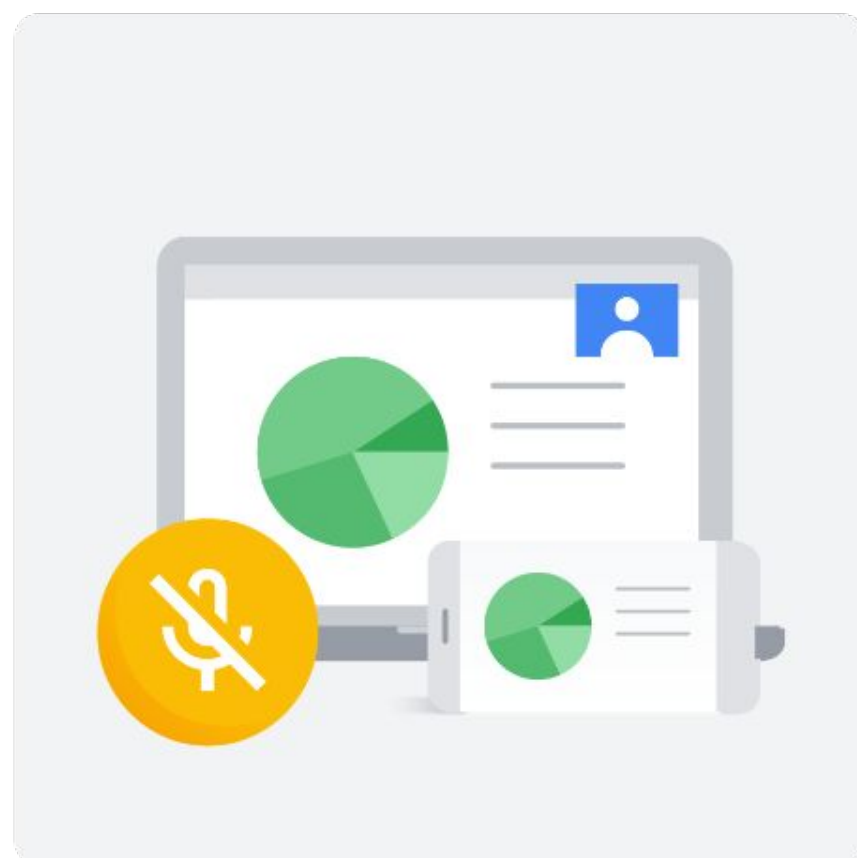


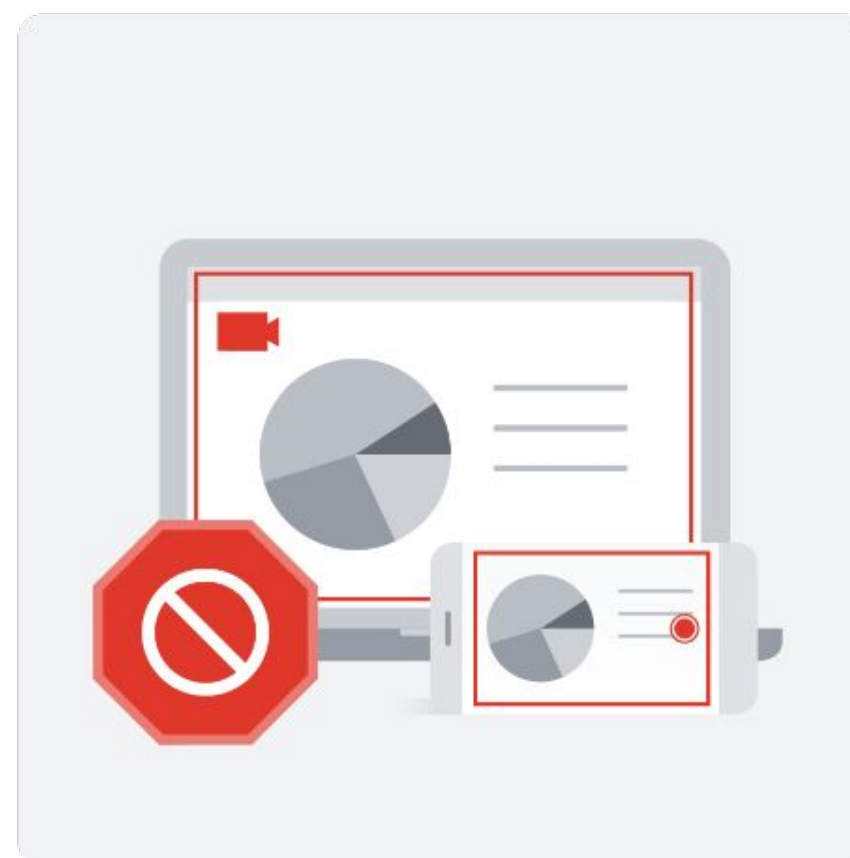
Building Generative AI Applications with Vertex AI for Partners



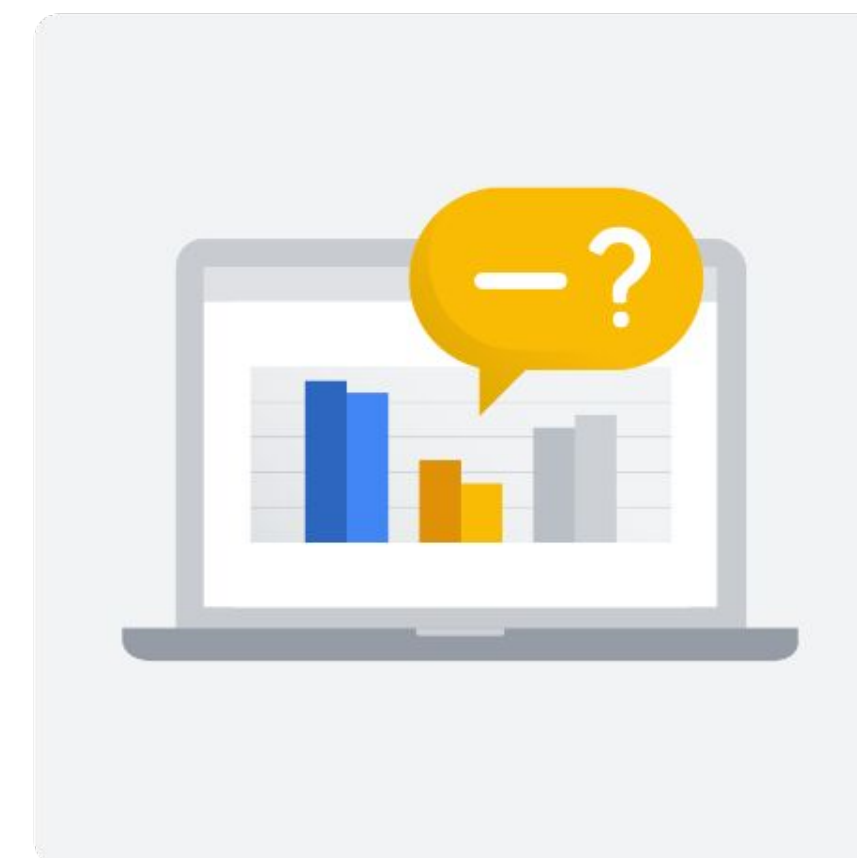
Etiquette



Mute microphone



No recording



Ask questions

Objectives

- 01 Design, program, and deploy applications that take advantage of Google's powerful generative AI tools
- 02 Generate text, code, and images using Google foundation models
- 03 Solve complex text generation problems using advanced prompt engineering methods
- 04 Program applications that integrate GenAI features using the Python client library and LangChain



Objectives (cont'd)

- 05 Understand and use Embeddings for Search, Classification, Recommendations and Q&A
- 06 Fine-tune models using supervised training
- 07 Test and evaluate generative AI applications
- 08 Follow responsible AI and security best practices when implementing generative AI solutions





Agenda Day 1



- 01 Gen AI Foundation Models on Google Cloud
- 02 Prompt Engineering
- 03 Programming Generative AI Applications
- 04 LangChain + Google



Agenda Day 2

- 05 Embeddings
- 06 Building RAG solutions
- 07 Designing Systems that use AI
- 08 Deploying an Internal Generative AI App





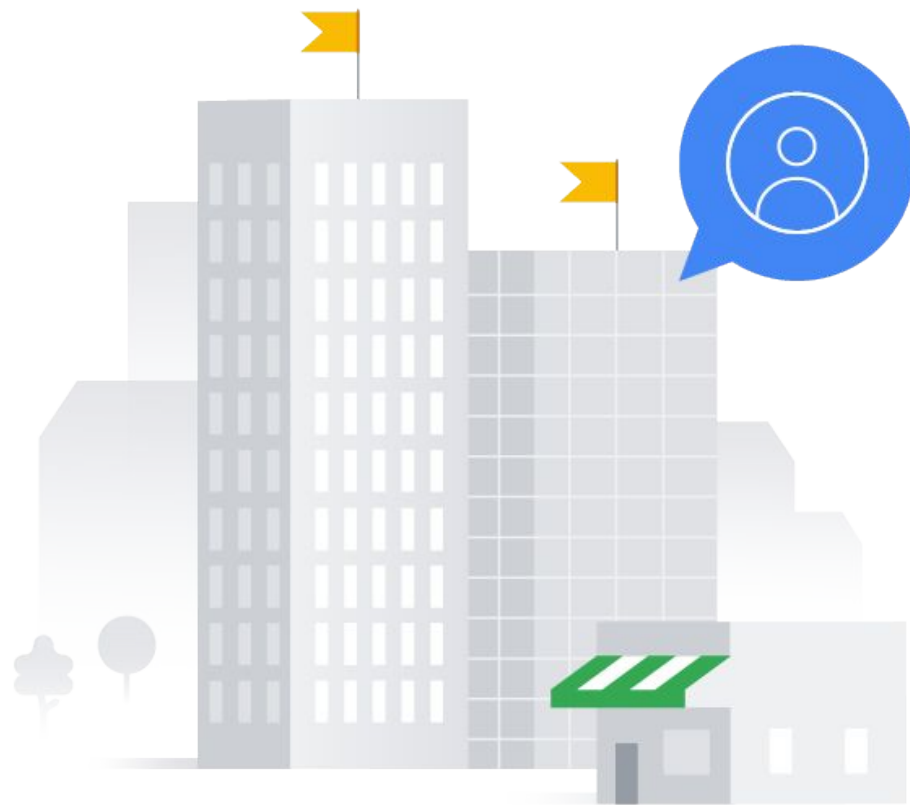
Agenda Day 3



- 09 Accelerating Software Development
- 10 Model Fine Tuning
- 11 Evaluating and Testing Generative AI Models
- 12 Responsible AI, Security, and Best Practices

Target audience

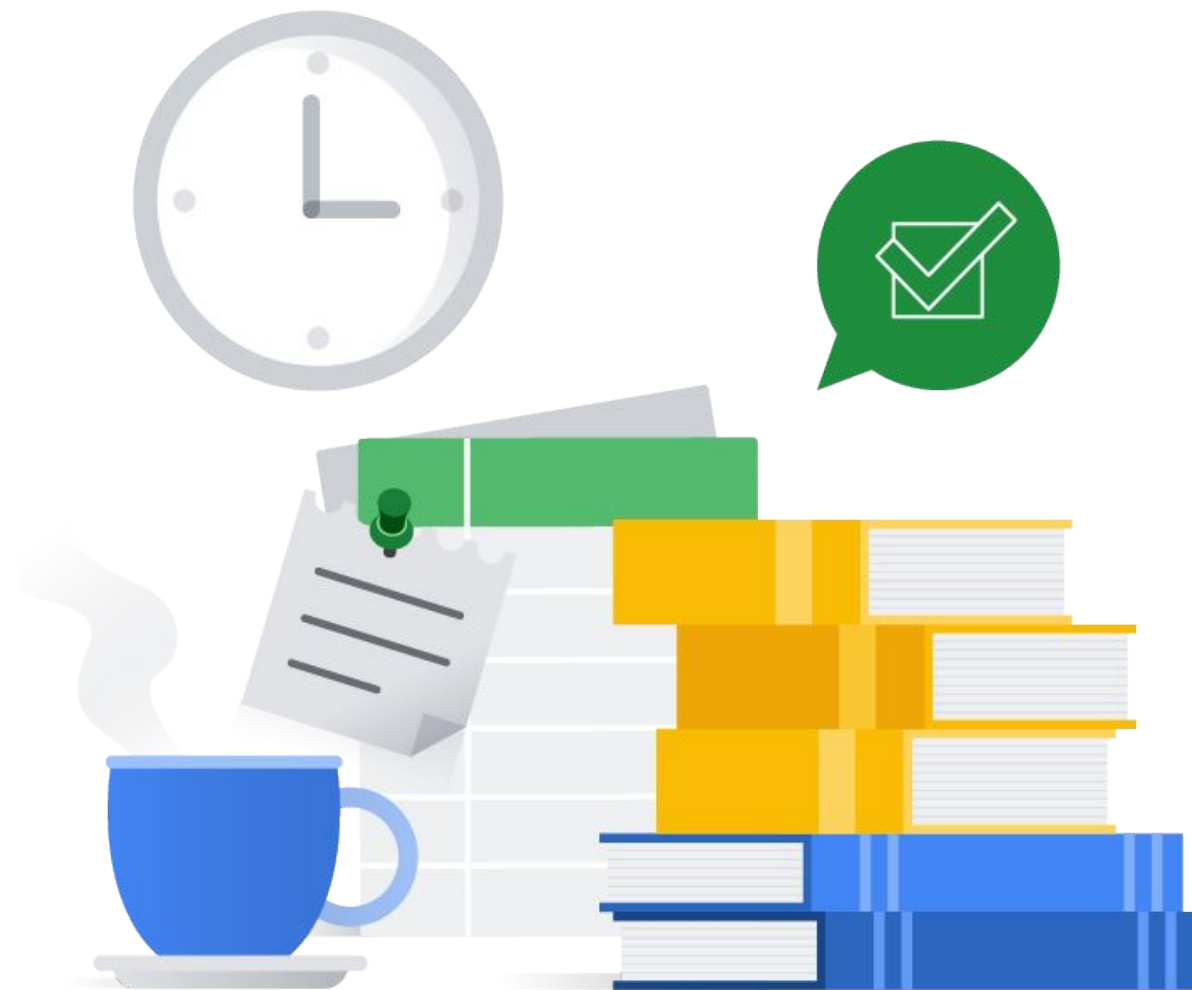
- Those developing apps using generative AI features on Google Cloud's Vertex AI platform



Google Cloud

- ✓ ML researchers
- ✓ Programmers
- ✓ App developers
- ✓ Data engineers

Helpful knowledge



- ✓ Google Cloud basics
- ✓ Python programming
- ✓ Machine learning basics
- ✓ Leveraging APIs in applications

Achieving the Advanced (L400) level Generative AI Status

Get one of the following certifications:

- [Professional Machine Learning Engineer](#)
- [Professional Data Engineer](#)
- [Professional Cloud Developer](#)

Take the following On-Demand Courses:

- [Introduction to Generative AI](#)
- [Generative AI for Machine Learning Engineers](#)
- [Generative AI for Developers](#)

Earn the following Skill Badges:

- [Integrate Vertex AI Search and Conversation into Voice and Chat Apps](#)
- [Text Prompt Engineering Techniques](#)

Take this course and complete the following Skill Badge

- [Build and Deploy a Generative AI solution using a RAG framework](#)
- **Note:** This Skill Badge is not available until the prior 2 are completed

Lab environment

For each lab, Qwiklabs offers:

- A free set of resources for a fixed amount of time
- A clean environment with permissions

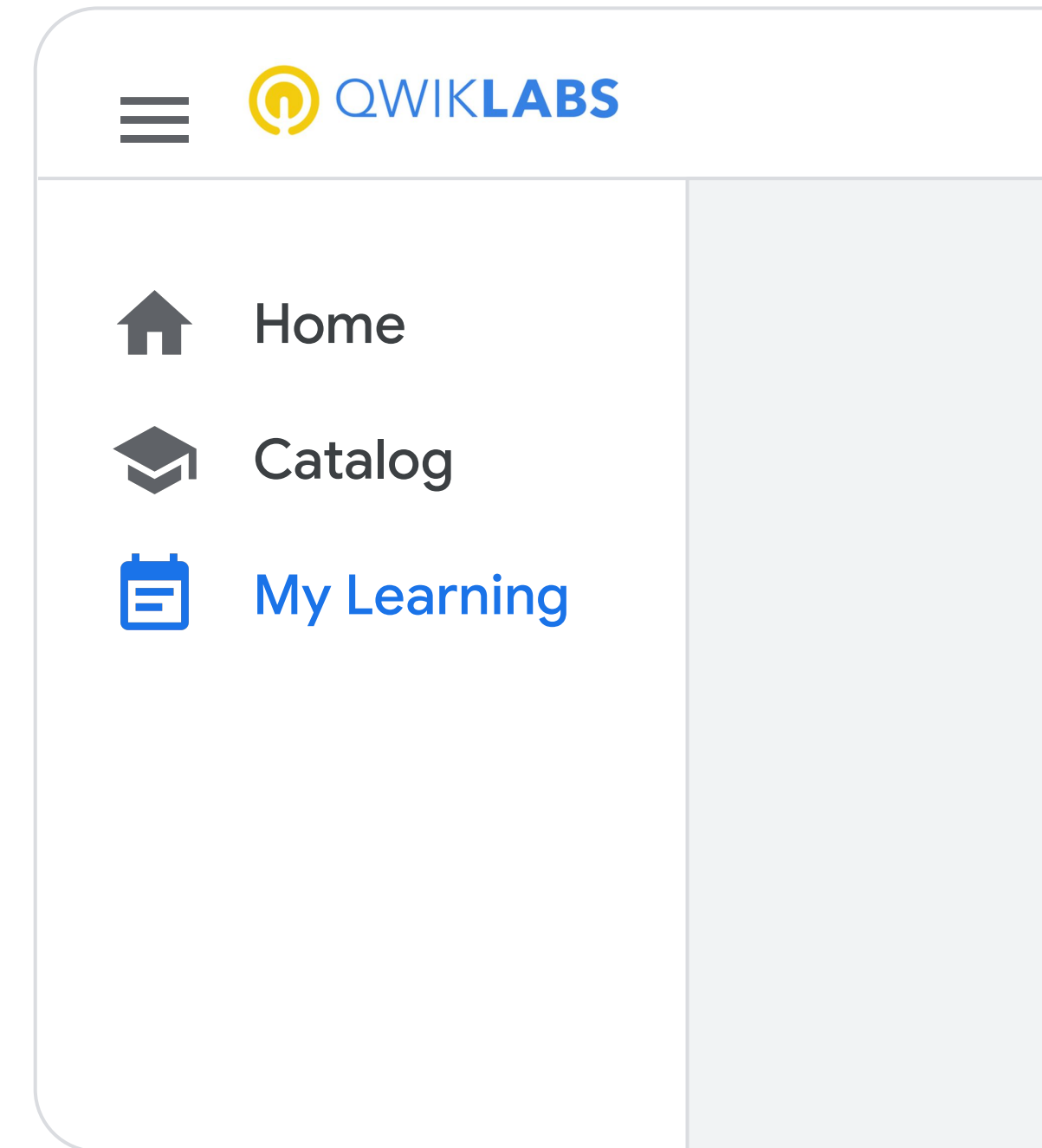


Open Qwiklabs

- 1 Open an incognito window (or private/anonymous window).
- 2 Go to the Qwiklabs URL your instructor provides.
- 3 Sign In with existing account or Join with new account (with email you used to register for the course).
- 4 Launch the course from **My Learning**.





Access issues

The process to open Qwiklabs can differ based on credentials used. Please reach out to your trainer if you have any access issues.



View your labs

Do **NOT** launch a lab until instructed to do so!

Labs	Lecture Notes
	<div></div>
	<div></div>
	<div>Lab Currently Disabled</div>
	<div>Lab Currently Disabled</div>

- ← Lab completed
- ← To be completed
- ← Not yet available

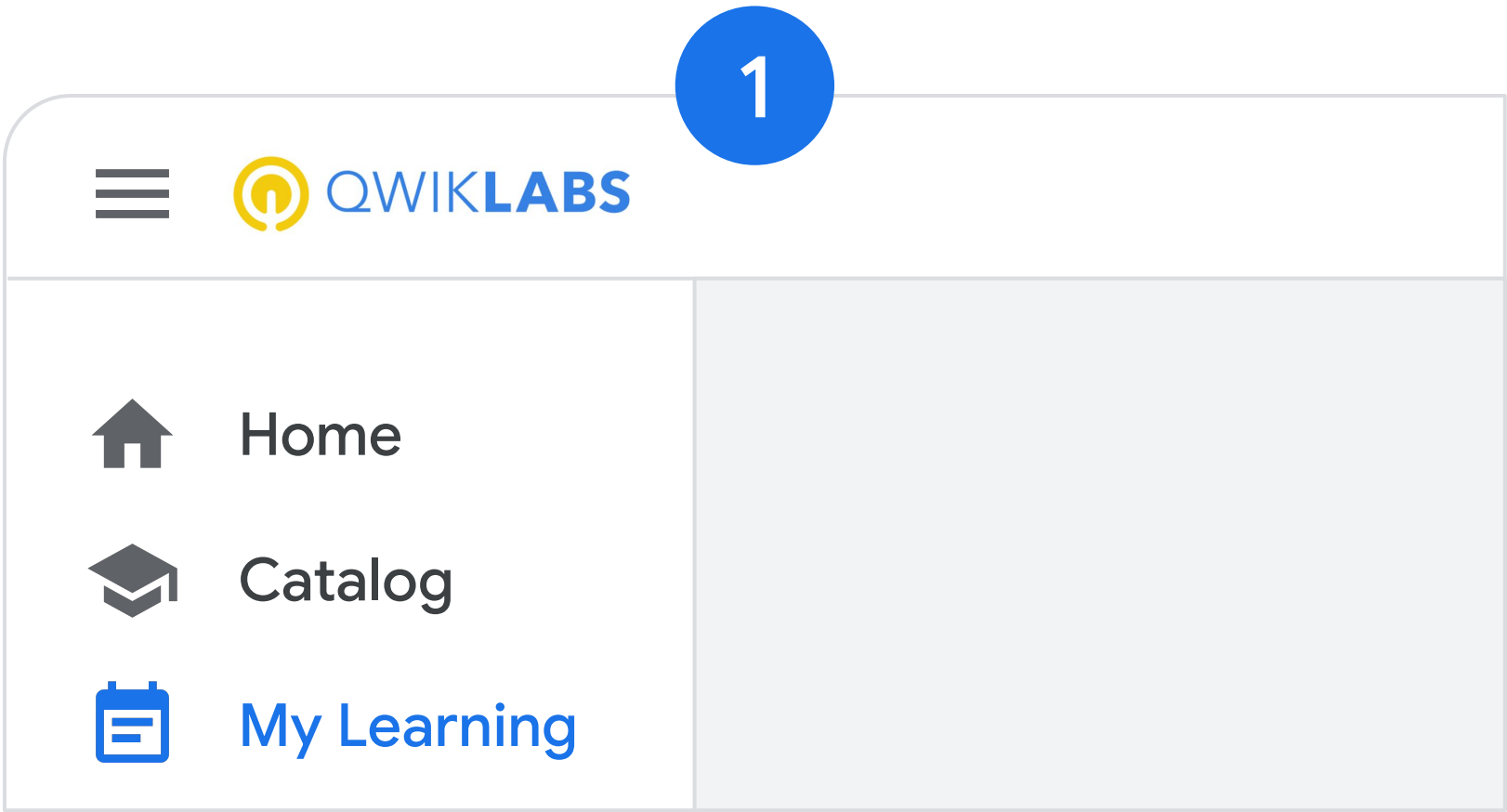
View lecture notes

Labs	Lecture Notes
01	<div></div> <div>↓</div>
02	<div></div> <div>↓</div>
03	<div></div> <div>↓</div>
04	<div></div> <div>↓</div>

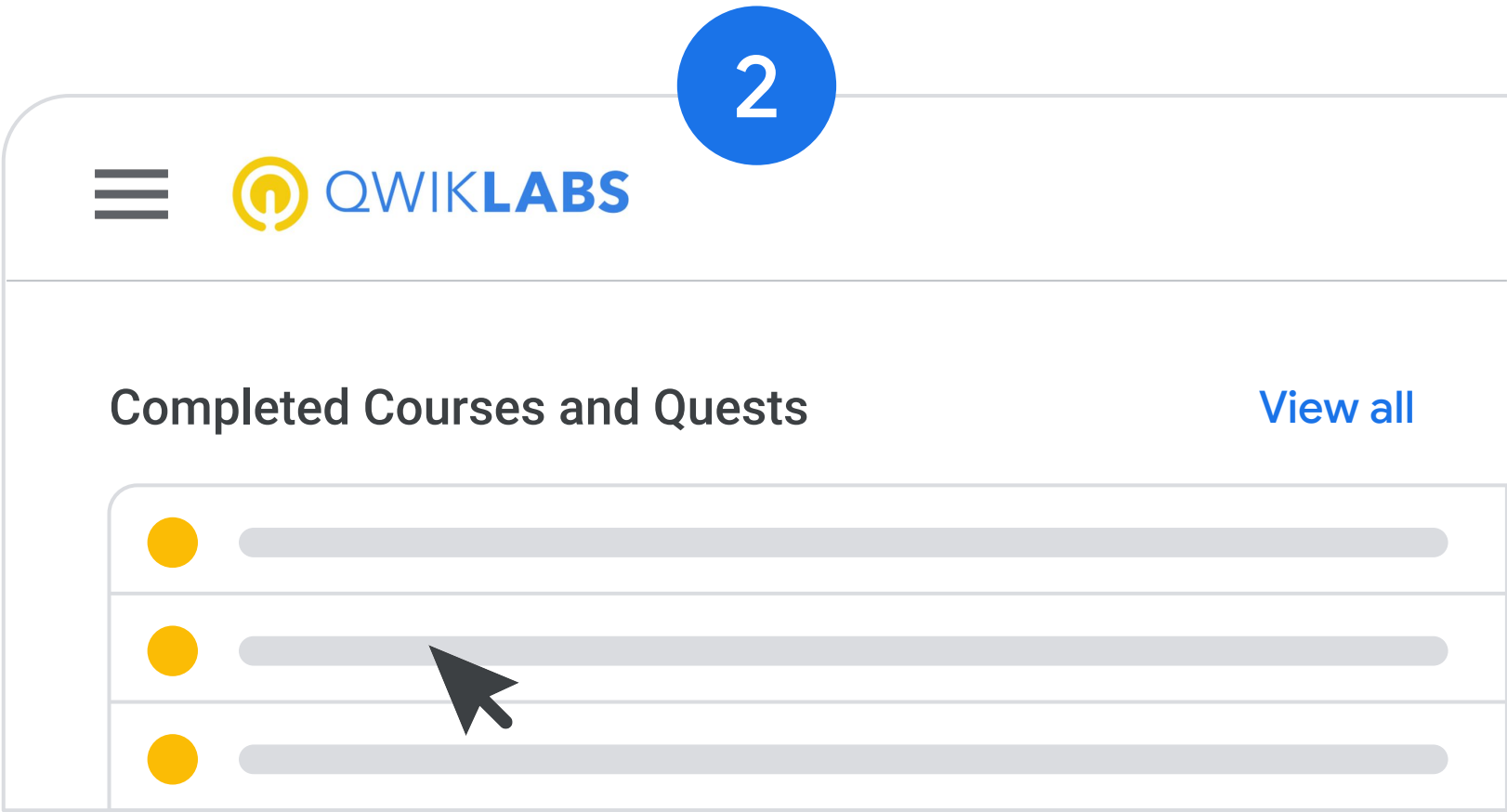
You can download
these as PDF files

End of class - Materials

Materials are available for 2 years



Click on My Learning in the left-hand navigation bar

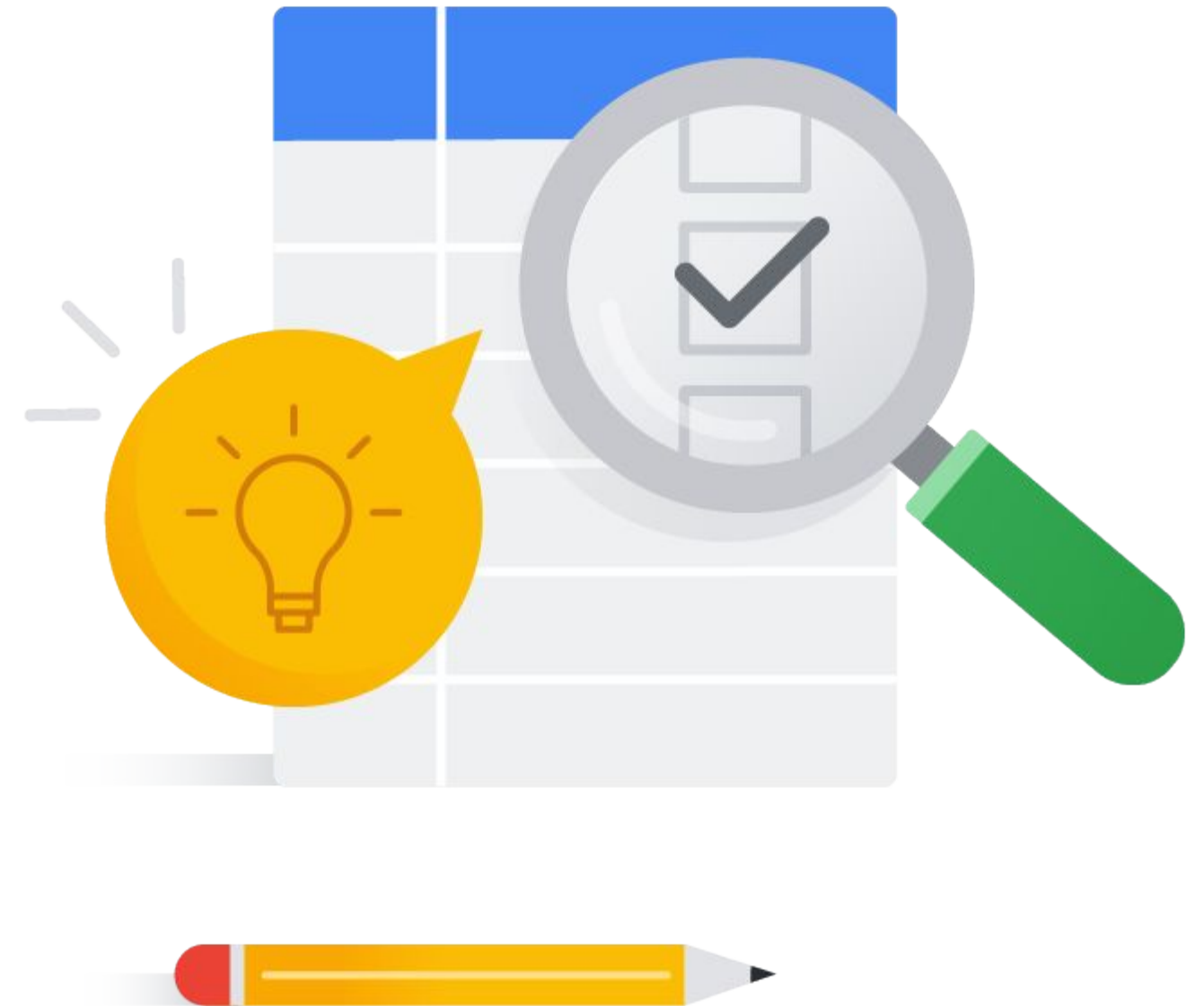


Select the class from the **Completed Courses** list

Day 1: Student Sandbox Environment

🕒 1 Day 🧑🏫

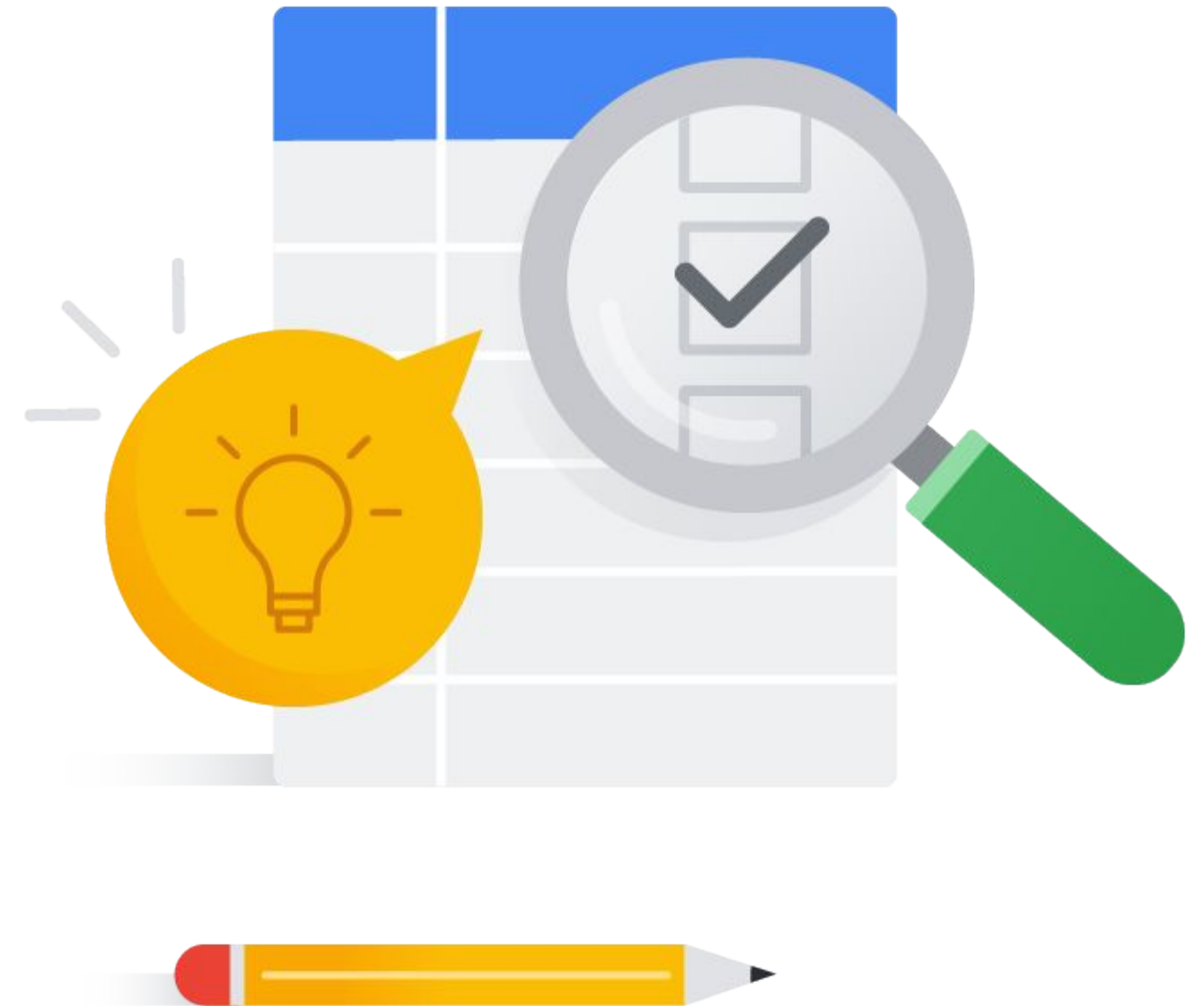
[Day 1: Building Generative AI Applications with Vertex AI Challenge Labs](#)



Day 2: Student Sandbox Environment

🕒 1 Day 🧑🏫

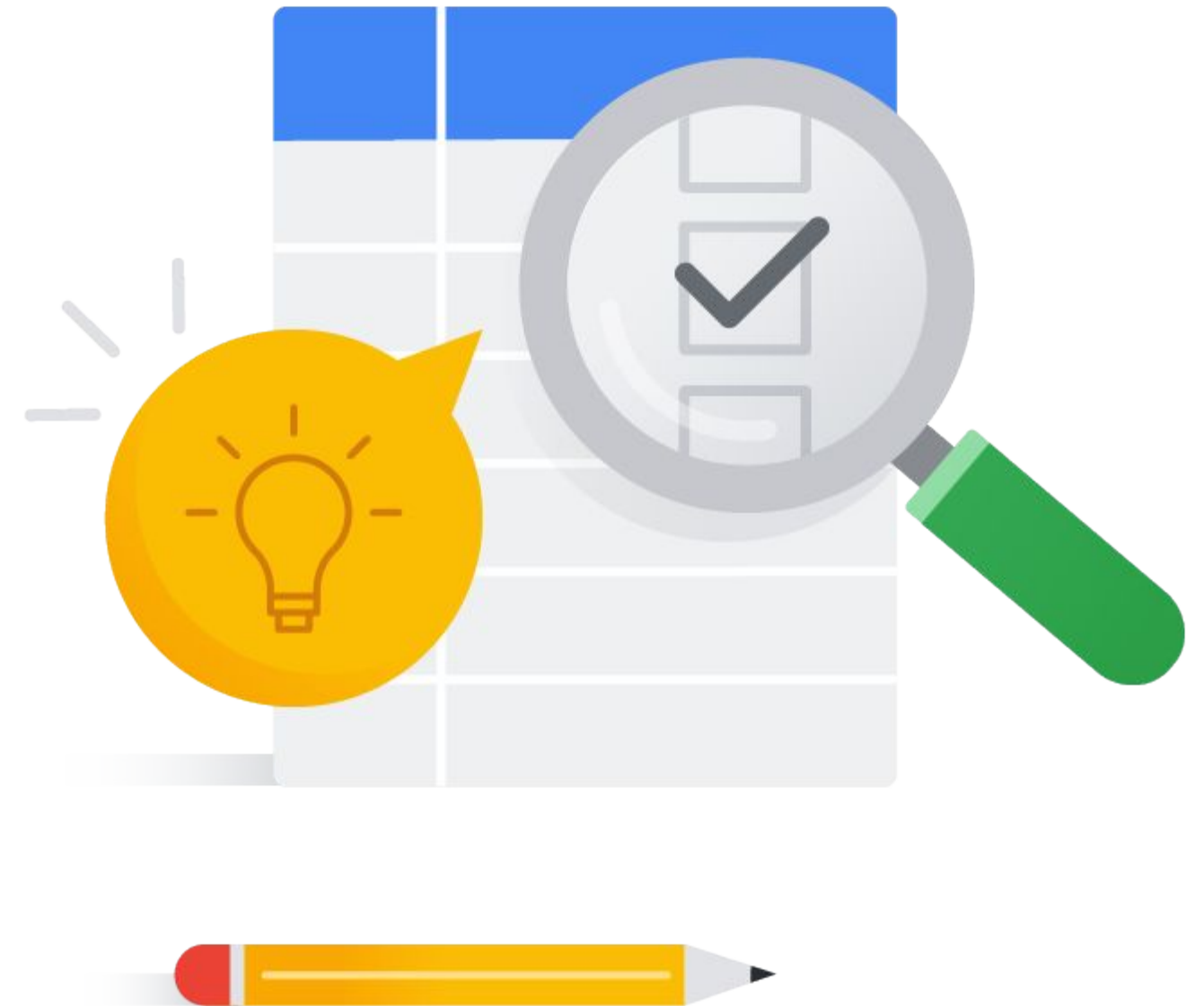
[Day 2: Building Generative AI Applications with Vertex AI Challenge Labs](#)



Day 3: Student Sandbox Environment

🕒 1 Day 🧑‍🎓

[Day 3: Building Generative AI Applications with Vertex AI Challenge Labs](#)



Now let's learn to build our own generative AI tools.

Google Cloud