🚀 Python Project Quick-Start

From install to running code in minutes

Why This Guide?

- Get a new Python project working **fast**

- Same steps for **Windows / macOS / Linux**

- Slides structured so you can present or follow along

1️⃣ Check Python

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

- ✅ **Output appears:** jump ahead
- ❌ **"command not found":** install Python next

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2 **Install / Re-install Python**

1. Download from **python.org/downloads** (3.x 64-bit).

2. **Windows**: tick "Add Python to PATH".

3. **macOS**: use the official pkg or **brew install python**.

4. **Linux**: `sudo apt install python3 python3-pip`.

> Re-open terminal to reload PATH.

3 **Add Python to PATH (Windows)**

1. Search **"Environment Variables"** → *Edit the system...*

2. System Variables → **Path** → *Edit*

3. *New* → paste install folder, e.g.
   ```
   C:\Users\<YOU>\AppData\Local\Programs\Python\Python312\
   ```

4. *OK × 3* → reopen PowerShell

5. Verify: ```python --version```

4️⃣ Open a Terminal

Editor	Shortcut
VS Code	**Ctrl/⌘ + `**
PyCharm	**Alt + F12**

Or launch **PowerShell / cmd / Terminal.app** directly.

5 Navigate the Filesystem

```
cd project_folder      # go in
cd ..                  # up one
dir          # Windows list
ls -la       # macOS/Linux list
```

Tip: Drag-drop a folder into terminal to auto-paste its path.

6 `pip` Essentials

Task	Command
Install a library	`pip install numpy`
Upgrade a library	`pip install -U numpy`
Show installed pkgs	`pip list`
Upgrade pip itself	`python -m pip install -U pip`

7️⃣ (Recommended) Virtual Environment

```
python -m venv .venv
# Windows
.venv\Scripts\activate
# macOS/Linux
source .venv/bin/activate
```

The prompt shows **(.venv)**.

Install packages **inside** the env for project isolation.

8 Get the Code

```
# GitHub — preferred
git clone https://github.com/user/repo.git
# or download ZIP & extract
```

Move into the folder:

```
cd repo
```

9 Install Requirements

```
pip install -r requirements.txt
```

If you see *ERROR: wheel not found,* first run

```
python -m pip install -U pip setuptools wheel
```

🔟 Run the Program

Common entry points:

```
python main.py
python -m package_name
streamlit run app.py
```

Read **README.md** for project-specific commands or env vars (e.g. `FLASK_APP=app.py`).

1️⃣1️⃣ Common Errors & Fixes

Error	Likely Cause	Quick Fix
`ModuleNotFoundError`	package not installed / wrong env	Activate venv & `pip install`
`PermissionError`	file in use / admin rights	Close app or run as admin
`SyntaxError: invalid syntax`	using Python 2 vs 3	Run with `python3`

1️⃣2️⃣ Next Steps & Resources

- **Python Docs:** docs.python.org

- **pip User Guide:** pip.pypa.io

- **VS Code Python Ext.:** aka.ms/python-vscode

- **More CLI Help:** `python -h`, `pip -h`, `git help`

🎉 You're Ready!

Run code, experiment, break things & fix them.

Happy Pythoning!