

Ghislain Fourny

Big Data For Engineers Exercises

0. Introduction (Azure, Jupyter, Moodle)



Exercise Format

Week Nr. X

- Lecture on X on Tuesday
- Exercises on Wednesday & Friday
 - Introduce exercise sheet for X-1
 - Get started with new technology
 - Discuss tips for exercises
 - Discuss solution of exercise sheet for X-2
- At home
 - Solve the rest of exercises for X-1
 - Read up on topics for X

Graded exercises

- Published on Moodle
- Up to 0.25 improvement of the exam grade
- Roughly 2 bonus questions à 0.01 per week
- Answer them on moodle
- Published at the same time as exercise sheets
- Deadline on Wednesday 12:00 one week later

Plan for this week:

Get Started with Azure, Jupyter, and Moodle

Moodle (for graded exercises):

<https://moodle-app2.let.ethz.ch/enrol/index.php?id=12414>

Online class room on Azure (with cloud credit):

- Enroll under <https://aka.ms/JoinEdu>, enter the code from moodle
- Access the course under <https://aka.ms/startedu>

Try to do it alone, come to the exercise for help

There will be one slot on Friday (check web site)

Online class room on Azure

The screenshot shows a web browser window displaying the Moodle LMS interface. The browser's address bar shows the URL <https://moodle-app2.let.ethz.ch/mod/quiz/view.php?id=340729>. The page header includes the ETH zürich logo and the Moodle logo. The main content area is titled "252-3900-00L Big Data for Engineers FS2019". Below the title, there is a breadcrumb trail: [Dashboard](#) / [My courses](#) / [252-3900-00L Big Data for Engineers FS2019](#) / [Sections](#) / [General](#) / [Week 0: Setting up accounts](#). The main content area displays the quiz title "Week 0: Setting up accounts" and a description: "Get familiar with the Moodle quizzes system. This quiz does NOT provide any bonus point." Below the description, it states "Attempts allowed: 1" and "The quiz will not be available until Monday, 25 February 2019, 7:01 PM". At the bottom, it says "This quiz will close at Tuesday, 5 March 2019, 7:01 PM". A red arrow points from a text box to the quiz title. The text box contains the text "Take the first test to get familiar with moodle."

Files - OneDrive X Exercise00.pptx - Microso X Big Data for Engineers - Sp X 252-3900-00L 2019S: Week X +

https://moodle-app2.let.ethz.ch/mod/quiz/view.php?id=340729

Most Visited ETH Nachrichten & Analys... PONS - Le dictionnair... Moodle Course ETH print Skandal im Kinosaal -...

ETH zürich Moodle

252-3900-00L Big Data for Engineers FS2019

Participants

Grades

Sections

Activities

Dashboard

Site home

My courses

Didaktische Ausbildung für Hilfsassistenten des Departements Informatik als Übungsleiter

263-3010-00L Big Data HS2018

252-3900-00L Big Data for Engineers FS2019

Add a block

252-3900-00L Big Data for Engineers FS2019

[Dashboard](#) / [My courses](#) / [252-3900-00L Big Data for Engineers FS2019](#) / [Sections](#) / [General](#) / [Week 0: Setting up accounts](#)

Week 0: Setting up accounts

Get familiar with the Moodle quizzes system. This quiz does NOT provide any bonus point.

Attempts allowed: 1

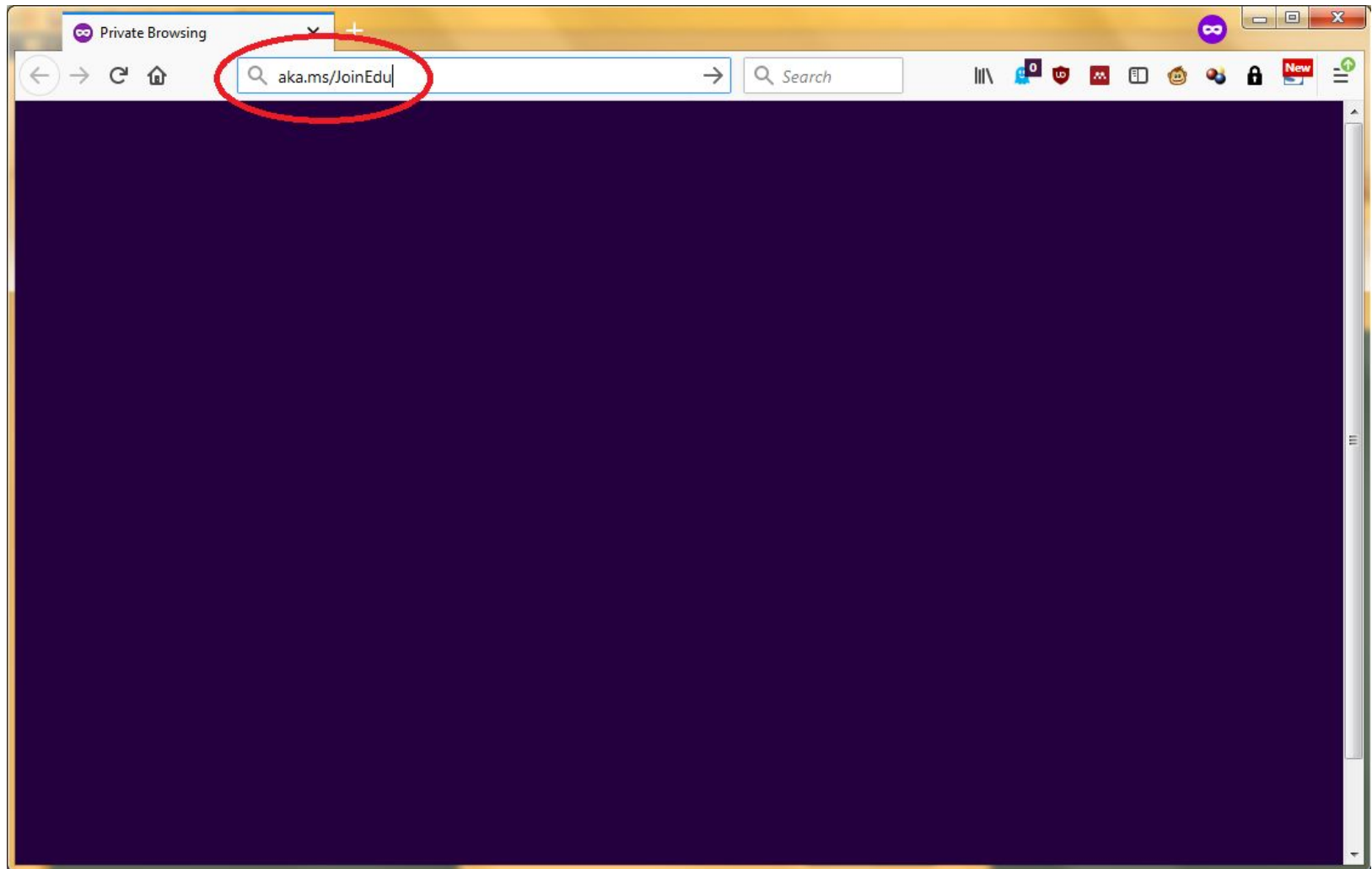
The quiz will not be available until Monday, 25 February 2019, 7:01 PM

This quiz will close at Tuesday, 5 March 2019, 7:01 PM

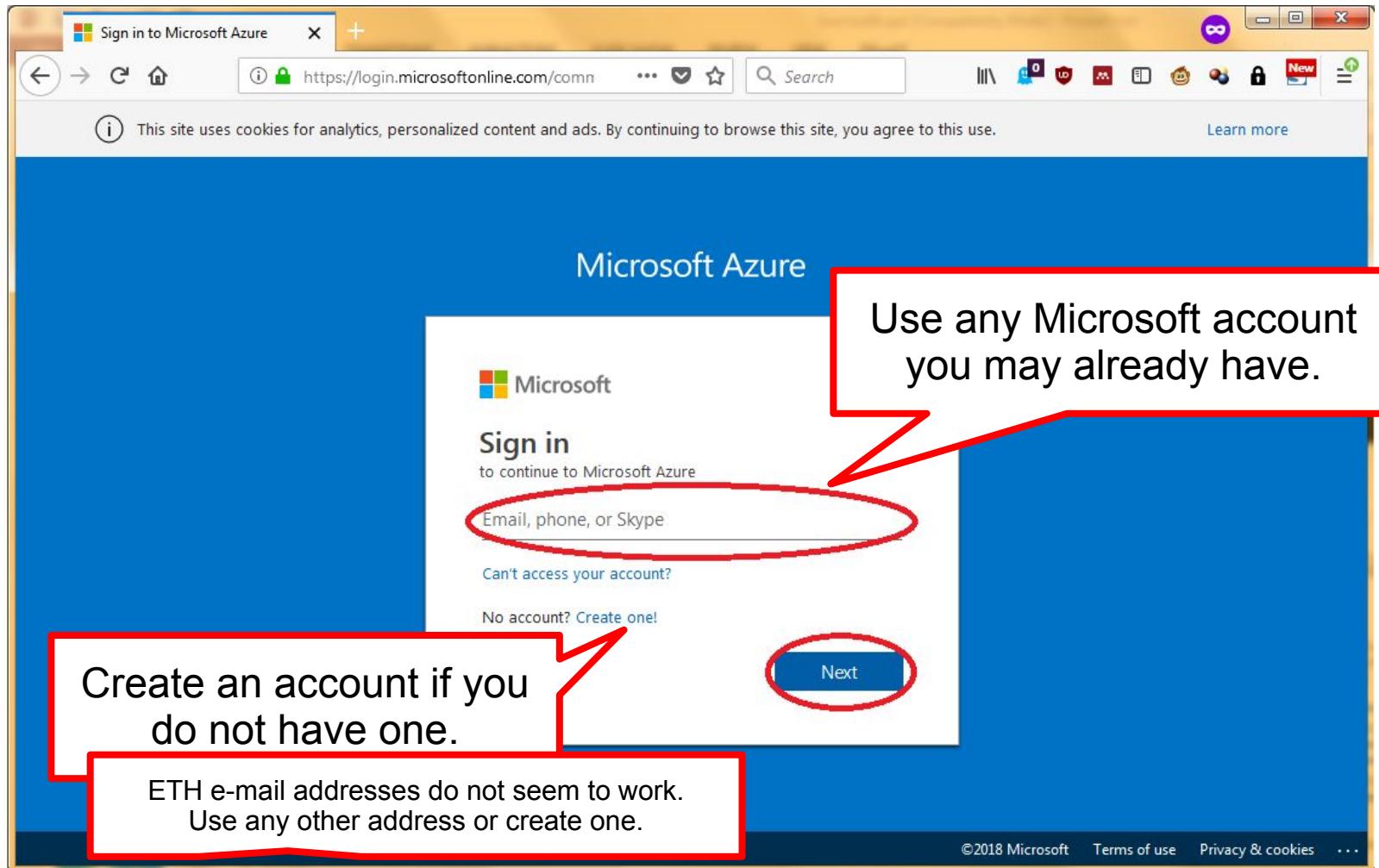
[Exercise 1](#)

Take the first test to get familiar with moodle.

Online class room on Azure



Online class room on Azure



The screenshot shows the Microsoft Azure sign-in page in a web browser. The browser's address bar displays `https://login.microsoftonline.com/comm`. A cookie notice is visible at the top. The main content area has a blue background with the 'Microsoft Azure' logo. A white sign-in box contains the Microsoft logo, the text 'Sign in to continue to Microsoft Azure', a text input field labeled 'Email, phone, or Skype', a link for 'Can't access your account?', a link for 'No account? Create one!', and a blue 'Next' button. Three red callout boxes provide instructions: one points to the sign-in box with the text 'Use any Microsoft account you may already have.', another points to the 'Create one!' link with the text 'Create an account if you do not have one.', and a third points to the bottom of the page with the text 'ETH e-mail addresses do not seem to work. Use any other address or create one.'

Sign in to Microsoft Azure

<https://login.microsoftonline.com/comm>

This site uses cookies for analytics, personalized content and ads. By continuing to browse this site, you agree to this use. [Learn more](#)

Microsoft Azure

Microsoft

Sign in
to continue to Microsoft Azure

Email, phone, or Skype

[Can't access your account?](#)

No account? [Create one!](#)

Next

Use any Microsoft account you may already have.

Create an account if you do not have one.

ETH e-mail addresses do not seem to work.
Use any other address or create one.

©2018 Microsoft Terms of use Privacy & cookies

Online class room on Azure

The screenshot shows a web browser window with the URL <https://portal.azure.com>. The page title is "Join course - Microsoft Azure". The breadcrumb navigation shows "Home > Join course". The main heading is "Join course" with the subtext "Education".

The central content area displays a white box with the following text:

Welcome [redacted]@outlook.com!

Please enter your conference code to continue

Below the text is a text input field and a blue "Join" button.

A red callout box with a pointer to the "Join" button contains the text: "Find the code on moodle".

Online class room on Azure

Education - Overview - X +

https://portal.azure.com/#blade/Microsoft_Azure_Education/Ed...

Microsoft Azure Search resources, services, and docs (G+/)

Home > Join course > Education - Overview

Education - Overview

- Overview
- Get started
- Learning resources
 - Courses
 - Software
 - Learning
 - Templates
- Need help?
 - Student FAQ

Hello, [redacted]@outlook.com

Course summary

Courses	Labs
1	1

Azure credits

Students are eligible for \$100 credit from Azure for Students. [Claim your free credit](#)

Action needed

Lab invite: Lab 1

Course	Big Data for Engineers - Spring 2020
Instructor	admin@ethbigdata2017.onmicrosoft.com
Credit	\$2

credits included (expires Jun 29, 2020)

Download free software [See all software](#)

Online class room on Azure

A screenshot of a web browser displaying the Microsoft Azure sign-up page. The browser's address bar shows the URL <https://signup.azure.com/signup?offer=>. The page header includes the Microsoft Azure logo and a 'Sign out' link. The main banner features the text 'Microsoft Azure Sponsorship 2' and a description: 'This offer provides customers sponsored access to Microsoft Azure for a set monetary limit and time duration, whichever is reached first.' Below the banner, the section '1 Agreement' is highlighted. It contains two checkboxes: the first is checked and labeled 'I agree to the [subscription agreement](#), [offer details](#), and [privacy statement](#)'; the second is unchecked and labeled 'I would like information, tips, and offers from Microsoft or selected partners about Azure, including Azure Newsletter, Pricing updates, and other Microsoft products and services.' A blue 'Sign up' button is located below the checkboxes. The footer of the page includes links for 'English', 'Privacy & Cookies', 'Trademarks', 'Legal', 'Support', and 'Give us feedback', along with the copyright notice '© 2018 Microsoft'.

Azure - Sign up

https://signup.azure.com/signup?offer=

Microsoft Azure

Sign out

Microsoft Azure Sponsorship 2

This offer provides customers sponsored access to Microsoft Azure for a set monetary limit and time duration, whichever is reached first.

1 Agreement

- ☒ I agree to the [subscription agreement](#), [offer details](#), and [privacy statement](#)
- ☐ I would like information, tips, and offers from Microsoft or selected partners about Azure, including Azure Newsletter, Pricing updates, and other Microsoft products and services.

Sign up

English Privacy & Cookies Trademarks Legal Support Give us feedback © 2018 Microsoft

Online class room on Azure

Education - Overview - Microsoft Azure

https://portal.azure.com/#blade/Microsoft_Azure_Education/Ed...

Search resources, services, and docs (G+)

Home > Education - Overview

Education - Overview

- Overview
- Get started
- Learning resources
 - Courses
 - Software
 - Learning
 - Templates
- Need help?
 - Student FAQ

Hello, [redacted]

Course summary

Courses 1 Labs 1

Azure credits

Students are eligible for \$100 credit from Azure for Students. [Claim your free credit](#)

Action needed

Lab invite: Lab 1

Course Big Data for Engineers - Spring 2020

Instructor admin@ethbigdata2017.onmicrosoft.com

Credit \$2

[Redacted area]

Online class room on Azure

Big Data for Engineers - Spring 2020 - Lab 1

Students	Administrators	Project groups	Consumed	Due date
1	0	0	\$0.00 USD	JUN 29, 2020

Description

Add a description for this lab by clicking the change link at the top of this widget

Instructions

Add detailed instructions for this Lab by clicking the change link at the top of this widget

Resources ✓ Done

Lab 1 [redacted]@outlook.com

Status: ✓ Active Expires on: **JUN 29, 2020**

0 out of \$2.00 used

Users

[redacted]@out... Student

Workflow

- Every week we will release a Lab, which will just contain the credits, necessary to complete the task
- You will be instructed, how to create necessary resources in each assignment, you can then use a Lab as a subscription to pay for the used resources.
- You don't need to spend credits in the first week
- You will execute your Jupyter notebooks in the Google Collab service, we will provide you with the link to the notebook each week

Jupyter

Exercise00_Jupyter_Basics_SQL_Example.ipynb

File Edit View Insert Runtime Tools Help Cannot save changes

+ Code + Text Copy to Drive

RAM Disk

Big Data – Exercises

Fall 2020 – Week 0 – ETH Zurich

1. Jupyter Basics

Welcome to this Jupyter notebook. Jupyter is a web-based open-source tool based on Python that allows you to run Python (and other types of) code, visualize and discuss results, and organize everything into notebooks like this one. We use Google Colab, but you can also [install your own server](#).

A notebook is organized in cells. Cells of this notebook contain Python code (but other cell types exists). To run a cell, select it, then press ctrl+enter. Try it out!

```
[ ] print("Hello World")
```

By default, the last expression is printed. Like this:

```
[ ] maxX = 10
[x * x for x in range(maxX)]
```

You can also edit the text. Just double-click on a cell. It's made with markdown code. After you are done editing, press ctrl+enter

We will do about half of the exercises with Jupyter. You will learn most things as we go. The notebook you are seeing is your copy stored on your

Jupyter

- Execute cells with ctrl+enter (shift+enter also works)