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aws

Placement Empowerment Program

Cloud Computing and DevOps Centre

Host a Static Website Locally: Set Up a Local Server Apache and Host a Simple HTML page with your name

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Introduction:

In today's digital world, understanding how web servers work is essential for anyone interested in web development or cloud computing. This task focuses on setting up a local server using Apache HTTP Server, one of the most widely used open-source web servers. By doing this, I learned how websites are hosted, how servers process requests, and how to troubleshoot common configuration issues.

Why Is This Task Important?

When developing websites, it's inefficient to deploy changes to a live server every time. A local server allows developers to test and modify their websites before making them publicly available. Apache provides a simple way to set up such a server on a personal computer.

Steps Followed

1. **Downloaded Apache** – Obtained the latest Apache version to set up the server.
2. **Extracted Files** – Placed Apache files in a suitable directory for installation.
3. **Installed Apache** – Used httpd.exe -k install to register Apache as a Windows service.
4. **Configured Apache** – Edited the httpd.conf file to define settings like the document root and server port.
5. **Started the Server** – Ran the command httpd.exe -k start to launch Apache.
6. **Hosted the Page** – Placed the HTML file in the htdocs folder and accessed it via http://localhost:

Where Can This Be Applied?

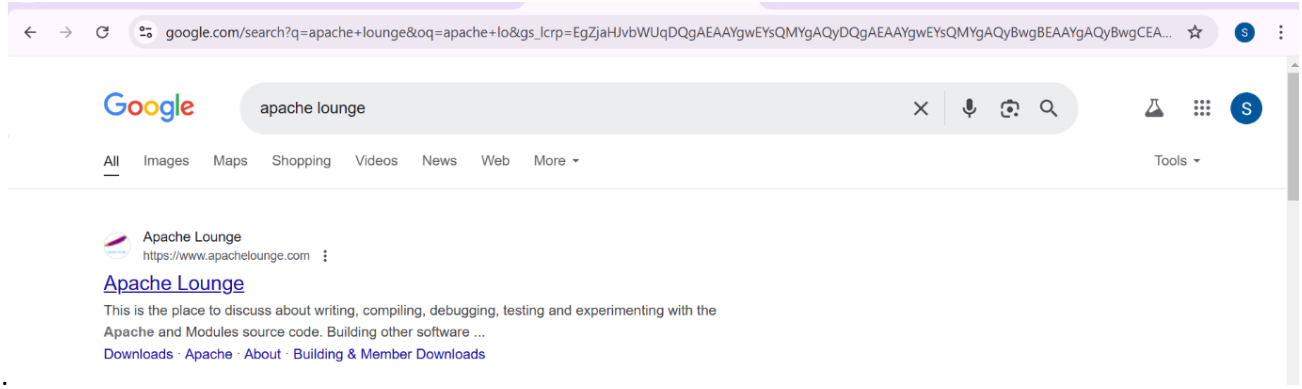
- **Web Development:** Developers use local servers to test their websites before deployment.
- **Cloud Computing & Hosting:** Understanding Apache helps when working with cloud-based servers.
- **Cybersecurity Testing:** Security professionals use local servers to analyze vulnerabilities.
- **Personal Projects & Prototyping:** Great for hosting small projects before making them live.

Step-by-Step Overview

Step1: Browse the Apache Website

✅ Instruction:

- Open your web browser (Chrome, Edge, Firefox).
- Go to the **official Apache website** (https://www.apachelounge.com/download/).

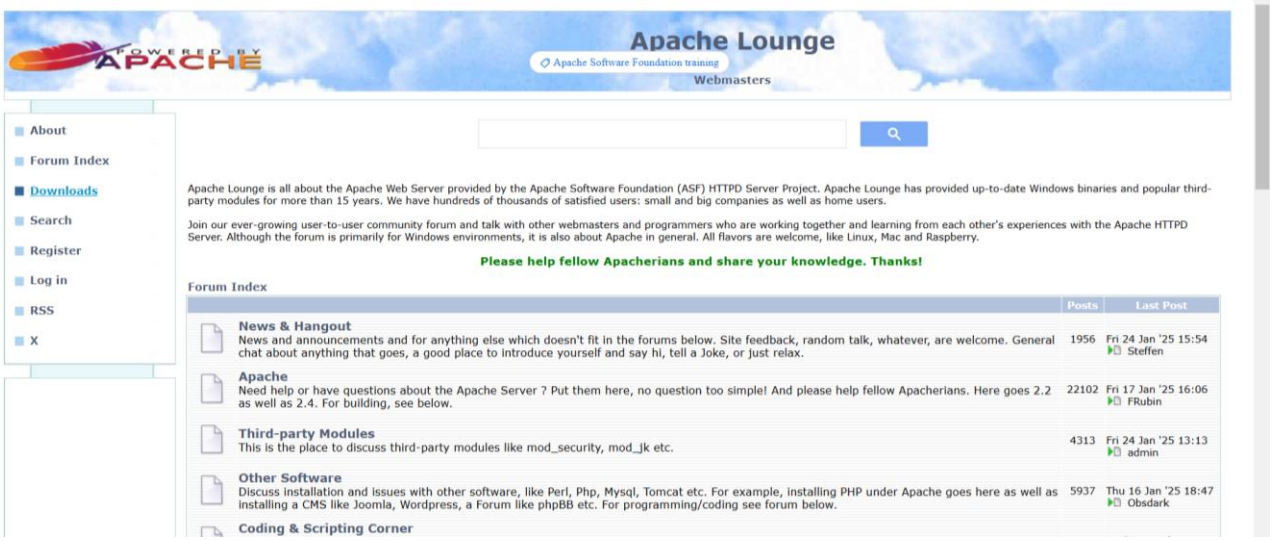


To download the **Apache HTTP Server** needed for hosting websites locally.

Step 2 : Navigate to the Downloads Section

✅ Instruction:

- Scroll down the webpage.
- Find the **Download section** for Apache.

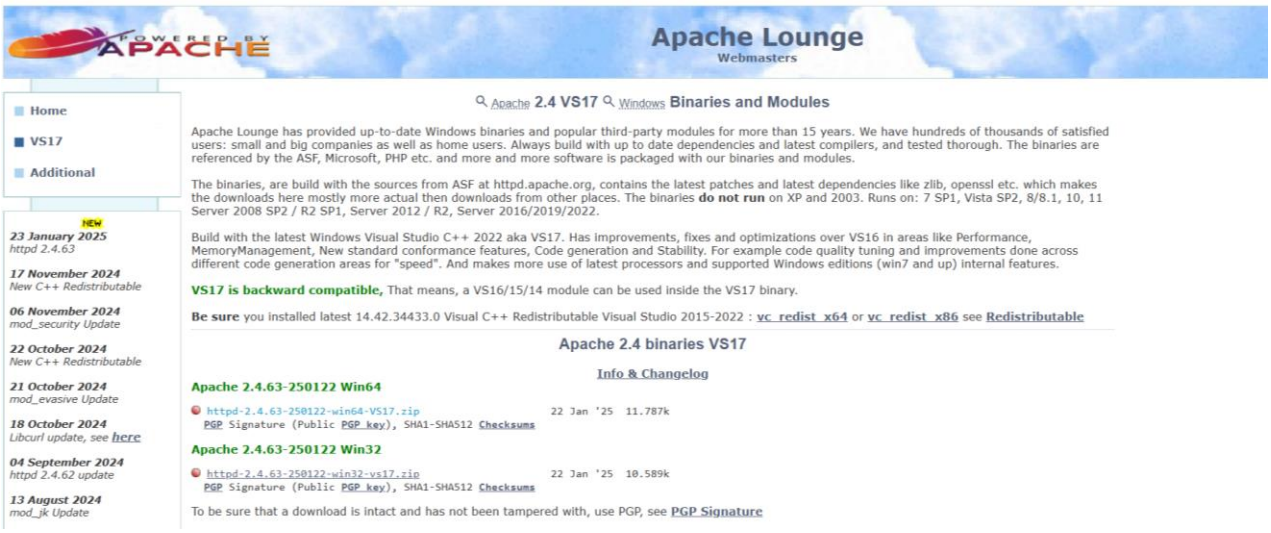


This section contains different versions of Apache for Windows.

Step 3 : Select and Download Apache 64-bit

☑ Instruction:

- Click on the **64-bit Windows version** of Apache.
- Wait for the file to download completely.

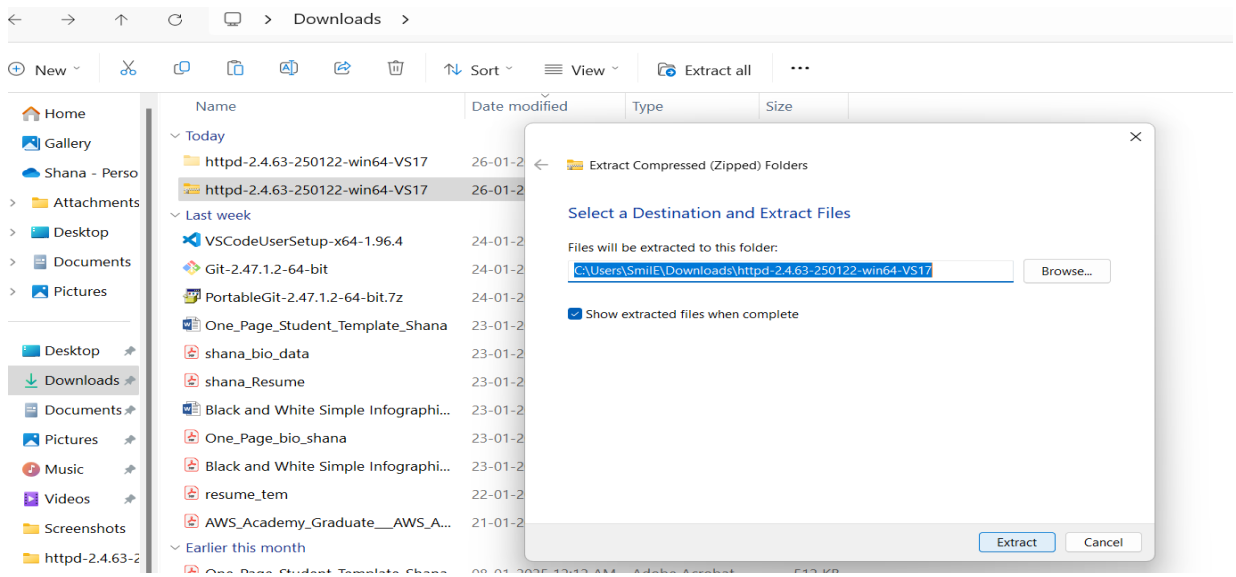


Ensure you download the correct **64-bit version** compatible with your Windows system.

Step 4 : Extract the Apache Files

☑ Instruction:

- Locate the downloaded **ZIP file** in your **Downloads folder**.
- **Right-click** on it and select **Extract All...**
- Extract it to a suitable location, e.g., C:\Apache24.

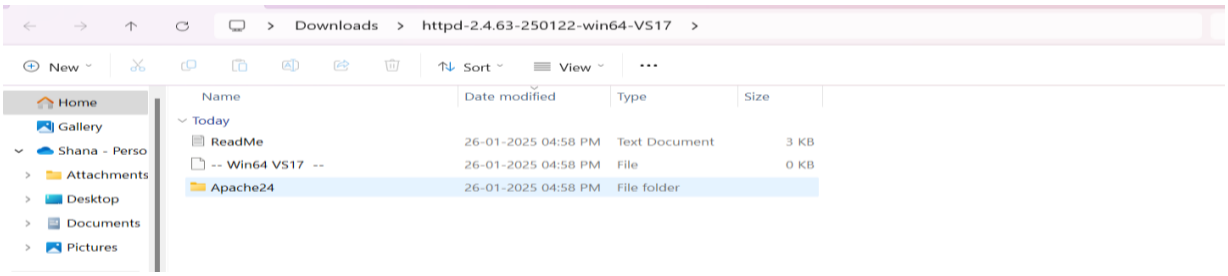


Extracting the files makes them accessible for installation.

Step 5 : Open the Apache Folder

✅ Instruction:

- Go to the location where you extracted the Apache files.
- Open the **Apache24** folder to check its contents.

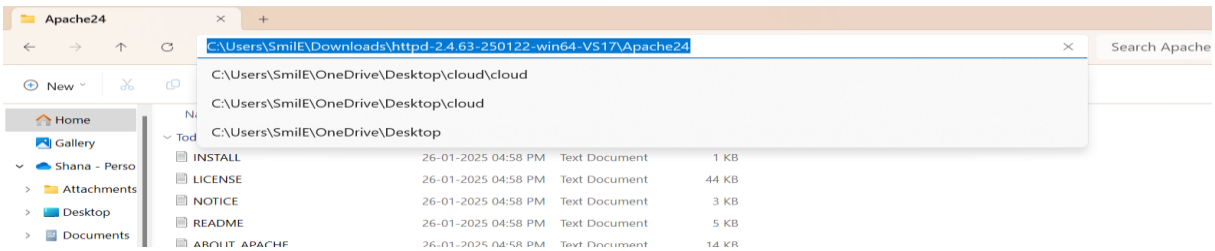


This folder contains all necessary files to run Apache.

Step 6 : Copy the Apache Path

✅ Instruction:

- Click inside the **Apache24** folder.
- Copy the **full path** (e.g., C:\Apache24).



This path is needed to navigate to the Apache directory in the command prompt.

Step 7 : Open Command Prompt and Navigate to Apache bin

✅ Instruction:

- Open **Command Prompt (cmd) as Administrator**.
- Type the following command and press Enter:

```
cd C:\Apache24\bin
```

```
Microsoft Windows [Version 10.0.22621.4317]
(c) Microsoft Corporation. All rights reserved.

C:\Users\SmilE>cd C:\Users\SmilE\Downloads\httpd-2.4.63-250122-win64-VS17\Apache24

C:\Users\SmilE\Downloads\httpd-2.4.63-250122-win64-VS17\Apache24>cd bin
```

Navigating to the bin folder allows you to run Apache commands.

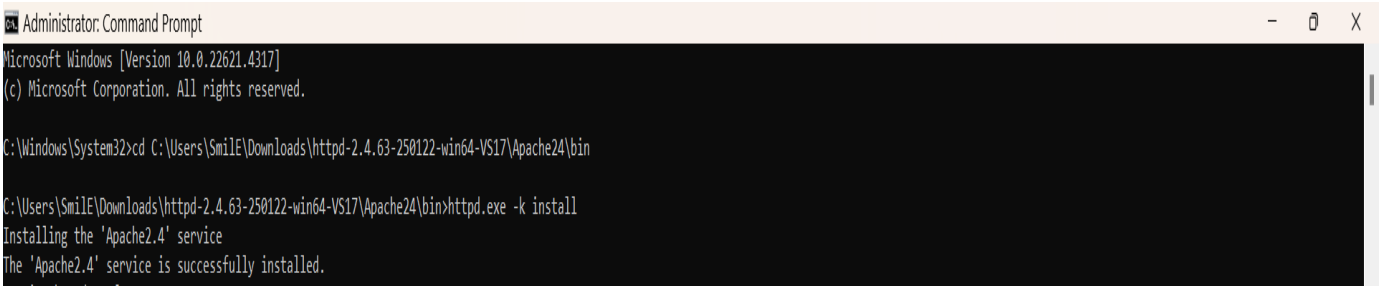
Step 8 : Install Apache as a Service

✅ Instruction:

- Run the command:

  httpd.exe -k install

- If installed successfully, you should see:
  “The 'Apache2.4' service is successfully installed.”

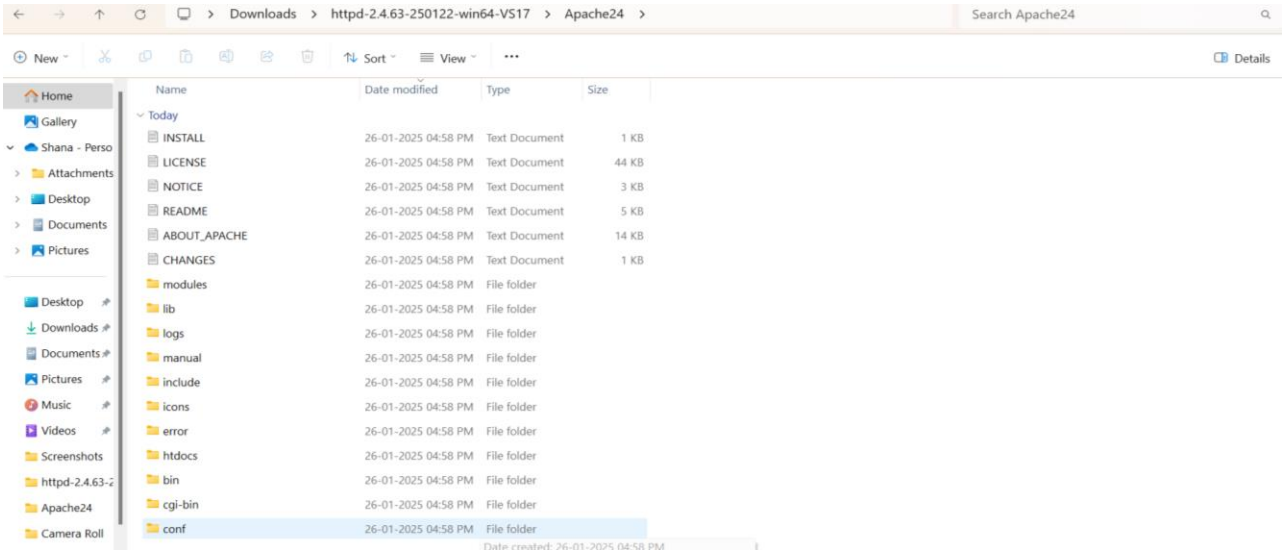


Installing Apache as a service allows it to start automatically.

Step 9 : Open the Apache Configuration Folder

✅ Instruction:

- Go to the **Apache24** folder.
- Open the **conf** folder inside it.



This folder contains the Apache configuration file (httpd.conf).

Step10: Open and Edit httpd.conf File

✅ Instruction:

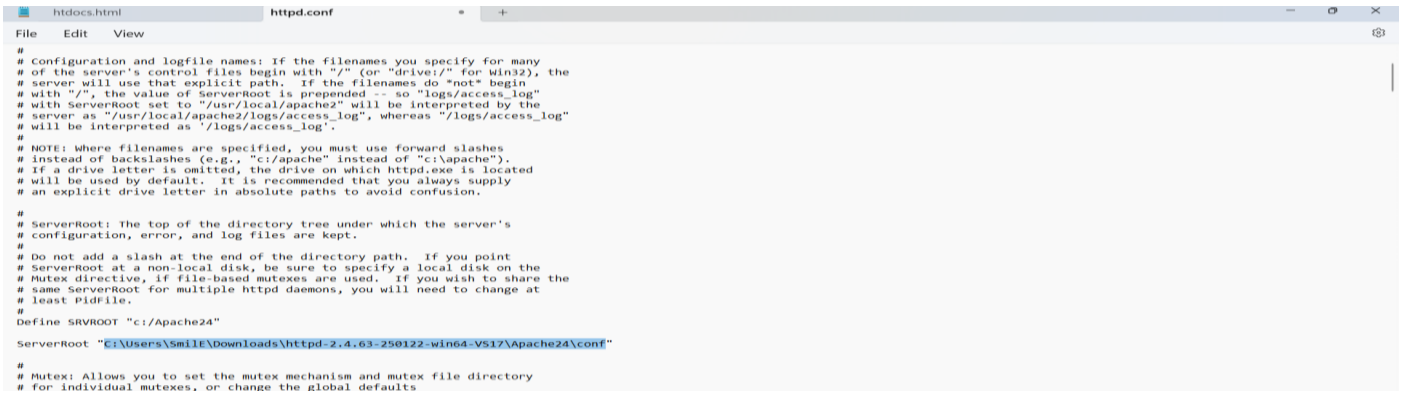
- Locate and open httpd.conf in Notepad or any text editor.
- Find and modify the following lines:

Change ServerRoot:

ServerRoot "C:/Apache24"

Change DocumentRoot:

DocumentRoot "C:/Apache24/htdocs"

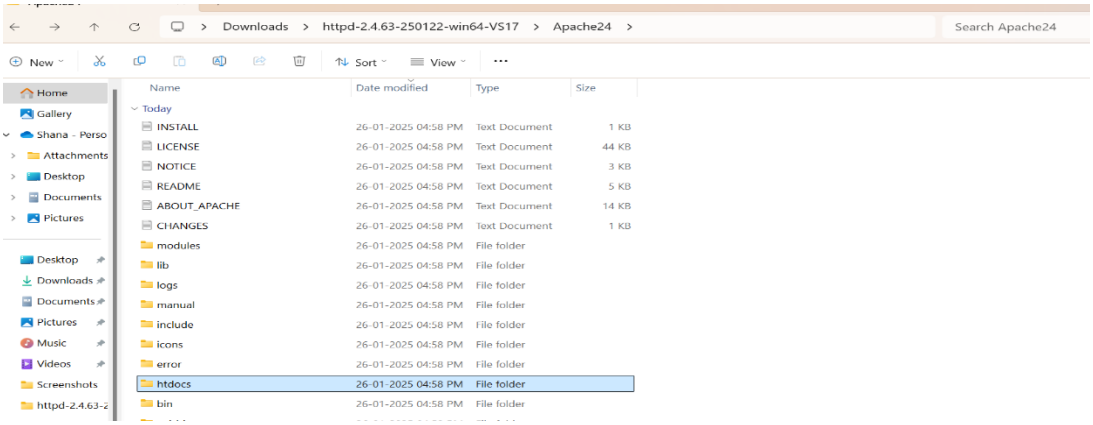


This ensures Apache serves files from the correct location.

Step 11 : Create htdocs Folder (If Not Present)

✅ Instruction:

- Inside C:\Apache24, check if the **htdocs** folder exists.
- If not, **create a new folder** and name it htdocs.



The htdocs folder is where your website files should be stored.

Step 12 : Create an HTML File

✅ Instruction:

- Open **Notepad or VS Code**.
- Copy and paste the following HTML code

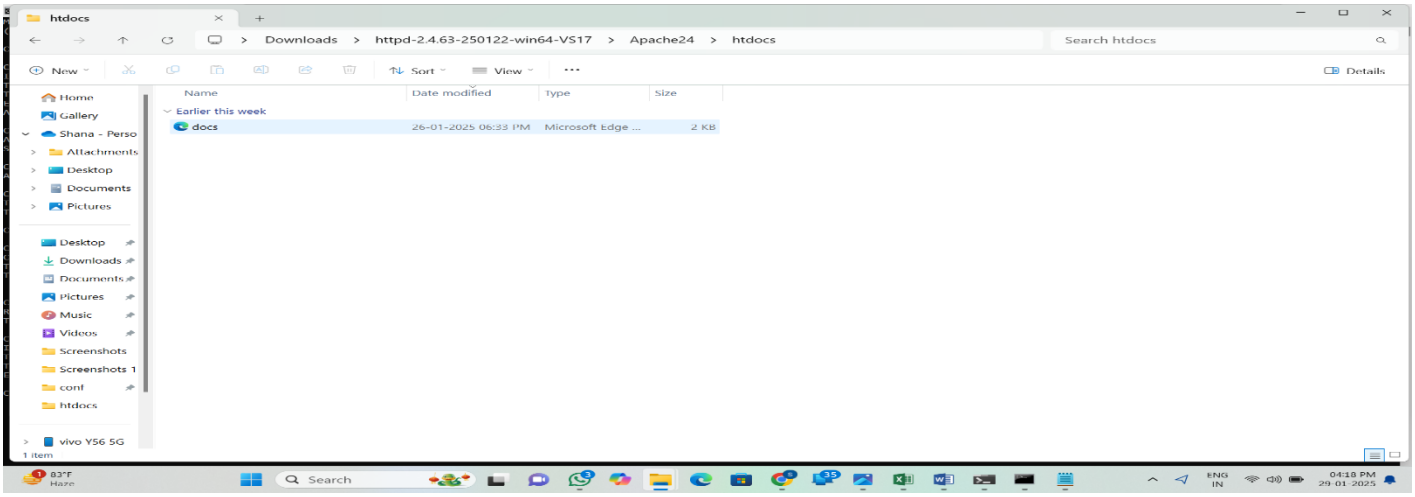
Open **Notepad** **or** **VS** **Code.**

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Shana's Page</title>
    <style>
        body {
            background-color: #f0f4f8; /* Light soft background */
            color: #333; /* Dark text for better readability */
            font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif; /* Clean font */
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
            margin: 0;
        }
        h1 {
            font-size: 48px;
            font-weight: 600;
            color: #6a5acd; /* Soft purple color */
            text-align: center;
            text-shadow: 2px 2px 5px rgba(106, 90, 205, 0.5); /* Subtle shadow for a soft glow */
            padding: 20px;
            background-color: #fff;
            border-radius: 15px;
            box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1); /* Soft shadow around text */
            transition: all 0.3s ease;
        }
        h1:hover {
            color: #fff;
            background-color: #6a5acd; /* Change color on hover */
            transform: scale(1.05); /* Slight grow effect */
        }
    </style>
</head>
<body>
    <h1>Hello, this is Shana's website!</h1>
```

Step 13 : Save the File as index.html

✅ Instruction:

- Open **Notepad or VS Code**.
- Copy and paste the following HTML code
- Click **File → Save As**.
- Select **All Files** instead of .txt.
- Name the file **index.html** and save it inside C:\Apache24\htdocs.



Apache will automatically serve **INDEX.HTML** when accessed.

Step 14: Restart Apache Server

✅ Instruction:

- Open **Command Prompt as Administrator**.
- Navigate to the bin folder:

  cd C:\Apache24\bin

- Restart Apache:

  httpd.exe -k restart
- Open **Google Chrome, Edge, or Firefox**.
- Type the following in the address bar:
  http://localhost

Outcome

By completing this POC, you will:

1. Successfully configure and run an Apache server locally.
2. Host a static HTML website that displays your name.
3. Understand the basics of web server configuration and file hosting.