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

Hosting a static website locally is an essential first step for web development. It allows you to test and view your HTML, CSS,

and JavaScript code on your own machine before deploying it to the web. By setting up a local server with tools like Apache or Nginx, you can simulate how your website would behave in a real-world scenario.

OVERVIEW

To host a static website locally, we follow these main steps:

1. Install a Web Server: A web server (like Apache or Nginx) is software that serves web pages to browsers. It reads and responds to requests for files like index.html, delivering them to users.

    a. Apache: Commonly used and included in software bundles like XAMPP.

    b. Nginx: Lightweight and highly performant, often used for modern web applications.

2. Prepare the HTML Page: Create a simple static web page using HTML. The content can include basic information, such as your name, displayed on the page.

3. Configure the Web Server: Place the HTML file in the server's root directory. The web server will fetch this file when a browser requests it.

4.Access the Website Locally: Once the server is running, the website can be accessed through http://localhost in your web browser.

OBJECTIVE

The goal of this project is to:

1. Set up a local web server using Apache.
2. Configure the server to host static files.
3. Create and host a simple HTML page displaying your name.

IMPORTANCE OF LOCAL HOSTING

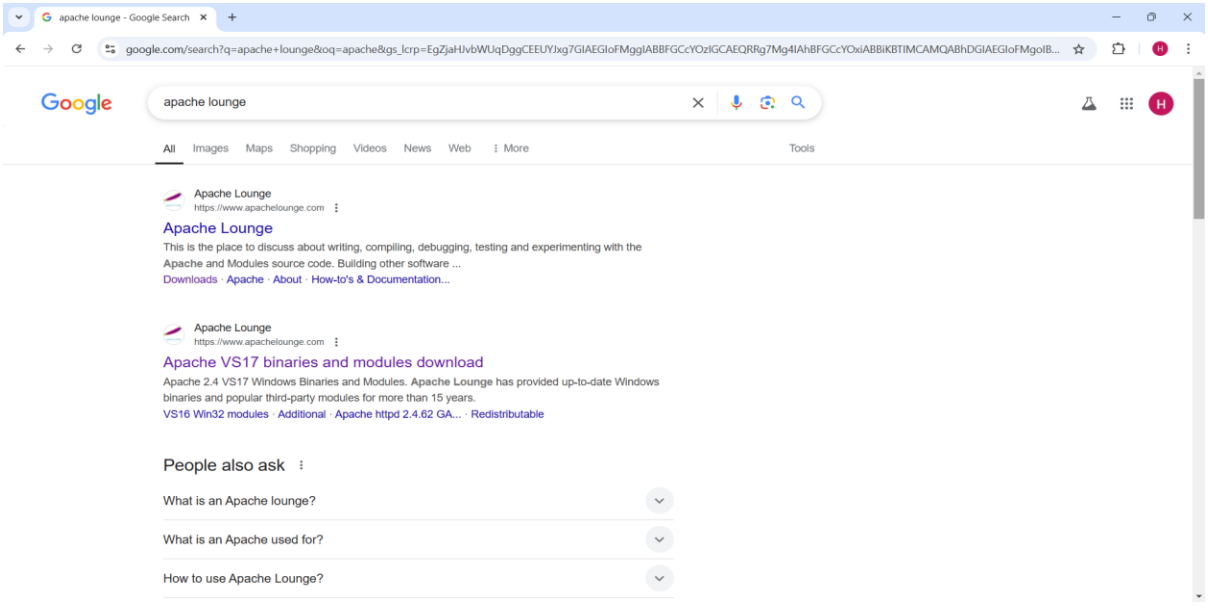
1. Development and Testing
2. No Internet Dependency
3. Cost-Effective Solution
4. Learning and Experimentation
5. Privacy and Security
6. Mirrors Real-World Hosting
7. Collaborative Development

STEP-BY-STEP OVERVIEW

Step1:

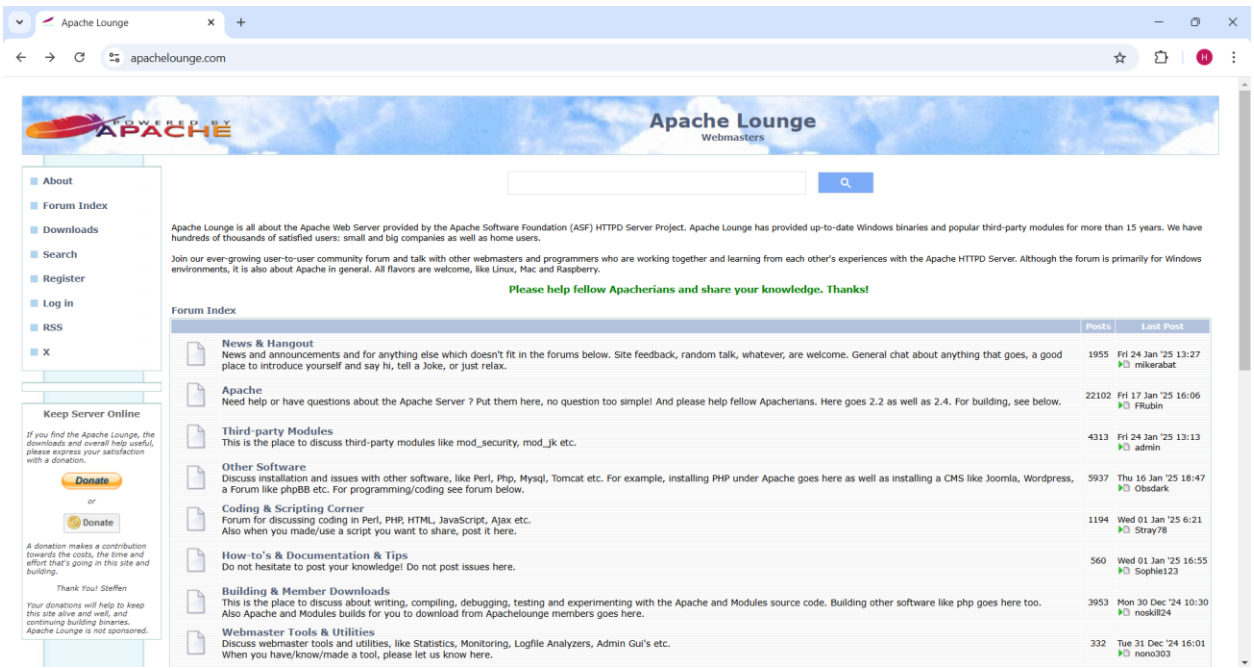
Search for "Apache Lounge" on Google

click the first link to access the official website.



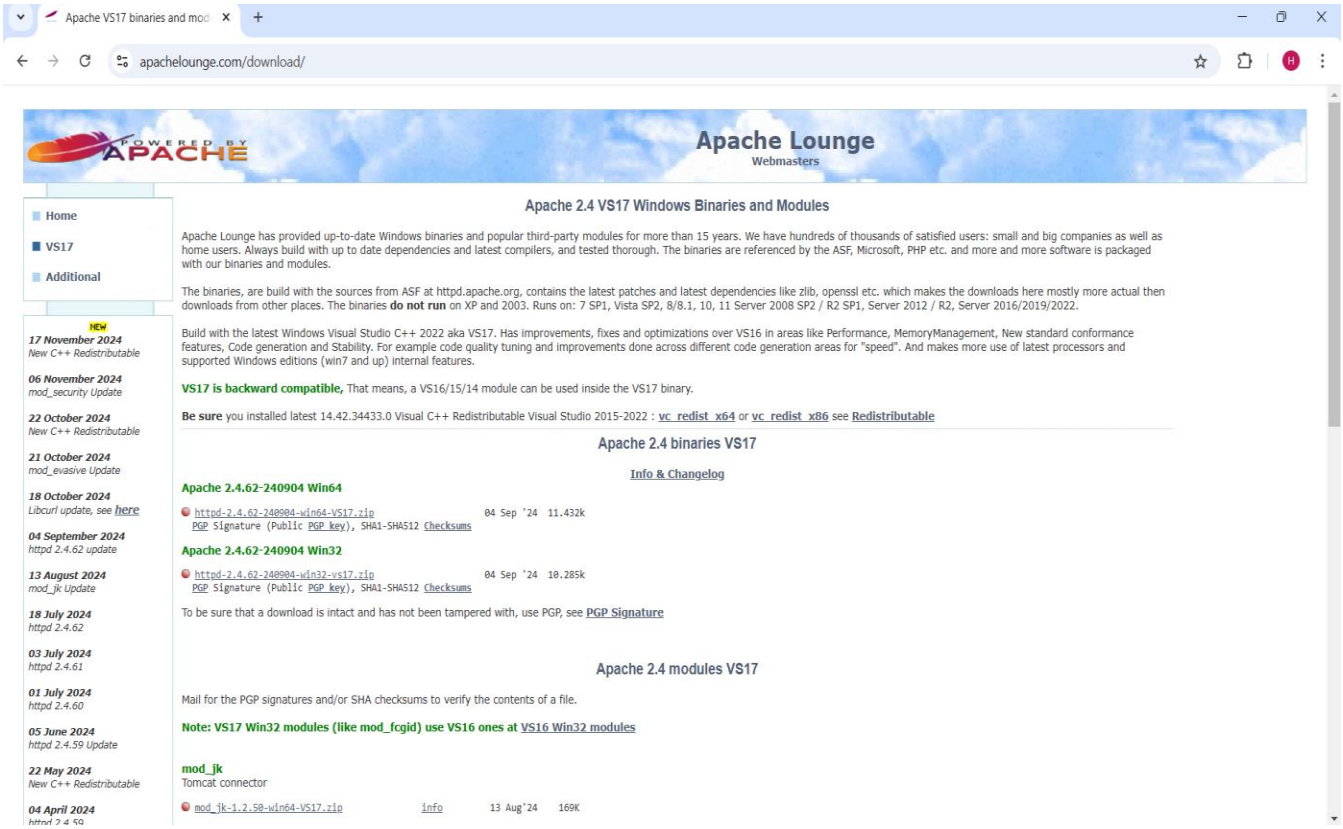
Step 2 :

Click on the "Downloads" option.



Step 3 :

Click on the link **"Apache 2.4.62-240904 Win64"** and download the file.



Step 4 :

Open Command Prompt as Administrator and use the command cd C:\path\to\apache\bin to set the path to the Apache bin folder

```
C:\Users\HP\Downloads\httpd-2.4.62-240904-VS17\Apache24>cd C:\Users\HP\Downloads\httpd-2.4.62-240904-win64-VS17\Apache24/bin
```

Step 5 :

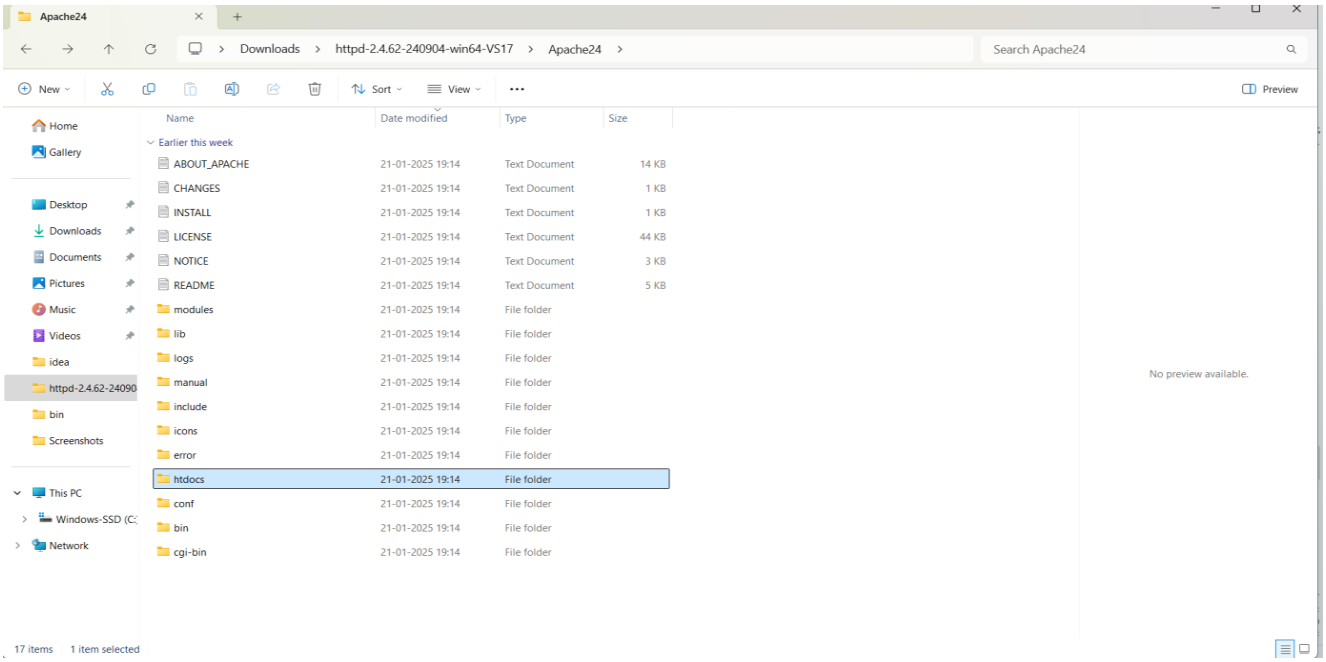
Then Run the installation command :

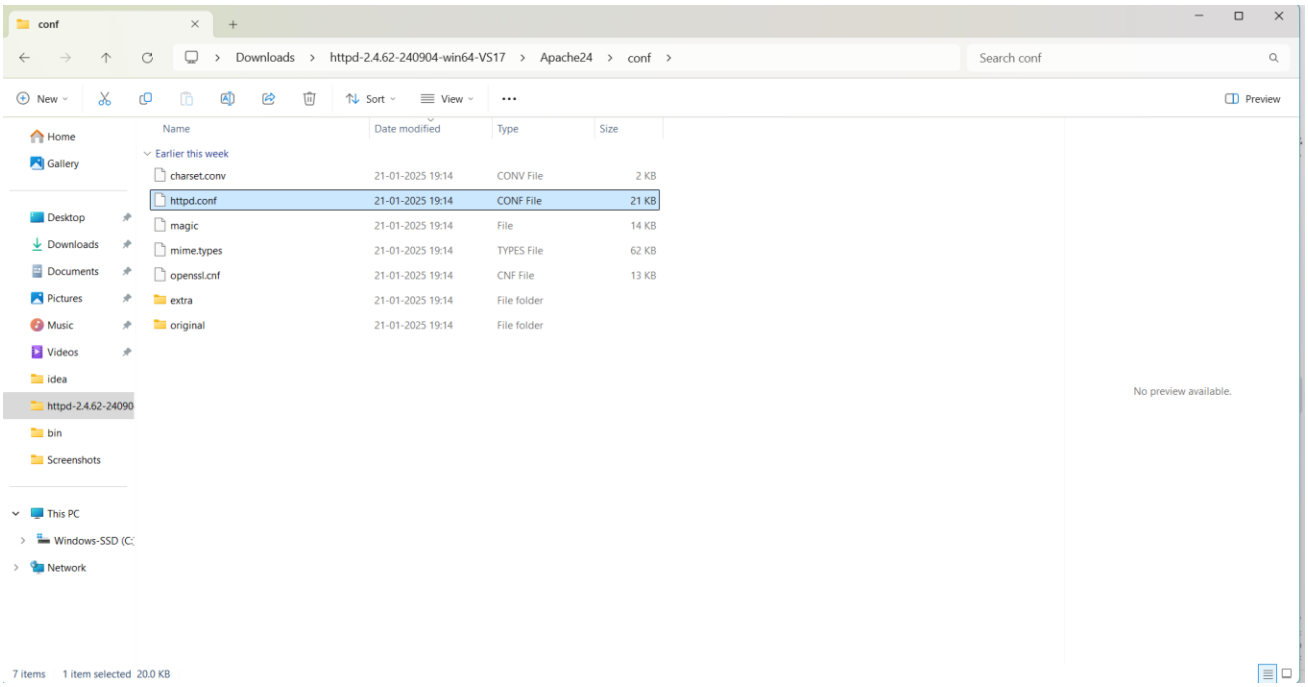
httpd.exe -k install

```
C:\Users\HP\Downloads\https-2.4.62-240904-win64-VS17\Apache24\bin>httpd.exe -k
install

Installing the 'Apache2.4' service

The 'Apache2.4' service is successfully installed.
```

Step 6 :

Navigate to the Apache folder you downloaded, go to the **conf** folder, and right-click on the httpd.conf file; select 'Edit with Notepad' .





Step 7 :

Inside the **httpd.conf** file, replace the content with the provided configuration.

Step 8 :

Open Command Prompt and type the command **httpd.exe -t** to test the configuration file. If the configuration is correct, you should see '**Syntax OK**'.

```
C:\Users\HP\Downloads\httpd-2.4.62-240904-win64-VS17\Apache24\bin>httpd.exe  -t

Syntax ok
```

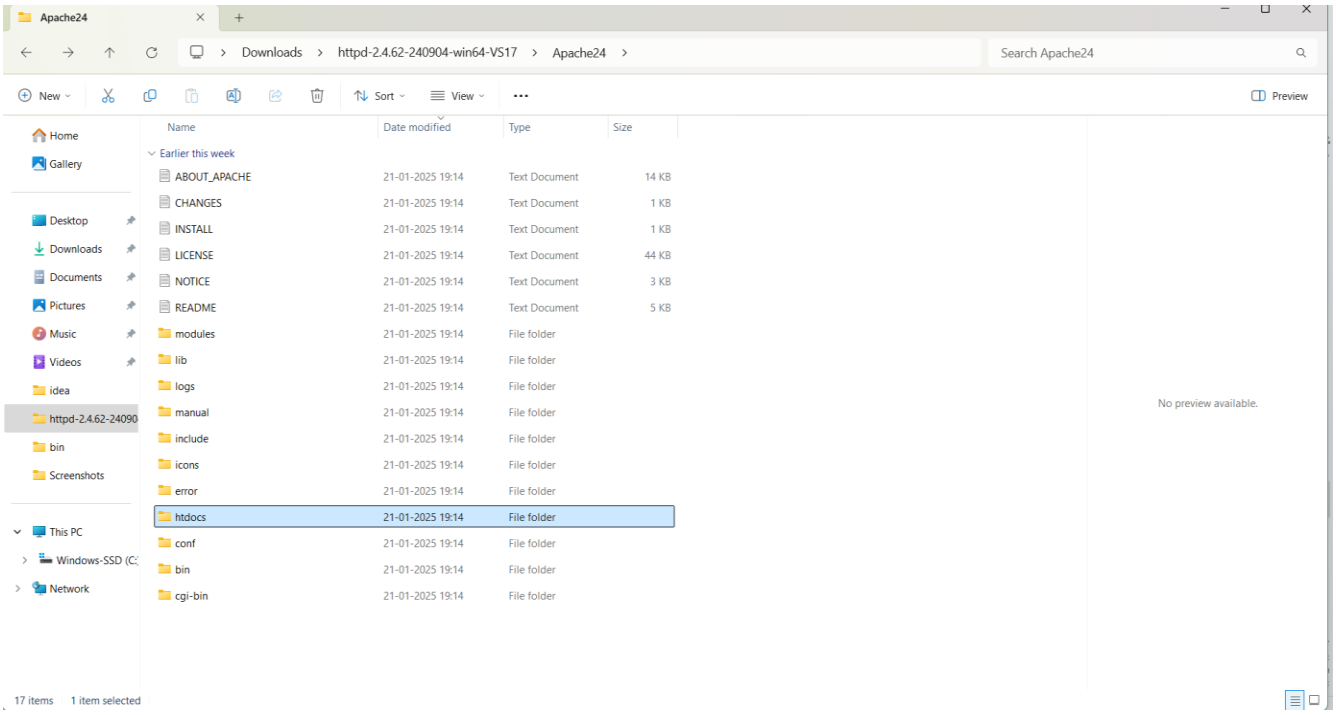
Step 9 :

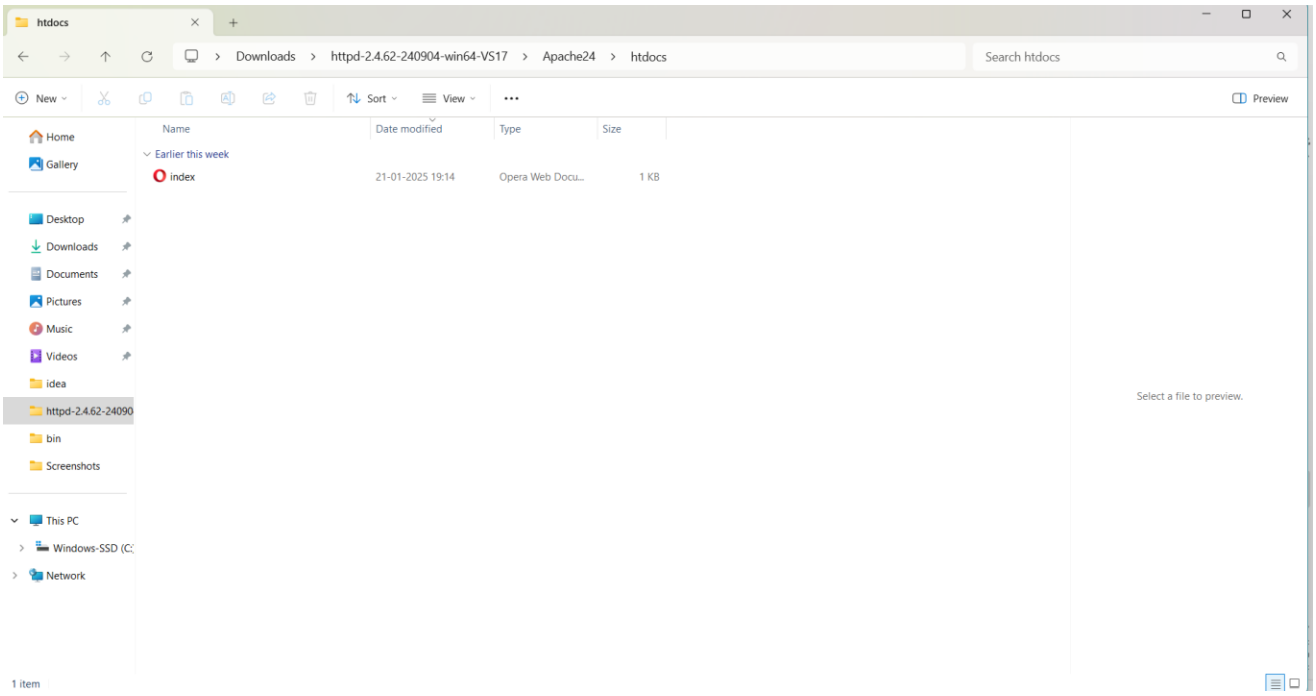
Run the command **httpd.exe -k** start to start the Apache server.

```
C:\Users\HP\Downloads\httpd-2.4.62-240904-win64-VS17\Apache24\bin>httpd.exe  -k start
```

Step10:

Go to the Apache folder, navigate to the **htdocs** folder, and find the **index.html** file. Right-click on it and select 'Edit with Notepad'.





Step 11 :

Create a simple model to display your name in HTML

```
<!DOCTYPE html>
<html>
<head>
   <title>Display My Name</title>
   <style>
      body {
         font-family: Arial, sans-serif;
         text-align: center;
         margin-top: 100px;
      }
      .container {
         padding: 20px;
         display: inline-block;
      }
      .name {
         font-size: 24px;
         font-weight: bold;
         color: #4CAF50;
      }
   </style>
</head>
<body>
   <div class="container">
      <p class="name">Hello, Harshana Perianayaki B !
      </p>
   </div>
</body>
</html>
```

Step 12 :

Open the Chrome browser and type **localhost/index.html** in the address bar. You should be able to see the website hosted successfully.

Hello, Harshana Perianayaki B !

OUTCOMES

By completing the task of hosting a static website locally using Apache or Nginx and creating a simple HTML page with your name, you achieve the following outcomes:

1. Practical Knowledge of Web Hosting

- **Understanding Server Basics**: You gain hands-on experience with how web servers like Apache and Nginx work, including how they serve static content.
- **File Structure Familiarity**: Learn where to place files (e.g., server root directory) and how servers locate and serve them.

2. Development Environment Setup

- **Local Hosting Environment**: Successfully set up a personal development environment to test and preview websites without requiring internet access or external hosting.
- **Efficient Testing**: Test changes to your code in real time without the need for deployment to a remote server.

3. Basic HTML Page Hosted

- **Hosted Static Website**: You create and serve a simple `index.html` file that displays your name, demonstrating your ability to develop and host basic web pages.
- **Browser Accessibility**: Access your hosted website at `http://localhost`, simulating a live hosting experience.

4. Troubleshooting and Problem-Solving

- **Server Configuration**: Learn to troubleshoot common issues like incorrect file paths, permissions errors, or port conflicts.
- **Error Handling**: Gain insight into identifying and resolving errors during server setup or while hosting files.

5. Skill Building for Real-World Hosting

- **Deployment Preparation**: The experience mirrors the process of deploying a website to a live server, making you more comfortable with deployment in the future.
- **Foundation for Dynamic Websites**: Understand the role of web servers as a stepping stone for hosting more complex websites with server-side functionality.

6. Privacy and Security Awareness

- **Safe Workspace**: Hosting locally ensures privacy, as files remain on your machine and are not exposed to the internet.

7. Confidence Boost

- **Hands-On Achievement**: Successfully hosting your first website locally builds confidence and motivates you to explore more advanced web technologies.