

Python and SQL: intro / SQL platforms

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Class 1: Python Installation

Installation of Visual Studio Code

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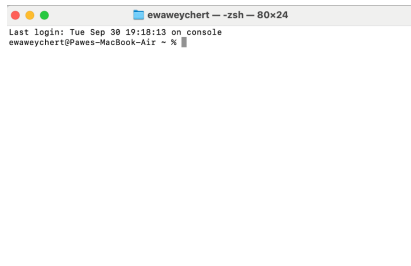
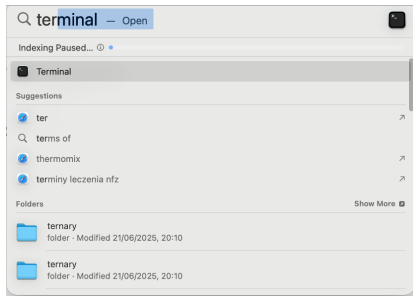


Steps of this Presentation

- ➊ What is the Terminal / Command Prompt?
- ➋ Mac Installation Steps
- ➌ Windows Installation Steps
- ➍ Installing Jupyter Notebook
- ➎ Running First Python Program

Mac Installation

Terminal – Your New Friend



Terminal on Mac

On a Mac, **Terminal** is an application that gives you access to the command-line interface (CLI) of macOS. Instead of clicking buttons and menus, you type text commands to interact with the system. It's essentially a way to “talk” directly to the computer using text.

Some key points:

- **Location:** Applications → Utilities → Terminal. Or open with Spotlight (Cmd + Space, then type **Terminal**).
- **Shell:** Runs a shell (e.g., **zsh** by default, previously **bash**) which interprets your commands.
- **Uses:**
 - Navigate the file system (**cd**, **ls**)
 - Manage files and folders (**cp**, **mv**, **rm**, **mkdir**)
 - Run scripts and programs
 - Install and use developer tools (e.g., **git**, **brew**)
 - Configure system settings not available in the GUI

Terminal – Commands

```
ewameychert ~ --zsh -- 110x51
Last login: Tue Sep 30 19:19:11 on ttys000
ewameychert@Pawes-MacBook-Air ~ % pwd
/Users/ewameychert
ewameychert@Pawes-MacBook-Air ~ % ls
Applications  Documents  Movies      Public      dashboard
Bikes.ipynb  Downloads  Music       Zotero      django_projects
Desktop       Library    Pictures    ai_overlay_tmp project_hello
ewameychert@Pawes-MacBook-Air ~ % mkdir myfolder_1
ewameychert@Pawes-MacBook-Air ~ % ls
Applications  Documents  Movies      Public      dashboard  project_hello
Bikes.ipynb  Downloads  Music       Zotero      django_projects
Desktop       Library    Pictures    ai_overlay_tmp myfolder_1
ewameychert@Pawes-MacBook-Air ~ % touch myfile.txt
ewameychert@Pawes-MacBook-Air ~ % ls
Applications  Documents  Movies      Public      dashboard  myfolder_1
Bikes.ipynb  Downloads  Music       Zotero      django_projects project_hello
Desktop       Library    Pictures    ai_overlay_tmp myfile.txt
ewameychert@Pawes-MacBook-Air ~ % cd myfolder_1
ewameychert@Pawes-MacBook-Air myfolder_1 % ls
ewameychert@Pawes-MacBook-Air myfolder_1 % mkdir myfile.txt
ewameychert@Pawes-MacBook-Air myfolder_1 % cd ..
ewameychert@Pawes-MacBook-Air ~ % ls
Applications  Documents  Movies      Public      dashboard  myfolder_1
Bikes.ipynb  Downloads  Music       Zotero      django_projects project_hello
Desktop       Library    Pictures    ai_overlay_tmp myfile.txt
ewameychert@Pawes-MacBook-Air ~ %
```

- `pwd` → Print Working Directory (shows where you are)
- `ls` → List files and folders in the current location
- `mkdir myfolder` → Create a new folder
- `touch myfile.txt` → Create an empty file
- `cd ..` → Go up one folder
- `cd ~` → Go back to your home folder
- `cd /` → Go to the root of the file system

Installing Jupyter Notebook (Mac)

① Make sure you have Python 3 and pip installed:

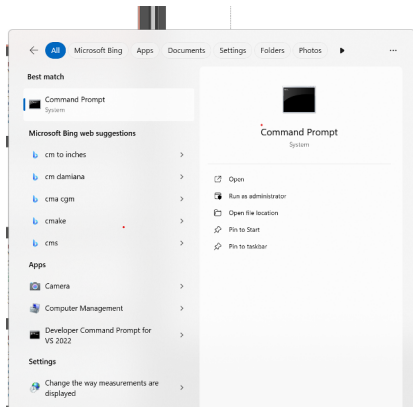
- In Terminal: `python3 -version` `pip3 -version`
- If not installed, get Python from python.org or via Homebrew:
 - Install Homebrew: `/bin/bash -c "$(curl -fsSL https://raw.githubusercontent.com/Homebrew/install/HEAD/install.sh)"`
 - Then install Python: `brew install python`

② Install Jupyter Notebook: `pip3 install notebook`

③ Launch Jupyter Notebook: `jupyter notebook`

Windows Installation

Terminal your new friend; Terminal on Windows – cmd command prompt



- `cd` → shows the current directory (instead of `pwd`)
- `dir` → lists files and folders (equivalent of `ls`)
- `mkdir myfolder` → creates a new folder (works the same)
- `type nul > myfile.txt` → creates an empty file (equivalent of `touch`)
- `cd ..` → go up one directory

Working with cmd

```
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ewawe>cd
C:\Users\ewawe

C:\Users\ewawe>cd Desktop

C:\Users\ewawe\Desktop>dir
Volume in drive C has no label.
Volume Serial Number is 8AF9-A88D

Directory of C:\Users\ewawe\Desktop

30/09/2025  20:06    <DIR>        .
25/08/2025  19:31    <DIR>        ..
04/09/2025  17:53    <DIR>        chapter_5
23/07/2025  10:25    <DIR>        Code_for_LiB_v1.0
06/05/2024  18:17             2,268 DyskSieciowy - Shortcut.lnk
19/08/2025  21:10             2,162 Fork.lnk
01/06/2025  19:48    <DIR>        jdr
04/08/2025  12:24    <DIR>        lib_partnership
04/08/2025  12:24    <DIR>        lib_validation
27/06/2025  10:15    <DIR>        lib_validation_27_06
30/09/2025  20:06    <DIR>        literature
30/09/2025  20:05    <DIR>        personel
14/03/2025  17:59    <DIR>        sun_guardian
01/05/2025  20:02    <DIR>        uk_florence
29/08/2025  18:05    <DIR>        zajecia
                2 File(s)              4,430 bytes
                13 Dir(s)  205,367,623,680 bytes free

C:\Users\ewawe\Desktop>mkdir group_1

C:\Users\ewawe\Desktop>type nul > myfile.txt

C:\Users\ewawe\Desktop>cd group_1

C:\Users\ewawe\Desktop\group_1>type nul > myfile.txt

C:\Users\ewawe\Desktop\group_1>dir
Volume in drive C has no label.
Volume Serial Number is 8AF9-A88D

Directory of C:\Users\ewawe\Desktop\group_1

30/09/2025  20:06    <DIR>        .
30/09/2025  20:06    <DIR>        ..
30/09/2025  20:06             0 myfile.txt
                1 File(s)                0 bytes
                2 Dir(s)  205,429,481,472 bytes free
```

```
C:\Users\ewawe\Desktop>mkdir group_1

C:\Users\ewawe\Desktop>type nul > myfile.txt

C:\Users\ewawe\Desktop>cd group_1

C:\Users\ewawe\Desktop\group_1>type nul > myfile.txt

C:\Users\ewawe\Desktop\group_1>dir
Volume in drive C has no label.
Volume Serial Number is 8AF9-A88D

Directory of C:\Users\ewawe\Desktop\group_1

30/09/2025  20:06    <DIR>        .
30/09/2025  20:06    <DIR>        ..
30/09/2025  20:06             0 myfile.txt
                1 File(s)                0 bytes
                2 Dir(s)  205,429,481,472 bytes free
```

Install python and jupyter notebook on Windows

❶ Check if Python is already installed

- Open Command Prompt:
 - Press Win + R
 - Type cmd
 - Hit Enter

❷ In the Command Prompt window, type:

- `python -version`
- `pip -version`

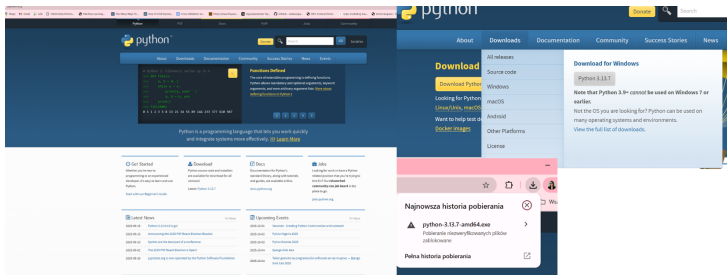
Install python and jupyter notebook on Windows

- ➊ Go to python.org → Downloads for Windows
- ➋ Download the latest **Python 3.x** installer (64-bit)
- ➌ Run the installer. On the first screen, make sure to check:
 - **Add Python to PATH** (very important!)
 - Then click **Install Now**

What does “Add Python to PATH” mean?

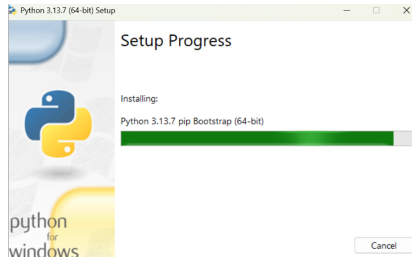
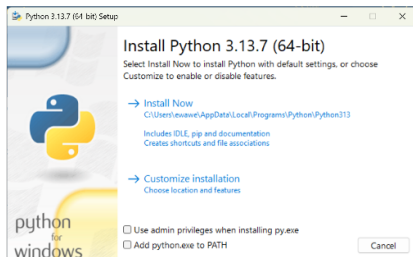
- PATH is an environment variable in Windows
- By adding Python to PATH, you tell Windows where to find `python.exe` and `pip.exe`
- Without it, you'd have to type the full folder path (e.g. `C:\Users\YourName\AppData\...\python.exe`)
- With PATH checked, you can simply type `python` or `pip` from any folder in Command Prompt

Install python and jupyter notebook on Windows



<https://www.python.org>

Install python and jupyter notebook on Windows



Install python and jupyter notebook on Windows

- 1 **Verify Python & pip installation** Open a new Command Prompt and type:
 - `python -version`
 - `pip -version`
- 2 **Install Jupyter Notebook** `pip install notebook`
- 3 **Launch Jupyter Notebook** `jupyter notebook`

Run your first program in cmd

Run your first python program in terminal

```
group_1 — -zsh — 150x45
Last login: Tue Sep 30 19:38:35 on ttys001
ewaweychert@Pawes-MacBook-Air ~ % pwd
/Users/ewaweychert
ewaweychert@Pawes-MacBook-Air ~ % cd desktop
ewaweychert@Pawes-MacBook-Air desktop % pwd
/Users/ewaweychert/desktop
ewaweychert@Pawes-MacBook-Air desktop % ls
04_Wizualizacja_danych.zip      october.docx
Screenshot 2025-09-30 at 14.12.22.png  python_installation_1.pptx
Screenshot 2025-09-30 at 14.29.10.png  s10997-024-09718-8.pdf
Screenshot 2025-09-30 at 16.48.08.png  thesis_master_students_1.docx
Screenshot 2025-09-30 at 19.24.33.png  winter_semester_schedule_matrix.xlsx
Screenshot 2025-09-30 at 19.38.41.png  ~$pytanie.pptx
Untitled.ipynb                    ~$python_installation_1.pptx
aktualne_projekty                 ~$rtility_CC_Narr_v1.docx
fpsyg-16-1636612.pdf              ~$xtbook_10_november_2023.docx
intro_to_python.xlsx              ~$y_textbooks.docx
mk
ewaweychert@Pawes-MacBook-Air desktop % mkdir group_1
ewaweychert@Pawes-MacBook-Air desktop % cd group_1
ewaweychert@Pawes-MacBook-Air group_1 % touch myfile.txt
touch file_1.py
ewaweychert@Pawes-MacBook-Air group_1 % python3 file.py
/opt/homebrew/Cellar/python@3.13/3.13.7/Frameworks/Python.app/Contents/MacOS/Python: can't open file '/Users/ewaweychert/Desktop/group_1/file.py': [Errno 2] No such file or directory
ewaweychert@Pawes-MacBook-Air group_1 % python3 file_1.py
Hello group_1
ewaweychert@Pawes-MacBook-Air group_1 %
```

Run your first Python program in macOS terminal

```
pwd
cd desktop
pwd
ls
mkdir group_1
cd group_1
touch myfile.txt
touch file_1.py
python3 file.py
python3 file_1.py
```

Run your first python program in cmd

```
Microsoft Windows [Version 10.0.26100.6584]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ewawe>python --version
Python 3.13.7

C:\Users\ewawe>python3 --version
Python was not found; run without arguments to install from the Microsoft Store, or disable this shortcut from Settings > Apps
> Advanced app settings > App execution aliases.

C:\Users\ewawe>pip --version
pip 25.2 from C:\Users\ewawe\AppData\Local\Programs\Python\Python313\Lib\site-packages\pip (python 3.13)

C:\Users\ewawe>cd Desktop

C:\Users\ewawe\Desktop>mkdir group_1
A subdirectory or file group_1 already exists.

C:\Users\ewawe\Desktop>cd group_1

C:\Users\ewawe\Desktop\group_1>type nul > myfile.py

C:\Users\ewawe\Desktop\group_1>python myfile.py
Hello group_1

C:\Users\ewawe\Desktop\group_1>
```

Run your first Python program in cmd

```
python --version
python3 --version
pip --version
cd Desktop
mkdir group_1
cd group_1
type nul > myfile.py
python myfile.py
```

Thank you!

See you next week

e.weychert@uw.edu.pl



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WARSZAWSKI



WYDZIAŁ NAUK
EKONOMICZNYCH