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

Name: N.V ANANTHA NARAYANAN   Department : CSE

Introduction and Overview

In this POC, we will learn how to host a static website locally using the Apache HTTP Server. This process involves setting up a local web server, configuring it correctly, and hosting a simple HTML page. By following these steps, you'll get hands-on experience with configuring and running a local Apache server, which is a foundational skill for web hosting and server management.

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

Local hosting is an essential skill for developers, as it allows them to test and experiment with web applications in a controlled environment. It offers several advantages, such as:

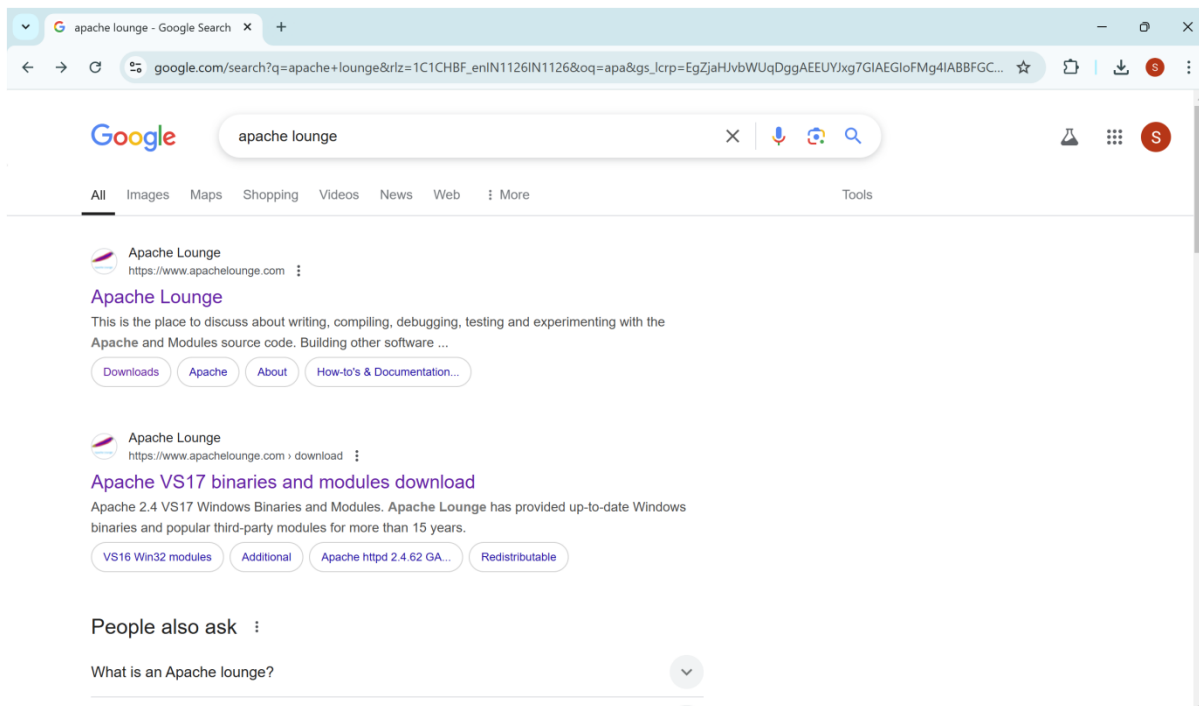**Hands-On Learning:** Gain practical experience with server setup and configuration.

Testing Ground: Safely test and debug websites before deploying them to a live server.

Offline Development: Work on web projects without requiring an active internet connection.
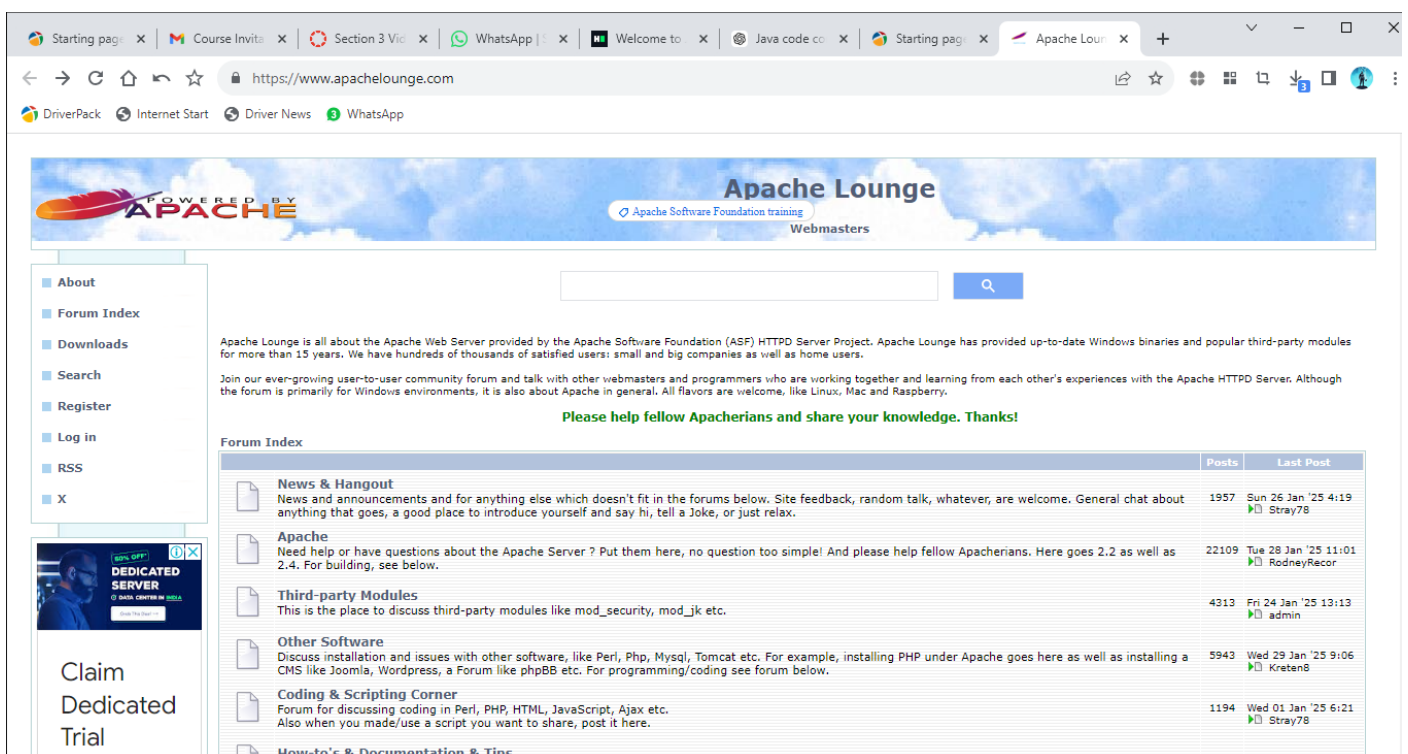
Step-by-Step Overview

Step1:

Search for "Apache Lounge" on Google and click the first link to access the official website.

Step 2 :

Click on the "Downloads" option located on the left-hand side of the Apache Lounge website.

Step 3 :

Click on the link **"Apache 2.4.62-240904 Win64"** (Windows version), download the file, and extract all its contents.

Step 4 :

Open Command Prompt as Administrator (Windows + R, type cmd, right-click and select 'Run as Administrator') and use the command cd C:\path\to\apache\bin to set the path to the Apache bin folder and paste the downloaded command from apache.

```
httpd-2.4.63-250122-win64-VS17.zip
```

Step 5 :

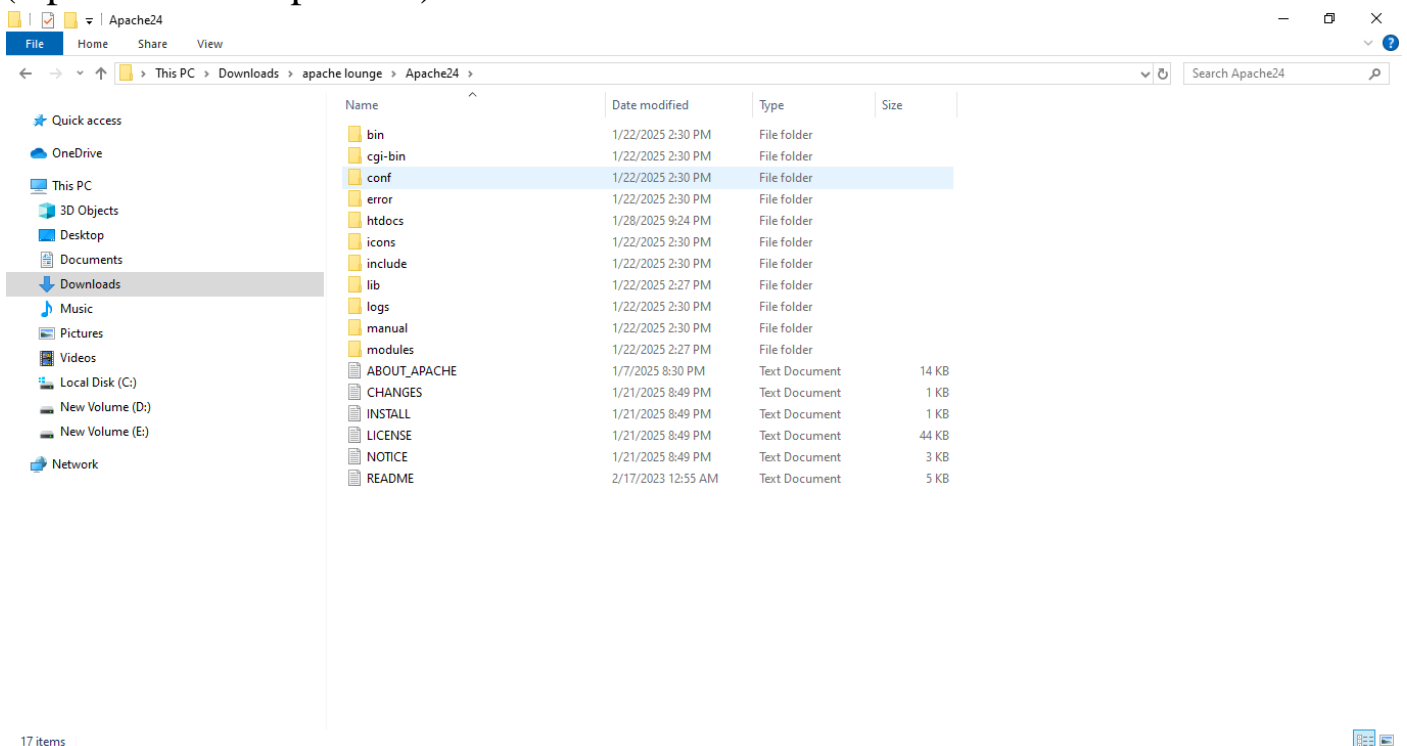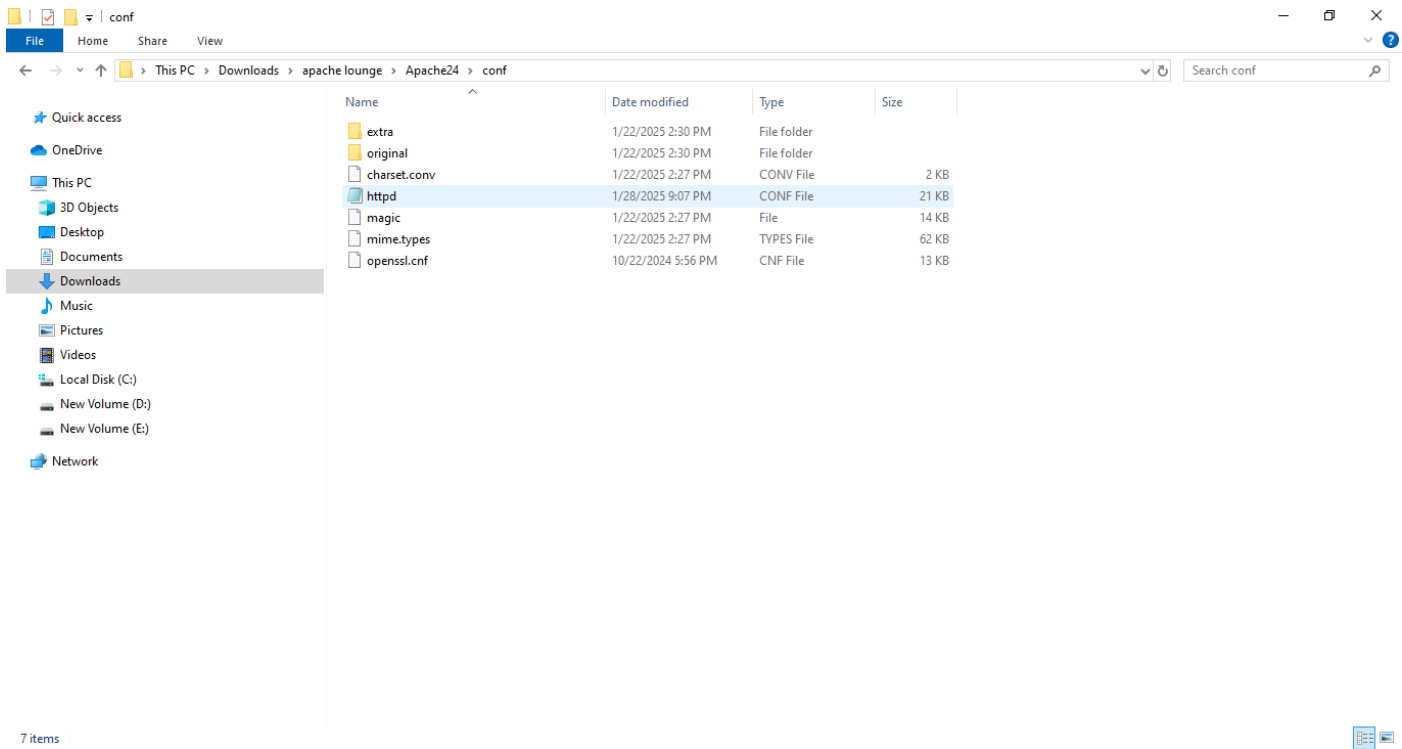Then Run the installation command :

httpd.exe -k install

```
C:\Users\HP\Downloads\httpd-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'

(Apache/conf/httpd.conf)

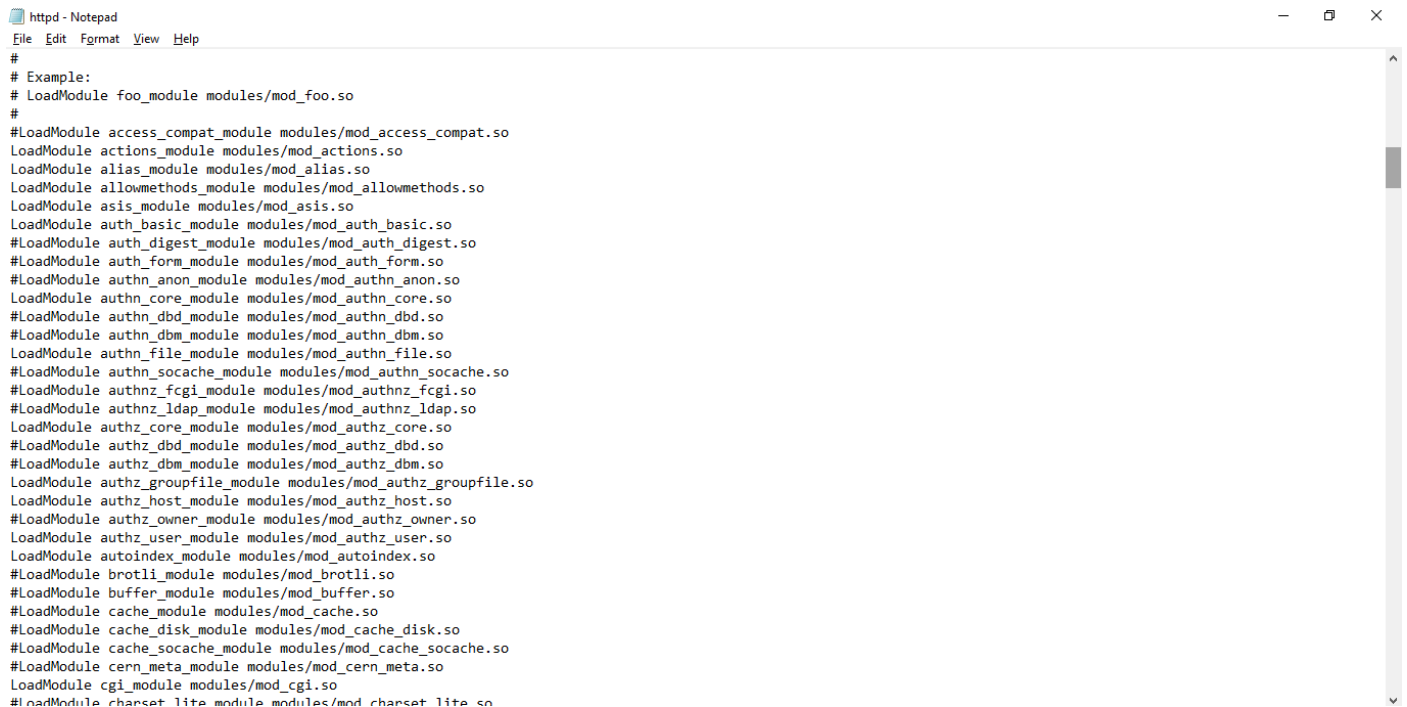| Name	Date modified	Type	Size
bin	1/22/2025 2:30 PM	File folder	
cgi-bin	1/22/2025 2:30 PM	File folder	
conf	1/22/2025 2:30 PM	File folder	
error	1/22/2025 2:30 PM	File folder	
htdocs	1/28/2025 9:24 PM	File folder	
icons	1/22/2025 2:30 PM	File folder	
include	1/22/2025 2:30 PM	File folder	
lib	1/22/2025 2:27 PM	File folder	
logs	1/22/2025 2:30 PM	File folder	
manual	1/22/2025 2:30 PM	File folder	
modules	1/22/2025 2:27 PM	File folder	
ABOUT_APACHE	1/7/2025 8:30 PM	Text Document	14 KB
CHANGES	1/21/2025 8:49 PM	Text Document	1 KB
INSTALL	1/21/2025 8:49 PM	Text Document	1 KB
LICENSE	1/21/2025 8:49 PM	Text Document	44 KB
NOTICE	1/21/2025 8:49 PM	Text Document	3 KB
README	2/17/2023 12:55 AM	Text Document	5 KB

17 items

Step 7 :

Inside the **httpd.conf** file, replace the content with the provided configuration. Ensure you update the SRVROOT directive with your Apache installation path. This configuration defines the server's root directory, listening port, modules, document root for serving web files, logging paths, and basic permissions, ensuring Apache serves content correctly from the specified htdocs directory.


```
# will be interpreted as '/logs/access_log'.
#
# NOTE: Where filenames are specified, you must use forward slashes
# instead of backslashes (e.g., "c:/apache" instead of "c:\apache").
# If a drive letter is omitted, the drive on which httpd.exe is located
# will be used by default.  It is recommended that you always supply
# an explicit drive letter in absolute paths to avoid confusion.

#
# ServerRoot: The top of the directory tree under which the server's
# configuration, error, and log files are kept.
#
# Do not add a slash at the end of the directory path.  If you point
# ServerRoot at a non-local disk, be sure to specify a local disk on the
# Mutex directive, if file-based mutexes are used.  If you wish to share the
# same ServerRoot for multiple httpd daemons, you will need to change at
# least PidFile.
#
Define SRVROOT "c:/Apache24"
Define SRVROOT C:\Users\welcome\Downloads\apache lounge\Apache24\bin

ServerRoot "${SRVROOT}"

#
# Mutex: Allows you to set the mutex mechanism and mutex file directory
# for individual mutexes, or change the global defaults
#
# Uncomment and change the directory if mutexes are file-based and the default
# mutex file directory is not on a local disk or is not appropriate for some
# other reason.
#
# Mutex default:logs

#
# Listen: Allows you to bind Apache to specific IP addresses and/or
# ports, instead of the default.  See also the <VirtualHost>
```
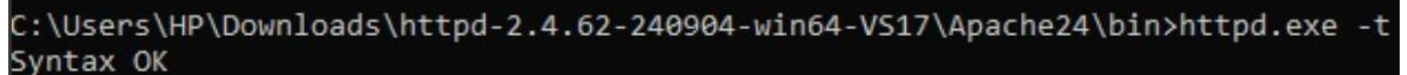
```
httpd - Notepad                                                                          —   □   ×
File  Edit  Format  View  Help
#                                                                                              ^
# Example:
# LoadModule foo_module modules/mod_foo.so
#
#LoadModule access_compat_module modules/mod_access_compat.so
LoadModule actions_module modules/mod_actions.so
LoadModule alias_module modules/mod_alias.so
LoadModule allowmethods_module modules/mod_allowmethods.so
LoadModule asis_module modules/mod_asis.so
LoadModule auth_basic_module modules/mod_auth_basic.so
#LoadModule auth_digest_module modules/mod_auth_digest.so
#LoadModule auth_form_module modules/mod_auth_form.so
#LoadModule authn_anon_module modules/mod_authn_anon.so
LoadModule authn_core_module modules/mod_authn_core.so
#LoadModule authn_dbd_module modules/mod_authn_dbd.so
#LoadModule authn_dbm_module modules/mod_authn_dbm.so
LoadModule authn_file_module modules/mod_authn_file.so
#LoadModule authn_socache_module modules/mod_authn_socache.so
#LoadModule authnz_fcgi_module modules/mod_authnz_fcgi.so
#LoadModule authnz_ldap_module modules/mod_authnz_ldap.so
LoadModule authz_core_module modules/mod_authz_core.so
#LoadModule authz_dbd_module modules/mod_authz_dbd.so
#LoadModule authz_dbm_module modules/mod_authz_dbm.so
LoadModule authz_groupfile_module modules/mod_authz_groupfile.so
LoadModule authz_host_module modules/mod_authz_host.so
#LoadModule authz_owner_module modules/mod_authz_owner.so
LoadModule authz_user_module modules/mod_authz_user.so
LoadModule autoindex_module modules/mod_autoindex.so
#LoadModule brotli_module modules/mod_brotli.so
#LoadModule buffer_module modules/mod_buffer.so
#LoadModule cache_module modules/mod_cache.so
#LoadModule cache_disk_module modules/mod_cache_disk.so
#LoadModule cache_socache_module modules/mod_cache_socache.so
#LoadModule cern_meta_module modules/mod_cern_meta.so
LoadModule cgi_module modules/mod_cgi.so
#LoadModule charset_lite_module modules/mod_charset_lite.so
```
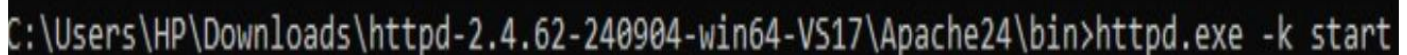
Step 8 :

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
```
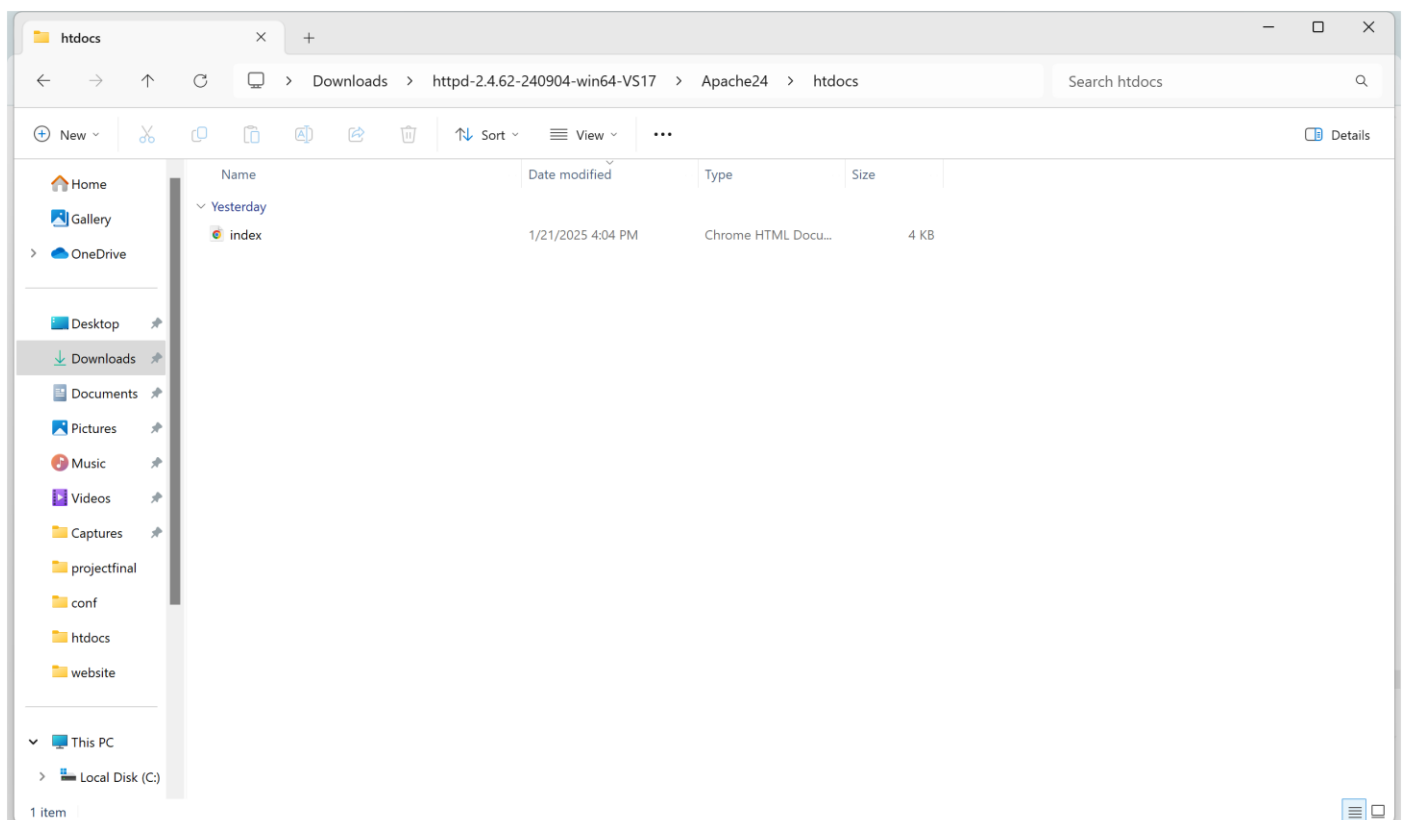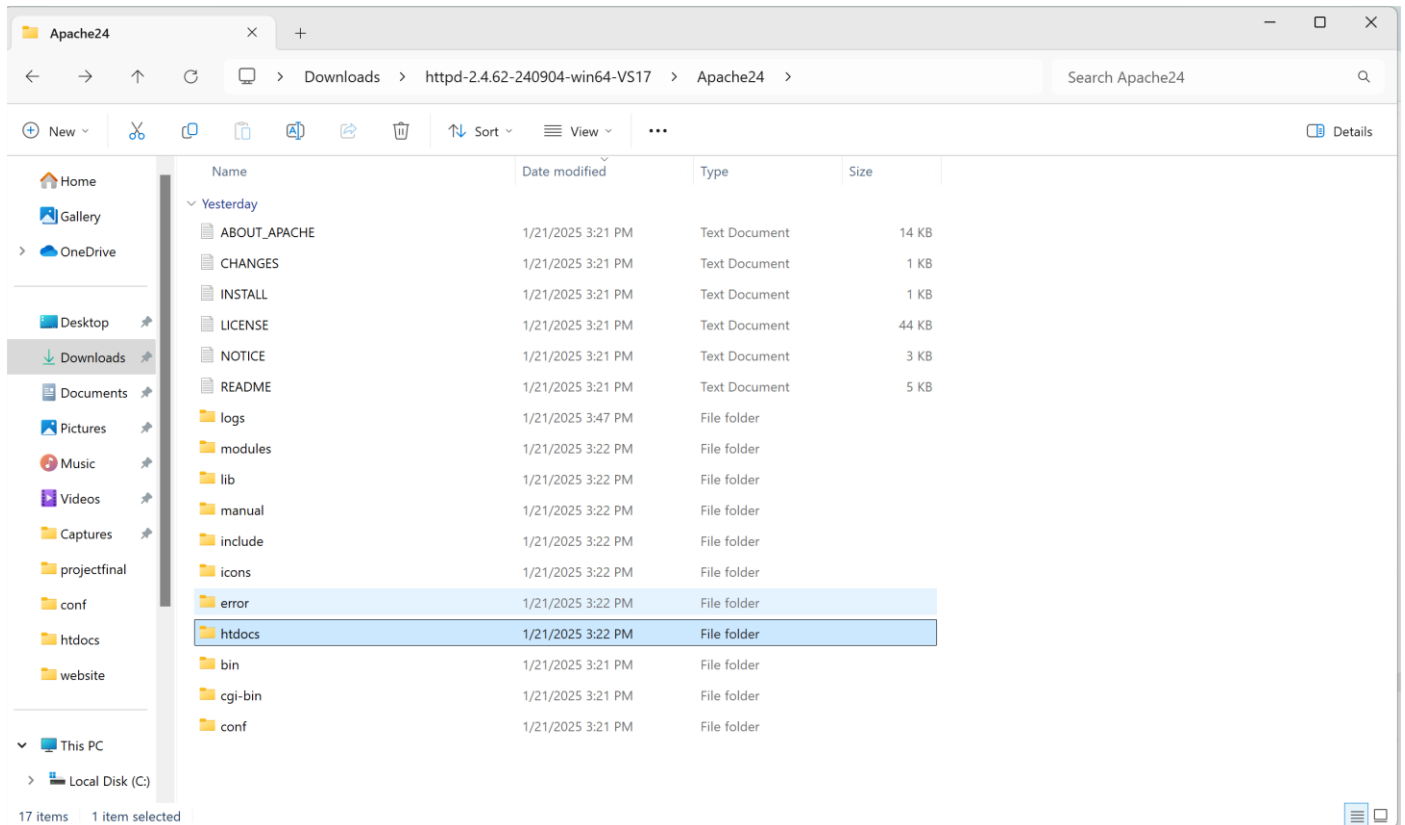
Step 9 :

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 (you may optionally add CSS for styling).

```
index - Notepad                                                              —   □   ×
File  Edit  Format  View  Help
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Welcome Page</title>
    <link rel="stylesheet" href="styles.css">
</head>
<body>
    <div class="container">
        <h1>Welcome to my website</h1>
        <p class="subscript">From Anantha Narayanan</p>
    </div>
</body>
</html>
```

Step 12:

In this step we are going to see the css code that defines styling for an HTML document by setting the font to "Times New Roman " and applies a dark blue background and setting the text in color to white.

```
styles - Notepad                                                             —   □   ×
File  Edit  Format  View  Help
body {
    font-family: "Times New Roman", Times, serif;
    background-color: #001f3d; /* Dark blue background */
    color: white; /* White font color */
    text-align: center;
    margin: 0;
    padding: 0;
}

.container {
    margin-top: 50px;
}

h1 {
    font-size: 36px;
}

.subscript {
    font-size: 18px;
    color: #ddd; /* Lighter white for the subscript */
    font-style
|
```
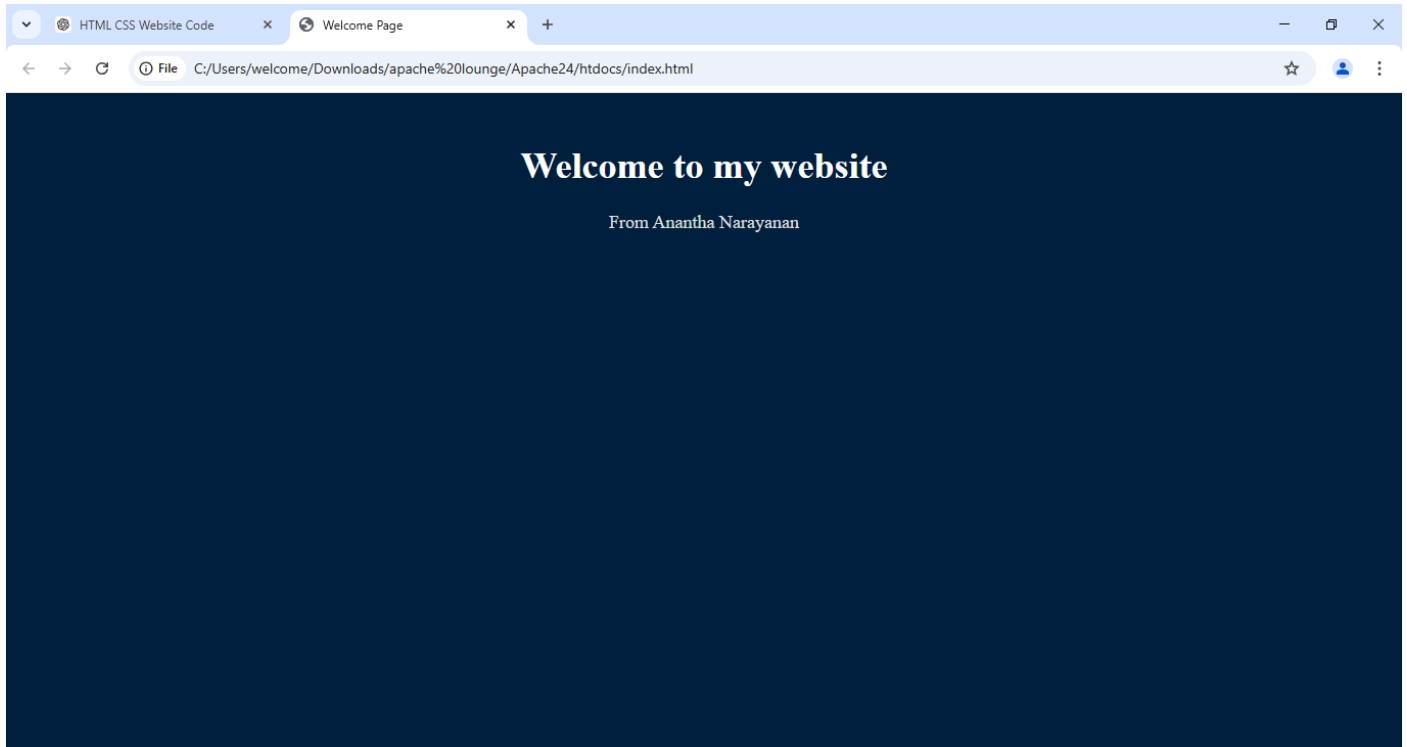
Step 13:

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

Expected 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.