

Python Environment & Packages

How do you check the Python version installed?

Python --version

How do you switch between Python versions on Linux (or Windows)?

Using pyenv

pyenv local/shell 3.12.1

pyenv virtualenv 3.11.8 env1

pyenv activate env1

What is venv, and how do you activate a virtual environment?

Virtual environments are used to isolate projects

Python -m venv env1

Source env1/bin/activate

How do you install a module globally vs inside a venv?

Globally - pip install <module_name>

Venv - activate venv and then pip install <module_name>

What is the circular import error?

When the file name you have is same as some module you are trying to import, your file itself will be imported causing the error

What is module not found error?

Either a third party module is not installed or a custom module path is not specified correctly

What does requirements.txt do?

How do you freeze all installed modules into a file?

How do you uninstall or upgrade a specific package?

What is pip, and how is it different from conda?

How do you check where a Python module is installed?

How do you install a module from a private or internal repository?



Python Basics & Data Structures

Difference between list, tuple, and set.

How do you convert a list into a tuple or vice versa?

How do you remove duplicates from a list?

How do you check if a key exists in a dictionary?

How do you merge two dictionaries in Python 3.9+?

What is list comprehension? Give an example.

How do you reverse a string in Python?

Difference between shallow copy and deep copy.

How do you slice an array or list?

How do you iterate over both keys and values in a dictionary?

File Handling & Scripting

How do you read a file line by line in Python?

How do you write JSON data into a file?

What is with `open(...)` as `f:` used for?

How do you handle exceptions during file read/write?

How do you check if a file exists before reading it?

Python with AWS & CLI

Have you used boto3? What for?

How do you upload a file to S3 using Python?

How do you assume an IAM role using boto3?

How do you list all EC2 instances using boto3?

How do you read secrets from AWS Secrets Manager using Python?

What is the difference between AWS CLI and boto3?

How do you store AWS credentials for boto3 usage?

What happens if credentials are missing when boto3 runs?

How do you handle rate limiting (`ThrottlingException`) in boto3?

Have you automated anything in AWS using Python scripts?