Understanding Web Servers & Python http.server

# How Web Servers Work (Briefly)

A web server is a program that:  
1. Listens for incoming requests from web browsers or clients.  
2. Processes those requests.  
3. Responds with data — usually an HTML page, image, or JSON.

Here’s the flow:  
1. Client (e.g., browser) requests a page — e.g., http://localhost:8000/index.html.  
2. Web server receives the HTTP request on a specific port (default: 80 for HTTP or 443 for HTTPS).  
3. It finds the requested file (like index.html) or runs a script (like Python, PHP, etc.).  
4. 📤 It sends back a response with a status code (e.g., 200 OK) and the content.  
5. 🌍 The browser renders the response for the user.

Common web servers: Apache, Nginx, and Python’s built-in http.server (for simple local testing).

# using Python's Built-in Web Server

You can start a simple local web server using Python with just one command:  
  
  
python -m http.server 8000  
```  
  
- This starts a server on port 8000 in the current directory.  
- You can then access files via http://localhost:8000  
- This is very useful for testing HTML, CSS, and JavaScript locally.