

Python Installation and Setup Guide on Windows

Reference Links

- **GitHub Learning Repository** (Optional):
https://github.com/karthickag04/learn_python
 - **Official Python Website**:
<https://www.python.org/>
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Step 1: Download Python

1. Open your browser and search for:
`python`
 2. Click the official Python website link:
<https://www.python.org/>
 3. Navigate to the **Downloads** section and download the **latest Python version for Windows**
(e.g., Python 3.13.3)
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☐ Step 2: Install Python

1. Go to your **Downloads** folder.
 2. Find the downloaded file (e.g., `python-3.13.3.exe`) and **double-click** it or **Right-click → Run as administrator**.
 3. In the installer:
 - ✓ Click on "**Customize installation**"
 - ✓ Select **all checkboxes**
 - ✓ Ensure "**Add Python to environment variables**" is checked
 - ✓ Check "**Install Python for all users**"
 4. Click **Next** and then click **Install** to complete the setup.
-

☐ Step 3: Verify Installation

1. Open Command Prompt

- Press `Windows Key`, search for **cmd**, and open **Command Prompt**

2. Run Python

Type the following and press Enter:

```
python
```

Expected output:

```
C:\Users\DELL>python
Python 3.13.3 (tags/v3.13.3:6280bb5, Apr  8 2025, 14:47:33) [MSC v.1943 64
bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

3. Try a Simple Python Command

Type:

```
>>> 1 + 2
```

Expected result:

```
3
```

4. Exit Python Shell

Type:

```
>>> exit()
```

This will return you to the normal command prompt:

```
C:\Users\DELL>
```

You can always re-enter the Python shell by typing `python` again.

✗ If Python Is Not Recognized in CMD

You may see:

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

✔ Step 1: Locate Python Installation

Check for Python installation in any of these paths:

- C:\Program Files\Python3x
- C:\Users\<YourUsername>\AppData\Local\Programs\Python\Python3x
- C:\Users\<YourUsername>\AppData\Roaming\Python\Python3x

Note down:

- **Python executable path** (e.g.,
C:\Users\DELL\AppData\Local\Programs\Python\Python3x)
 - **Scripts path** (e.g.,
C:\Users\DELL\AppData\Local\Programs\Python\Python3x\Scripts)
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✓ Step 2: Add Paths to Environment Variables

1. Press Windows Key → search **Environment Variables**
 2. Click "**Edit the system environment variables**"
 3. In the System Properties window, click "**Environment Variables**"
 4. Under **System variables**, select Path → click **Edit**
 5. Click **New** and paste:
 - Python path
C:\Users\DELL\AppData\Local\Programs\Python\Python3x
 - Scripts path
C:\Users\DELL\AppData\Local\Programs\Python\Python3x\Scripts
 6. Click **OK** to close all windows
-

🔄 Step 3: Reopen CMD and Test Again

- Close the existing Command Prompt and open a **new one**
- Type:

```
python
```

Then test again with:

```
>>> 5 * 10  
50
```

If you see results, Python is now installed and recognized system-wide.

✓ Summary

- Download from: <https://www.python.org/>
- Use **Custom Installation** with all options enabled
- Ensure **Environment Variables** are set
- Use CMD to verify Python with basic math
- Troubleshoot with environment path if Python is not recognized

✂ PyCharm & Visual Studio Code Installation Guide (Windows)

🚀 Part 1: Install PyCharm Community Edition

🔗 Download Link

👉 <https://www.jetbrains.com/pycharm/download/>

☐ Installation Steps

1. Visit the above link and click on the “**Download**” button under **Community Edition** (Free and open-source).
2. Once the .exe file is downloaded (e.g., `pycharm-community-2024.1.exe`), go to your **Downloads** folder and double-click the installer.
3. In the setup wizard:
 - Click **Next**
 - Choose installation path (default is fine)
 - Click **Next**
4. In the next screen:
 - ✓ Check “**Add Launchers dir to the PATH**”
 - ✓ Check “**Add ‘Open Folder as Project’**” (optional)
 - ✓ Check **Create Desktop Shortcut**
5. Click **Next** and then **Install**
6. After installation, click **Finish** (you may also check “**Run PyCharm Community Edition**”).

☐ First Launch

1. On first launch, choose “**Do not import settings**”
 2. Wait for PyCharm to initialize
 3. You’re now ready to create a new Python project or open an existing one.
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Part 2: Install Visual Studio Code (VS Code)

Download Link

 <https://code.visualstudio.com/>

Installation Steps

1. Visit the above link and click “**Download for Windows**”
 2. Open the downloaded installer (e.g., VSCodeUserSetup-x64-1.89.0.exe)
 3. Go through the setup wizard:
 - Click **Next**
 - Accept the agreement and click **Next**
 - Choose installation location (default is fine), then click **Next**
 4. **IMPORTANT:** On the “Select Additional Tasks” screen:
 - ☒ Check “**Add to PATH**”
 - ☒ Check “**Add ‘Open with Code’ action to Windows Explorer file context menu**”
 - ☒ Check “**Register Code as an editor for supported file types**”
 5. Click **Next**, then **Install**
 6. Once installation is done, click **Finish** and launch VS Code
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First Launch – Install Python Extension for VSCODE

1. Open **VS Code**
2. Click the **Extensions icon** (square icon on left bar)
3. Search for “**Python**” by Microsoft
4. Click **Install**

VS Code is now ready for Python development.

🐍 Getting Started with Python in Visual Studio Code (VS Code)

✓ Step 1: Open VS Code

Launch **Visual Studio Code** from your system.

📁 Step 2: Open a Folder

You can open a folder in **any one** of the following ways:

- From the **Welcome Page**, click on "**Open Folder...**"
- From the **Explorer icon** 📁 on the **left sidebar**, click "**Open Folder**"
- From the **menu bar**, click **File** → **Open Folder...**

📁 Step 3: Create and Select a New Folder

1. In the **Open Folder dialog box**, navigate to any of the following locations:
 - **Desktop**
 - **Documents**
 - **Local Disks D:, E:, or F:**
✗ *Do NOT choose Local Disk C:*
 2. Click "**New Folder**" 📁, and name it something meaningful like:
 - PythonPrograms
 3. To rename: Right-click on the folder → **Rename** → type the new name → hit **Enter**.
 4. After naming, **select the folder** and click "**OK**".
-

📄 Step 4: Create a New Python File

1. In the **Explorer** 📁 (left sidebar), **expand your folder**.
 2. Right-click inside the folder → **New File** 📄.
 3. Name your file with a `.py` extension, for example:
 - `py_program_01.py`
 4. You can:
 - **Rename** the file: Right-click → **Rename**
 - **Delete** the file: Right-click → **Delete**
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📄 Step 5: Write and Save Python Code

1. Double-click the file `py_program_01.py` to open it.
2. Type the following Python code:

```
print("Welcome to Python")
print(2 + 2)
```

3. To **save** the file:

- Press **Ctrl + S**
 - or
 - Click **File → Save**
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Step 6: Run the Program from Terminal

1. Open terminal using any of these options:
 - **Menu:** Terminal → **New Terminal**
 - **Shortcut:** Ctrl + J or Ctrl + ~ (tilde)
2. Make sure the **terminal path** is set to your folder, e.g.:

```
C:\Users\YourName\Desktop\PythonPrograms>
D:\PythonPrograms>
```

3. Run your program using:

```
python py_program_01.py
```


or

```
py py_program_01.py
```

✓ You should see output like:

```
Welcome to Python
4
```

Step 7: Optional - Install Python Extension for Easier Execution

1. Click the **Extensions icon**  from the **left sidebar**.
2. Search for **Python** (by Microsoft) and click **Install**.
3. Once installed:
 - Right-click your Python file
 - Click "**Run Python File in Terminal**"

You will see the output in the terminal just like before.

Repeat

You can repeat these steps for different Python programs by creating new `.py` files in the same folder or a new folder.