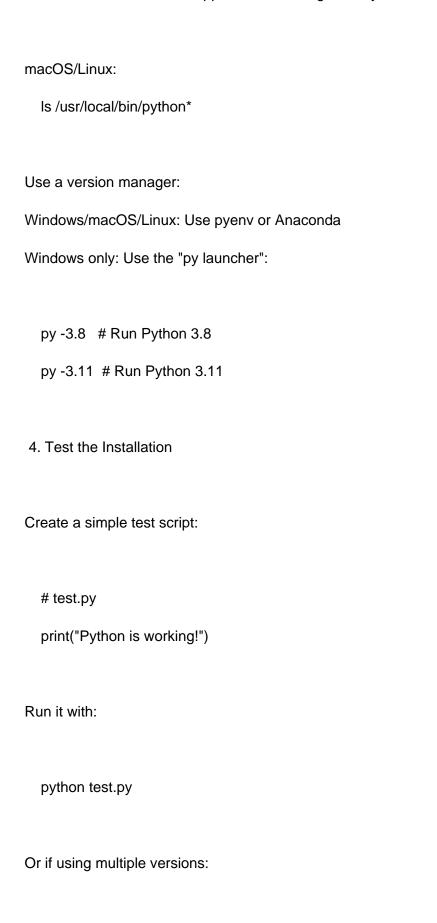Python Installation Troubleshooting Guide

1. Check if Python is Installed

Open a terminal or command prompt and type:

    python --version

or

    python3 --version

If you see an error like:

    'python' is not recognized as an internal or external command...

It likely means Python is not added to your systems PATH environment variable.

2. Fix "Python Not in PATH"

Windows:

1. Open C:\Users\<YourName>\AppData\Local\Programs\Python\PythonXX

2. Copy the full path, e.g.:

   C:\Users\Jason\AppData\Local\Programs\Python\Python311\

3. Press Win + S search for "Environment Variables"

4. Click Edit the system environment variables

5. In the System Properties window click Environment Variables

6. Under "System Variables", find and select Path click Edit

7. Add:

   C:\Users\<YourName>\AppData\Local\Programs\Python\Python311\

   C:\Users\<YourName>\AppData\Local\Programs\Python\Python311\Scripts\

8. Click OK, then restart your terminal.

 macOS/Linux:

Add the following to your ~/.bashrc, ~/.zshrc, or ~/.profile file:


```
export PATH="/usr/local/bin/python3:$PATH"
```


Then run:


```
source ~/.zshrc  # or the appropriate file for your shell
```


 3. Dealing with Multiple Versions of Python

Check which version runs by default:


```
which python
which python3
```


List all installed versions:

Windows:

Check in:

```
C:\Users\<YourName>\AppData\Local\Programs\Python\
```

macOS/Linux:

```
ls /usr/local/bin/python*
```

Use a version manager:

Windows/macOS/Linux: Use pyenv or Anaconda

Windows only: Use the "py launcher":

```
py -3.8   # Run Python 3.8
py -3.11  # Run Python 3.11
```

 4. Test the Installation

Create a simple test script:

```
# test.py
print("Python is working!")
```

Run it with:

```
python test.py
```

Or if using multiple versions:

```
python3.11 test.py
```

5. Check pip is Working

```
pip --version
```

If it fails, try:

```
python -m ensurepip --upgrade
python -m pip install --upgrade pip
```

Bonus: Set Default Python Version (Unix/macOS)

Use alias:

```
alias python=python3.11
```

Add that line to ~/.zshrc or ~/.bashrc to make it permanent.