🐍💻 Bits & Bytes @ Bishop's 💻🐍

✨🎉 Welcome to coding camp 🎉✨
with Ms Trepte!

👋 Welcome!

- 🎉 Welcome to Bits & Bytes @ Bishop's!
- 💻 Summer Python Camp
- 🙋 Meet your instructor
- 👥 Meet each other
- 🚀 Explore what we'll build together!

🙋 Meet Your Instructor

- 👩‍🏫 Who I am
- ❤️ Why I love coding
- ✨ Fun fact about me

Join Slide Deck

👥 Meet Each Other

- 👋 Student intros: name, favorite game or hobby….

👥 Meet Each Other

- 🖥️Have you coded before?

👥 Meet Each Other

Why Did You Join Bits & Bytes @Bishops? What do you want to learn or accomplish here?

🎯 What We Will Accomplish

- 🐍 Learn Python (a powerful, beginner-friendly language)
- 🛠️ Learn/Work inside VS Code (our code editor)
- 🎮 Build small projects and a final game
- 🤩 Have fun exploring and solving problems!

⚙️ Setting Up

- ✅ Check that VS Code is installed
- 🐍 Install Python + Python extension
- 📁 Open a folder or create a new file
- 💬 Run a simple program: print("Hello, Bishop's!")

💡 What Is VS Code?

- ✅ Check that VS Code is installed
- 🖥️ Visual Studio Code = a code editor for writing, organizing, and testing code
- 🌍 Works with many languages (we'll focus on Python)

🤖 About Copilot and AI Helpers

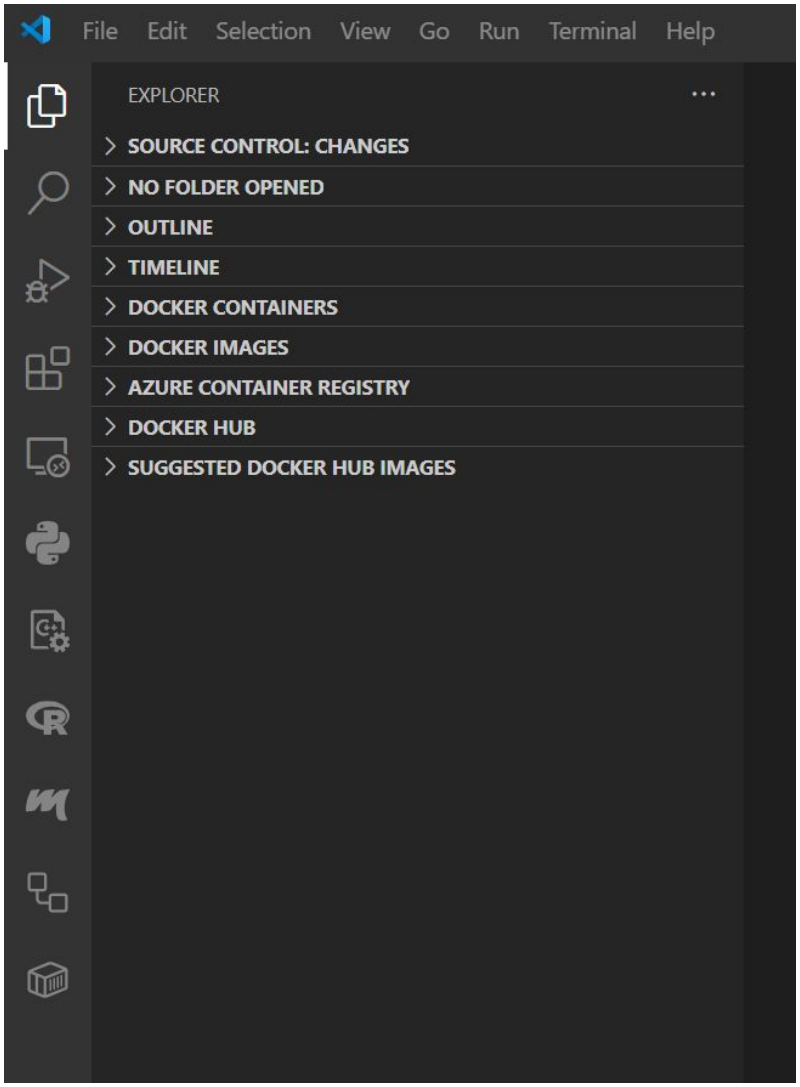
We know some of you might have access to AI assistance, **GitHub Copilot** or other AI tools inside VS Code.
That's awesome — AI can be a helpful assistant for coding!

✨ **Later this week in camp, we'll explore how to use these tools effectively and responsibly.**
We'll talk about:

- When to let AI help
- When it's better to think through the code yourself
- How to check and improve AI-generated suggestions

🚦 For Now: Code It On Your Own!

What Is VS Code?



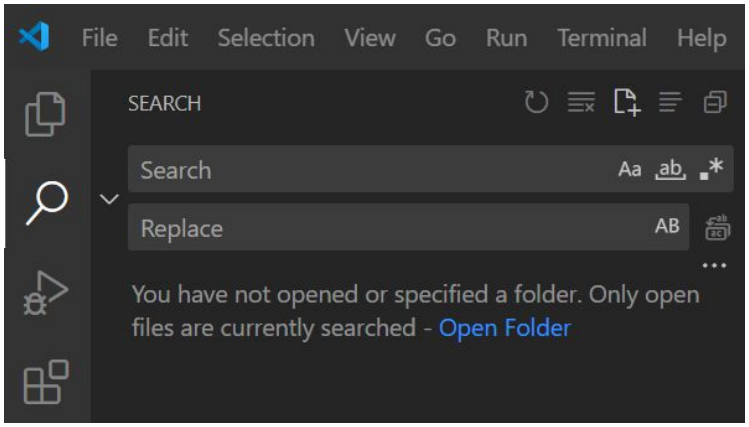
📂 Explorer Tab (Files Panel)

This is where we'll see all our project files and folders once we load them in.

✅ Right now it's mostly empty — but once we open or create files, they'll show up here!
✅ Later, we'll also touch on Git (source control) inside this tab, but that's for a future lesson.

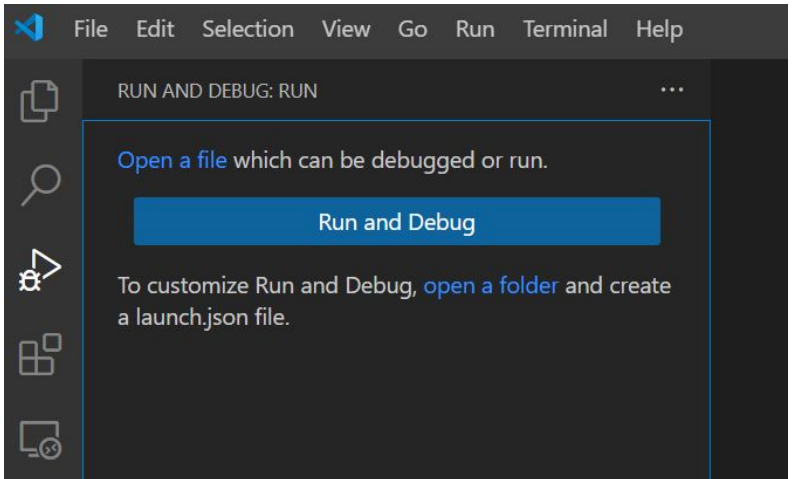
We'll come back to explore this more once we set up our project!

What Is VS Code?



🔍 Search Tab in VS Code

✅ **Search:** Type a keyword, and it will show all the files where that word appears.
✅ **Replace:** (optional) Automatically replace one word or phrase with another across multiple files.
✅ **Why it's useful:** Imagine you want to change the name of a variable or find where you used a function — this tool saves you time!



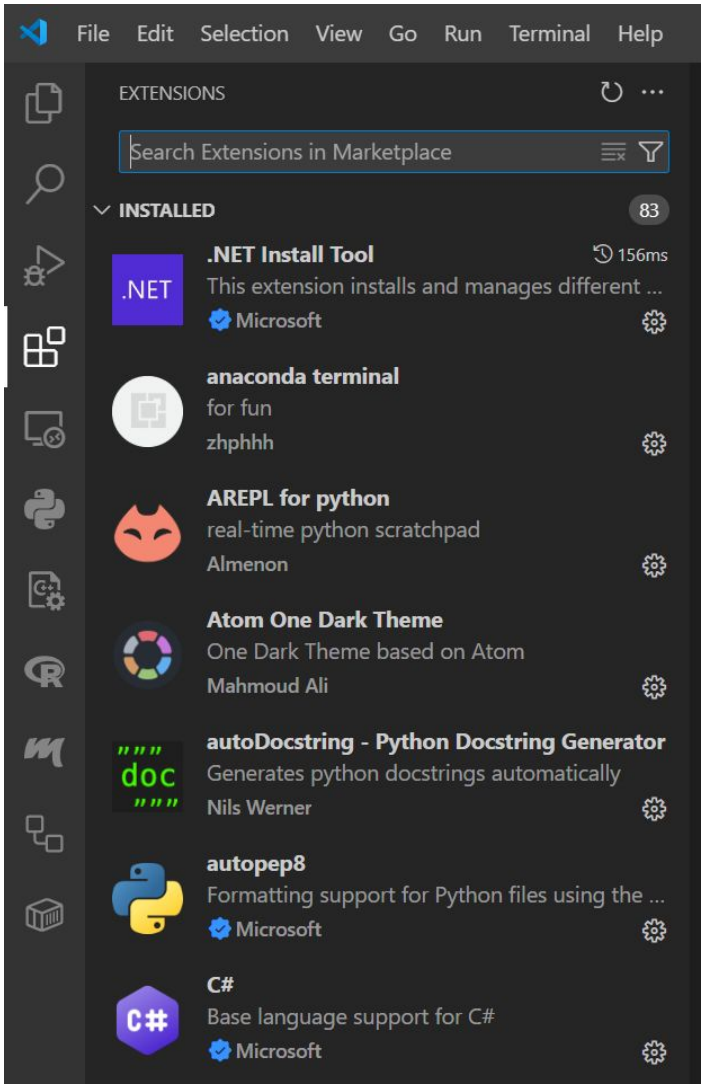
▶️ Run and Debug Tab

This is where you can run your code and (later) debug it if something goes wrong.

✅ For now, we'll mostly use the **Run** button to test our Python programs.
✅ We won't dive deep into debugging yet — but later, when we work on bigger projects, I'll show you how to use breakpoints and the debug tools.

For our camp, we won't use these much at first, but it's good to know it's there when your projects grow bigger.

What Is VS Code?



🧩 Extensions Tab

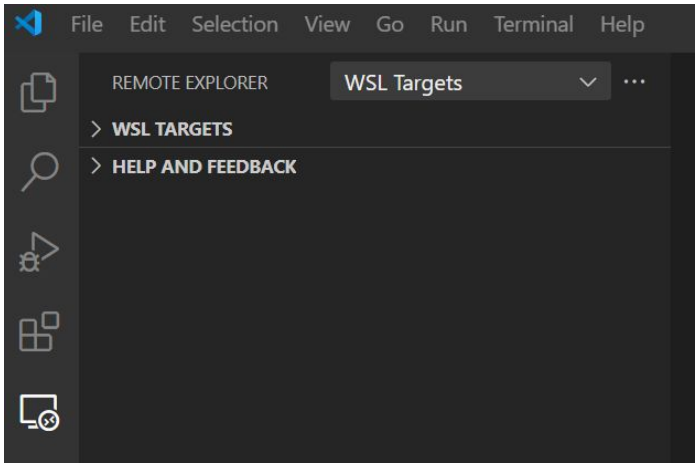
This is where we can **add extra tools** to VS Code to help with coding — like language support, linters, or themes.

✅ For our Python camp, we'll keep it minimal and only install the essentials:

- **Python Extension (by Microsoft)** → lets us run and debug Python code inside VS Code
- *(Optional but helpful)* **Pylint** or **autopep8** → helps check and format your Python code

We don't need to load too many — just the basics to get us writing and running Python smoothly!

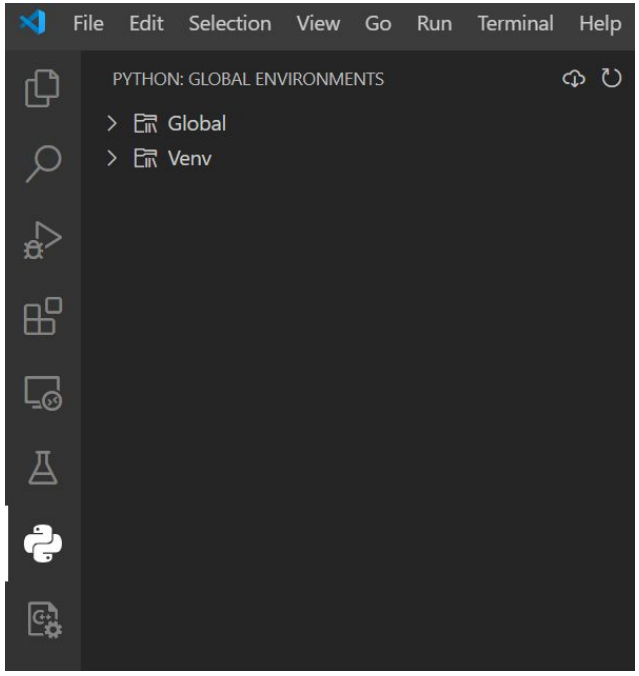
What Is VS Code?



🌐 Remote Explorer Tab

This tab is for working with **remote systems** — like running code inside WSL (Windows Subsystem for Linux), Docker containers, or even remote servers.

✅ For our camp, we won't need this right now.
✅ Later, if you explore advanced setups or cloud coding, this is where you'd connect!



🐍 Python Environments Tab

This tab shows your **Python environments** — like the global Python installed on your computer or virtual environments (`venv`) you create for specific projects.

✅ For camp, we'll mostly use the **global environment** (the main Python install).
✅ Later, when you build bigger projects, you might use virtual environments to manage project-specific libraries.

The rest of the tabs are specific extensions, and for this camp, we will not need them.

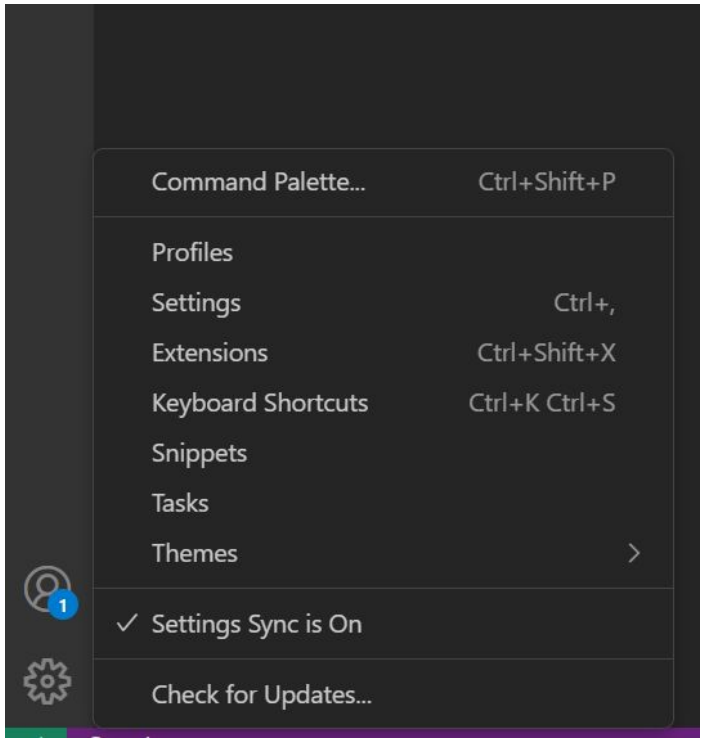
📋 VS Code Cheat Sheet (Tabs)

- 📂 Explorer (Files) ✔
- 🔍 Search ✖
- 🌿 Source Control (Git) ✖ (later!)
- 🐞 Run & Debug ✔ (basic)
- 🧩 Extensions ✔ (Python extension)
- ⚙️ Settings ✔ (themes, fonts)

🎨 Change Your VS Code Theme!

1️⃣ **Click the gear icon** (⚙️) in the bottom left corner of VS Code.
2️⃣ In the menu, click **“Themes”** → **“Color Theme”**.
3️⃣ A list of themes will pop up — use the **arrow keys** to scroll and preview live.
4️⃣ **Press Enter** when you find one you like!

✅ You can also install **more themes** from the Extensions tab if you want extra styles later.



⚙️ Setting Up

- 🐍 Install Python + Python extension
- 📁Make a Folders: Add Folder to Workspace
  - bits_bytes_camp
    - week_1
- 📁 Open a folder or create a new file
  - Go To: https://github.com/parcheesime/bits_bytes
  - download day1_student
  - Open in VS Code

- ✏️1️⃣**follow_along.py**
- ▶️ Run from terminal or VS Code play button

🖥️ How to Run Your Python File from the Terminal

1️⃣ **Open the Terminal**
In VS Code, click the top menu → **Terminal** → **New Terminal** (or use the shortcut: <kbd>Ctrl + `</kbd>).

2️⃣ **Move into your folder**
If your files are inside a folder (for example, `day1`), type:

bash
CopyEdit
```
cd day1
```

3️⃣ **List the files (optional)**
To see what's inside, type:

bash
CopyEdit
```
ls
```

4️⃣ **Run the Python file**
Type this command (replace with your filename):

nginx
CopyEdit
```
python filename.py
```

⚙️ Setting Up

- 🧩2️⃣ **puzzle.py**
- 🚀3️⃣ **mini_project.py**
- 🌟4️⃣ **challenge_project.py**

🚀 Mini Project

Hi! My name is Albert.

I am 146 years old.

My favorite hobby is playing the violin.

I'm excited to learn Python at Bits & Bytes @Bishop's!

🌟 Challenge: Hello Script

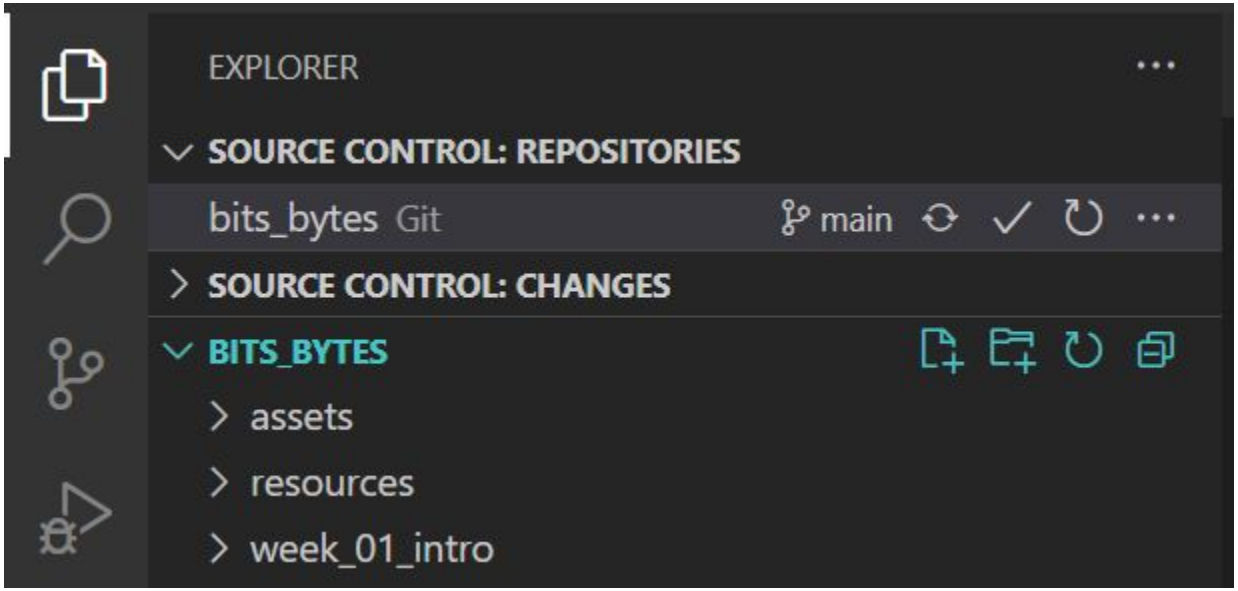
- 📝 Write your first Python program
- 🎨 Personalize the message (add your name, favorite word, or fun ASCII art)

```
# Challenge Project: ASCII Art or Creative Print

print("   *   ")
print("  ***  ")
print(" ***** ")
print("*******")
print("  |||  ")
print("  |||  ")

print("The best way to learn Python is to PLAY with it!")
```

How to start your Own File



🔮 Tomorrow's Teaser

- 📦 Learn about variables and data types
- 🎛️ Make interactive programs (user input)
- 🎲 Start planning simple games!

❓ Questions + Wrap-Up

- 💭 What was something cool you learned today?
- 🤔 Anything you're curious or excited about for tomorrow?

Last thoughts

💾 Reminder: Save your files, bring questions, and come ready to explore!