Textbook
- https://qiskit.org/learn



Qiskit 공부 자료 추천

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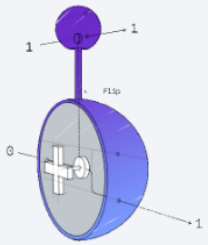
Start learning in the best way for you

Learn | Teach

Courses

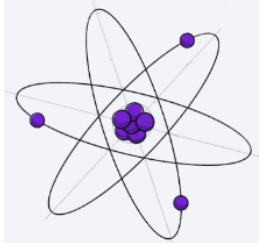
Quantum computing is a big topic and working out where to start can be difficult. In this interactive textbook, the content is organised into courses with clear prerequisites and end goals. If you're looking for something specific, you can browse all content, and if you can't find what you're looking for you can ask the community on Slack.



Introduction course

Not sure where to start? This path is for you. This introduction is aimed at audiences from all backgrounds. Whether you're keen to start your journey into quantum computing, or just curious as to what it's all about, this course will take you from zero to one, without the hand waving.

Go to this course →

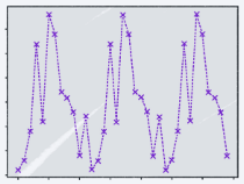


Understanding quantum information and computation

Unit 1: Basics of quantum information

This free course covers quantum information at a detailed mathematical level. Join John Watrous as you explore quantum information, quantum algorithms, and how to understand and mitigate noise.

Take this course in IBM Quantum Learning →

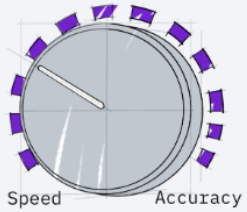


Understanding quantum information and computation

Unit 2: Fundamentals of quantum algorithms

Discover how we can use quantum systems to solve problems more efficiently, including problems with real-world applications such as searching and factoring.

Take this course in IBM Quantum Learning →



Variational algorithm design

This course teaches how to write variational algorithms: near-term, hybrid-quantum-classical algorithms that are ideal candidates to achieve quantum advantage. We'll also cover how to use Qiskit Runtime primitives to optimize for speed and accuracy.

Take this course in IBM Quantum Learning →

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