

Environment setup

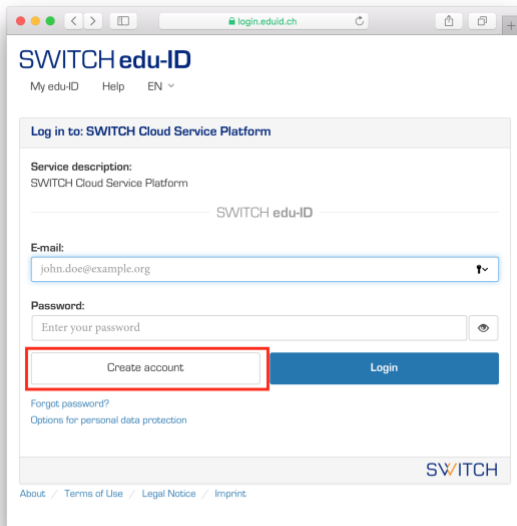
You will be expected to use a macOS based machine throughout the semester. You can use your own, or use one in the UNIL lab.

If you are using the UNIL machines, you can skip some of the steps (notably Steps 2 and 3.1).

Step 1: Install SWITCHdrive

1.1. Register and install

Go to <https://cloud-id.switch.ch/>. If you don't have a SWITCH edu-ID you can create one by pressing the "Create account" button on the login screen.



The screenshot shows the SWITCH edu-ID login page in a web browser. The page title is "SWITCH edu-ID" and the URL is "login.eduid.ch". The page has a navigation bar with "My edu-ID", "Help", and "EN". The main content area is titled "Log in to: SWITCH Cloud Service Platform". Below this, there is a "Service description" section. The login form includes an "Email" field with the placeholder "john.doe@example.org", a "Password" field with the placeholder "Enter your password", and a "Create account" button highlighted with a red rectangle. There is also a "Login" button. Links for "Forgot password?" and "Options for personal data protection" are visible. The SWITCH logo is at the bottom right, and a footer contains links for "About", "Terms of Use", "Legal Notice", and "Imprint".

Choose "University of Lausanne", then click "Login"



The screenshot shows the SWITCH edu-ID registration page in a web browser. The page title is "SWITCH edu-ID" and the URL is "eduid.ch". The page has a navigation bar with "Help" and "EN". The main content area is titled "Registration Method". Below this, there is a text block explaining the two methods to create a SWITCH edu-ID account. The first method is "Create a SWITCH edu-ID account with your AAI account". Below this, there is a "Select an AAI organisation and login" section. The "Login with:" field shows "Université de Lausanne" selected, with a red rectangle highlighting the "Login" button. The second method is "Create a SWITCH edu-ID account manually". At the bottom, there is a note: "If you don't have an AAI account, use the manual registration page to proceed." The SWITCH logo is at the bottom right, and a footer contains links for "About", "Terms of Use", "Legal notice", and "Imprint".

Enter your UNIL credentials, then click “login”.

FR | EN
SWITCHaai

UNIL IT services
SWITCHaai Authentication

You are about to access the service:
Inscription à SWITCH edu-ID
Description as provided by this service:
Créez un compte edu-ID.

Username
Username

Password
Password

Login

i
This connection gives you access to applications and services the SWITCHaai authentication system for a period of **4 hours**.
When you have finished using these authenticated services, please **logout completely** to protect your data and avoid unauthorized access. Remember to close your browser too.
You can find more information on the personal data used during authentication [here](#).

Then agree to release your SWITCHaai data and it will be used to create your edu-ID account.

Choose your password (it can be different from the moodle password), confirm it and click on “Create account”. A confirmation message will appear if the eduID account was successfully activated.

Vous allez accéder au service :
SWITCH Cloud Service Platform de switch.ch

Description du service :
SWITCH Cloud Service Platform

Données requises par le service	
Prénom	
Nom de famille	
Email	
Affiliation	
Organisation	
Type d'organisation	

Les informations ci-dessus seront transmises au service si vous continuez. Acceptez-vous de fournir ces informations à chaque connexion à ce service ?

Sélectionnez la durée de l'accord pour la transmission de vos données :

☐ Me redemander à la prochaine connexion

- J'accepte de transmettre mes informations pour cette session.

☒ Me redemander si les données transmises devaient changer


- J'accepte le fait que les mêmes données sont envoyées automatiquement à ce service dans le futur.


Vous pouvez revenir sur cette décision à tout moment en cochant la case correspondante la page de connexion

Refuser Accepter

Choose your credentials, click “Create SWITCH Cloud Account” and confirm.

Adresse e-mail


Mot de passe 

 Le mot de passe est fort

Choisissez un mot de passe fort avec au moins **10 caractères**. Idéalement, il devrait être composé de lettres minuscules, majuscules, chiffres et lettres de ponctuation.


Ci-dessous quelques exemples de mots de passe forts et générés au hasard:

- troSwe-phe/di4
- Bo2prU4di*j8%
- 5IA2FrU4sU8ME%

Confirmez le mot de passe 

☒ J'ai entièrement lu et compris les [conditions d'utilisation](#) de SWITCH edu-ID.
Les conditions d'utilisation seront en plus envoyé chez vous par e-mail après la création du compte.

[Créer un compte](#)



[A propos](#) / [Conditions d'utilisation](#) / [Infos légales](#) / [Impressum](#)

Continue and login with your new edu-id account

Inscription

Creation du compte  Verification e-mail  Activation du compte 

 Votre compte SWITCH edu-ID a été créé avec succès et il est actif maintenant. Dans un instant vous recevrez un message par e-mail avec des informations complémentaires.

[Continuer](#)



[A propos](#) / [Conditions d'utilisation](#) / [Infos légales](#) / [Impressum](#)

Accept data transmission

Choisir une durée de consentement:

☐ Me demander à nouveau à la prochaine connexion
J'accepte d'envoyer mes informations cette fois-ci.

☒ Me redemander si les données transmises à ce service devaient changer
J'accepte dorénavant d'envoyer ces mêmes données automatiquement à ce service.

Vous pouvez revenir sur cette décision à tout moment en cochant la case correspondante dans la page d'authentification.


[Rejeter](#) [Accepter](#)



[A propos](#) / [Conditions d'utilisation](#) / [Infos légales](#) / [Impressum](#)

Finally, register for SWITCHdrive.

SWITCHdrive



SWITCHdrive

Sync and share files with your clients, your co-workers and partners.

register

Register for SWITCHdrive

☒ I accept the Terms and Conditions of SWITCH.

register

SWITCHdrive Help

By using SWITCHdrive you accept these Terms and Conditions [\(de\)](#), [\(fr\)](#), [\(en\)](#).

1.2. Installing the client

Download the SWITCHdrive client from <https://help.switch.ch/drive/downloads/> and follow the installation steps.

SWITCH

SWITCHdrive

Search

What is new in SWITCHdrive

How to register SWITCHdrive

Downloads

Installation Instructions


FAQ

Contact & Support

Current Status


SWITCHdrive clients

For Windows

 Download (Version 2.4.2) (Windows 7+)

Visit the installation Instructions

For Mac

 Download (Version 2.4.2) - *Firefox users please right-click the link and chose 'Save Link As...'* (OSX 10.10+, Yosemite and later)

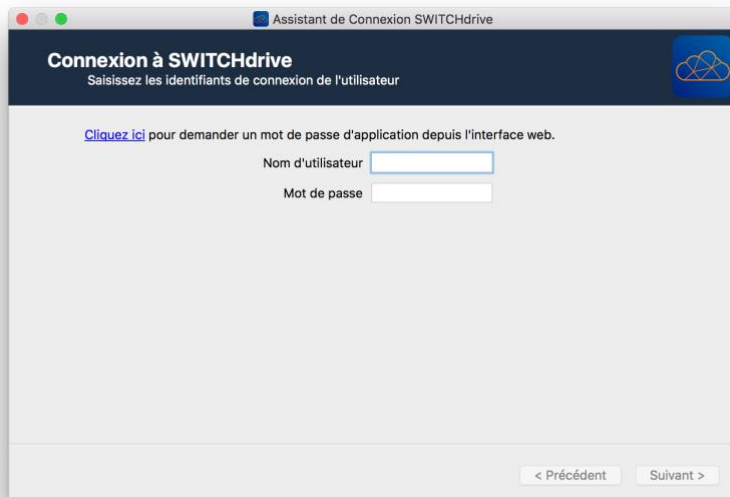
Visit the installation Instructions

For Linux

For iOS devices

For Android devices

At the end, log in using your new account credentials.



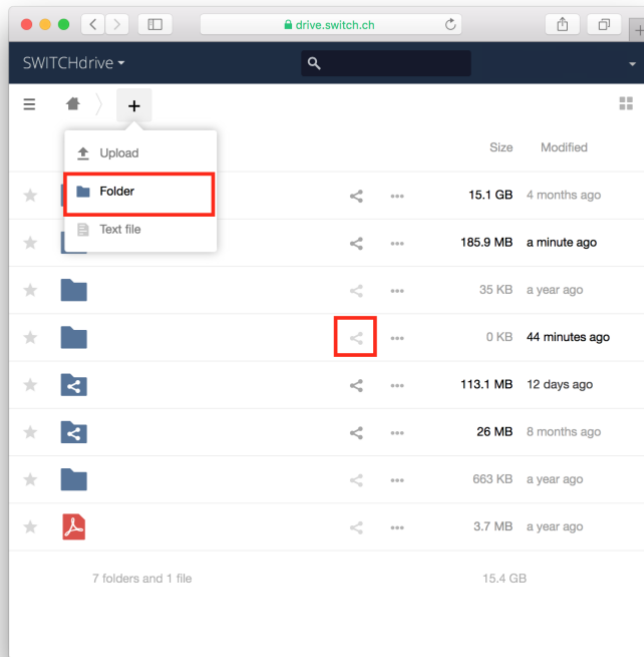
Choose your desired synchronization options. We recommend you to synchronize all the content in a new switchdrive folder.



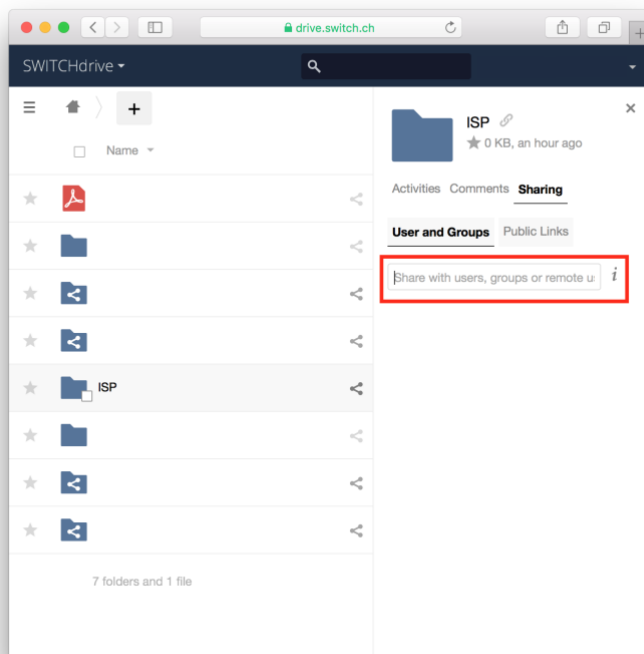
The SWITCHdrive client will automatically synchronize all your files from the server.

1.3. Create shared folders

Using your credentials, log in <https://drive.switch.ch>. The welcome page shows you all your folders. To create a new folder, click on the + sign. To share a folder, click on the share icon



In the text field, you can enter the email address of the person whom you want to share this folder with. They should have a SWITCHdrive account too. You can also select the option to allow this person to make changes to this folder once you enter his/her email address.



Step 2: Install brew

Go to <https://brew.sh> and follow the instructions

See the course slides.

Step 3: Install Python

Open your macOS Terminal (Applications > Utilities > Terminal) and enter the command:

```
brew install python3
```

Step 4: Install PyCharm

3.1. Installation

As a UNIL student, you can use the professional version of PyCharm freely. To do so, go to <https://www.jetbrains.com/student/> and select “Apply Now”. Provide your UNIL email address and follow the activation instructions that you will receive by email. You will be asked to create a JetBrains account and, upon this, you will be able to download PyCharm <https://www.jetbrains.com/pycharm/download/> and install it.

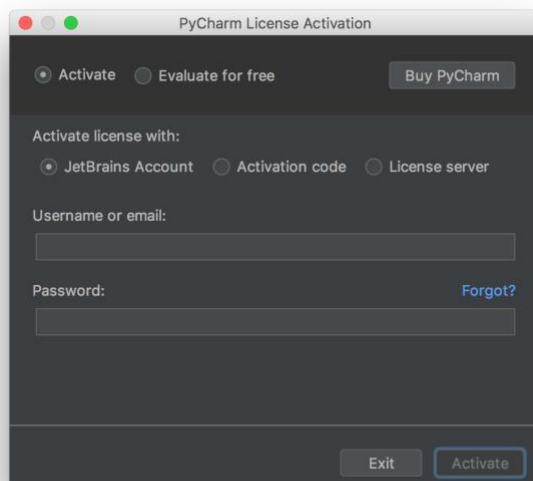
You can find full usage documentation at <https://www.jetbrains.com/pycharm/documentation/>.

3.2. First use

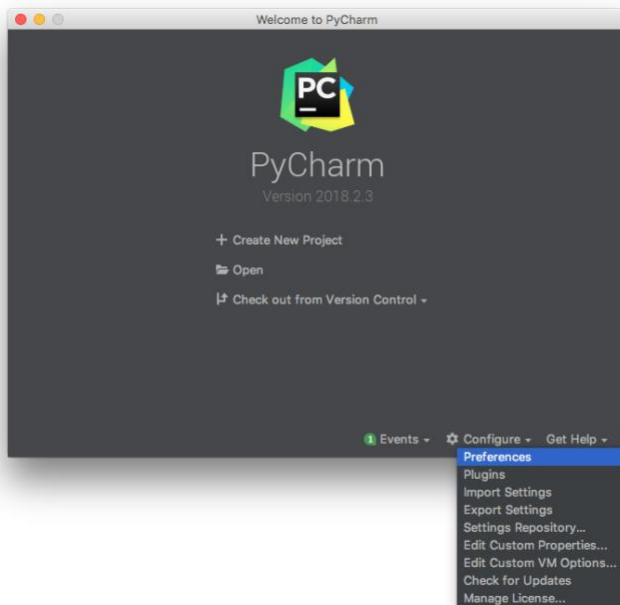
Install PyCharm by dragging it to the Application folder.

Follow the instruction and select the desired keymap scheme.

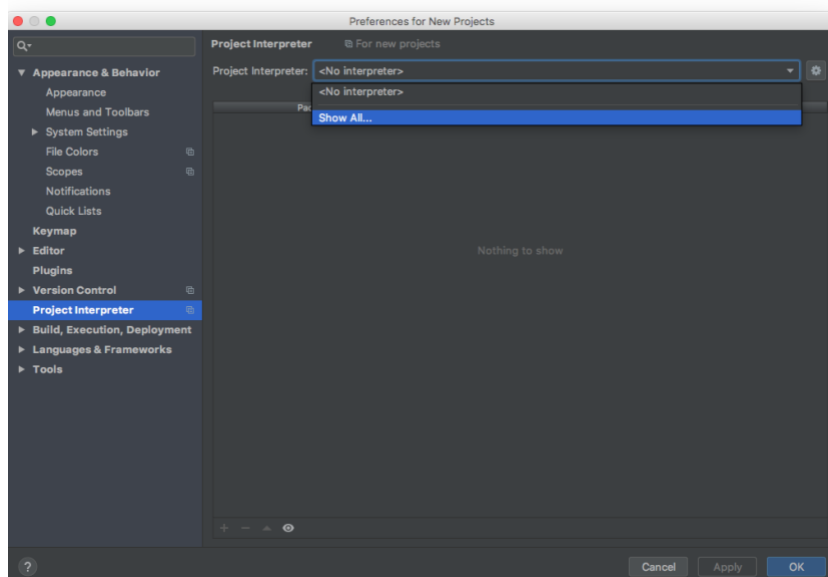
The first time you open it, you must configure PyCharm with your account. Click on “Activate” and use your newly created JetBrains account associated to your UNIL email address.



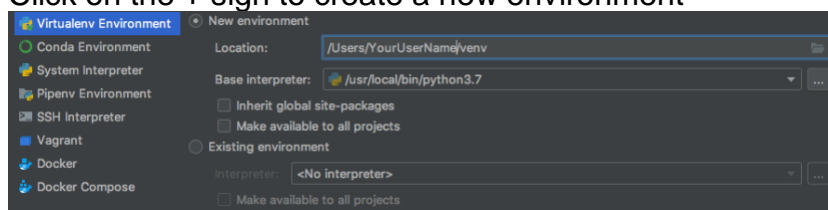
You must also configure your Python installation. To do so, select **Configure > Settings**.



In the new window, select **Project interpreter** and make sure that, in the Project Interpreter drop down list, the location of your 3.* Python installation is selected.

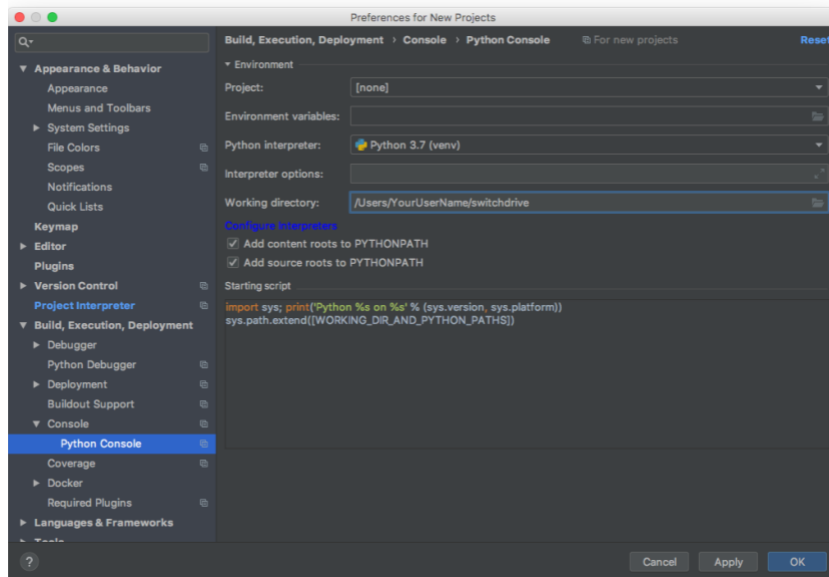


Click on the + sign to create a new environment



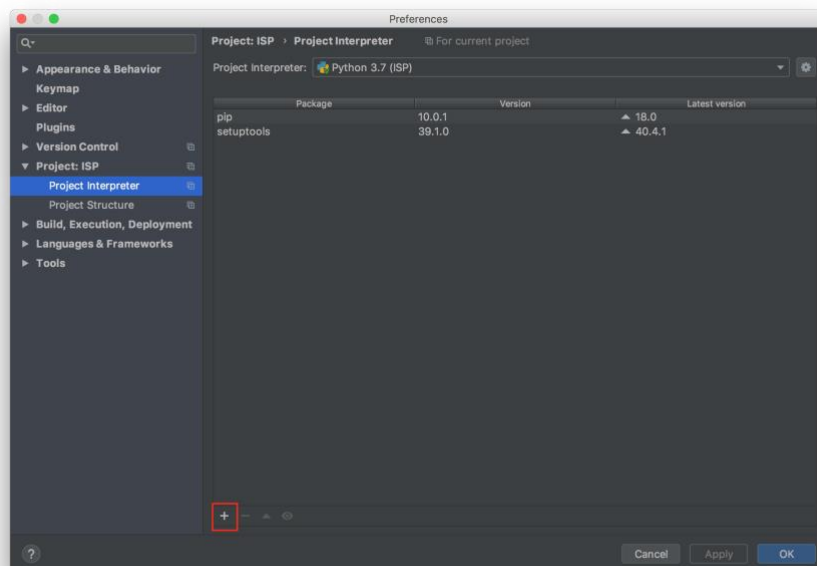
Next, select **Build, Execution, Deployment > Console > Python Console** and select again the path to your Python installation. Then, select a location where you want to work. We recommend you to use a subfolder of your SwitchDrive root folder. This would allow you to work on your assignments

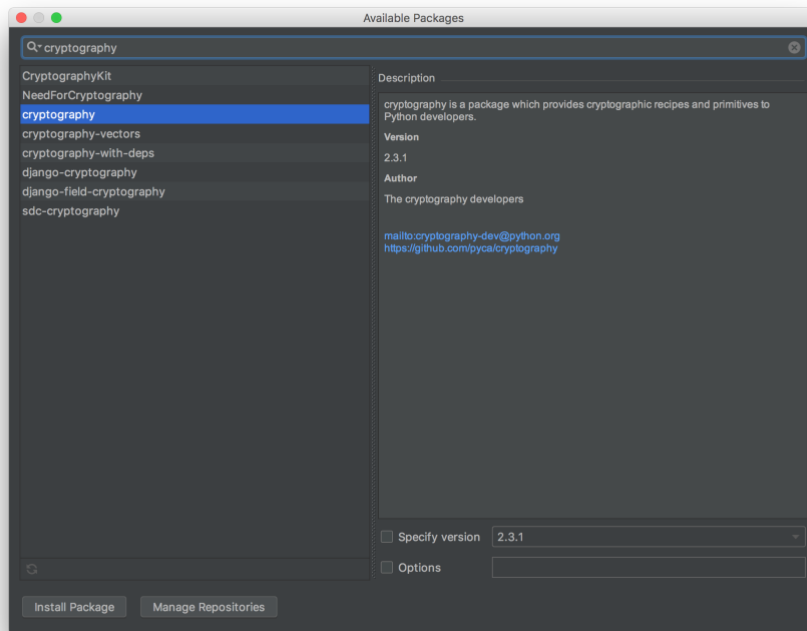
from any machine where SwitchDrive is installed and will also make it easier to work in groups.



3.3. Installing modules

Open PyCharm and go to **File > Settings > Project > Project interpreter**. Here, in the table, you will see the list of already installed modules. You can also install new modules by clicking the "+" sign and typing the name of the module. Please search and install the module "cryptography".

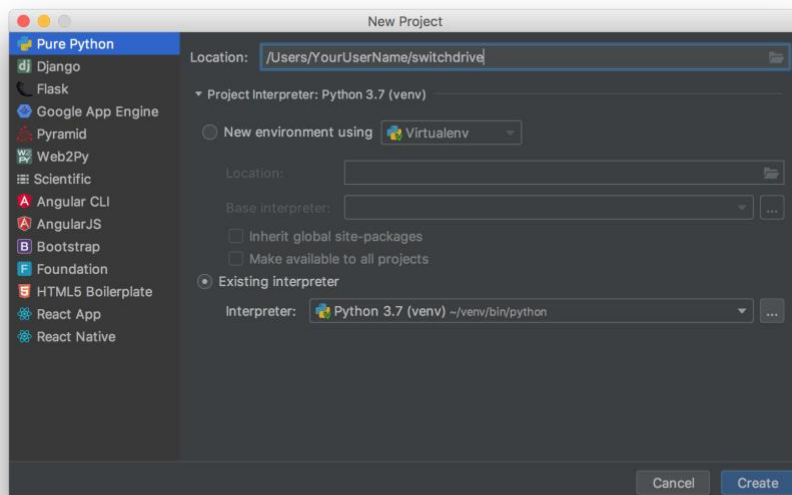




Alternatively, you can go to <https://pypi.org/project/cryptography/> and follow the installation instructions. Here you also find tutorials about using this library.

3.4. Create your first project

Close the settings windows and on the Welcome to PyCharm page, click on create project. Create a Pure Python and use the existing interpreter you just created.



Step 5: Moodle setup and student groups

See the course slides.