What you will learn from the sessions:

Python programs are often limited to the machine they run on, which restricts their overall utility. To make them more versatile and useful across different platforms or applications, it's important to expose them as services. This allows other systems to interact with them, regardless of where they are hosted. By deploying Python programs as REST APIs, we can separate core business logic from the user interface—making the solution more scalable and maintainable.

The pre-read link offers an overview of this approach - Basecamp 3 - Pre read

Across both sessions, we will:

- Explore the core concepts of REST APIs
- Learn how to build user interfaces using Streamlit

By the end of these sessions, you'll be able to implement a Python program as a service and consume it from a user interface built using Streamlit.

2 Day Agenda: Basecamp 2

Session 1	• Writing REST API using FastAPI framework:
	  ○ Develop a basic Calculator Application
	  ○ Implement a REST API to power the Calculator service
	  ○ Understand and apply core REST API methods

Session 2	• Building Applications with Streamlit

	○ Introduction to Streamlit and its capabilities ○ Create a basic user interface (UI) ○ Integrate and call REST APIs from the UI ○ Deploy the Streamlit application

Pre-requisite:

The prerequisites for Basecamp 2 are largely the same as Basecamp 1, except for an addition in the 4th item.

If you haven't completed these yet, please ensure they are done before starting Basecamp 2.

1. Python Installation

- Download the installer from: python.org/downloads
- Choose a stable version: **3.12 or 3.13**
- Select the appropriate installer for your system (Windows / macOS)
- Complete the installation
- Verify the installation:
    - In **Command Prompt/Terminal**:
      `python --version` → Confirms the version installed
      `where python` (Windows) / `which python` (macOS) → Shows the installation path

---

2. VSCode Installation

- Download VSCode for your OS from: code.visualstudio.com/download
- Install VSCode and open it
- Press `Ctrl + Shift + P` → Search for `Python: Select Interpreter`
  → Choose the Python version you installed

- Go to the **Extensions** tab and install:
    - `Python`
    - `Python Debugger`
    - `Jupyter`

---

3. Git Installation

- Download Git from: git-scm.com/downloads
- Choose the right installer for your system (Windows / macOS)
- For **Windows** users: Choose the *Standalone version* for a simpler setup
- Once installed, you'll have Git CLI access via your terminal
- (Optional) Git GUIs like *TortoiseGit* can be explored later

---