



St. JOSEPH'S
GROUP OF INSTITUTIONS
OMR, CHENNAI - 119

PLACEMENT EMPOWERMENT PROGRAM

CLOUD COMPUTING AND DEVOPS CENTRE

TASK 1- HOST A STATIC WEBSITE LOCALLY

**Set up a local server Apache and host a
simple HTML page**

NAME - MAHASHREE U

DEPT - ADS

Introduction

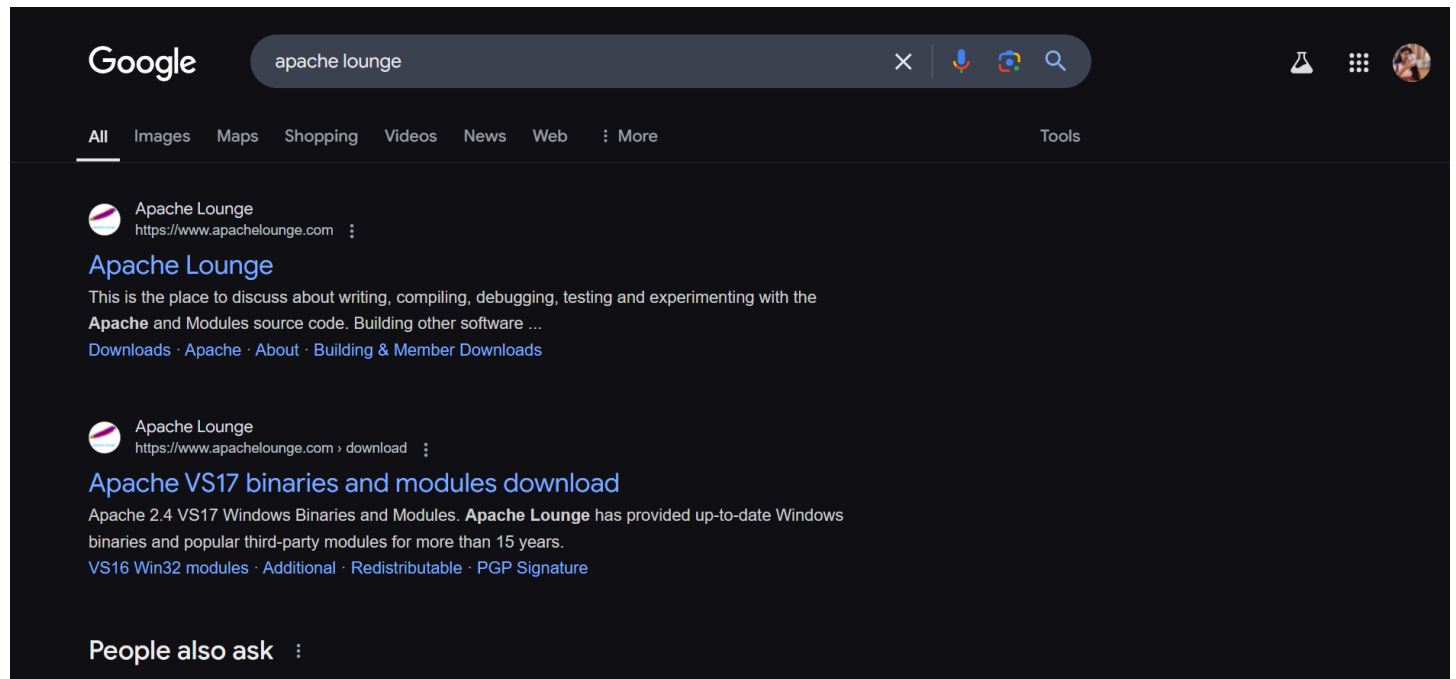
Apache HTTP Server is one of the most widely used web servers for hosting websites and applications. It is open-source, reliable, and supports multiple platforms, including Windows, Linux, and macOS. Hosting a static website locally using Apache is useful for development, testing, and learning web technologies before deploying a site online.

Uses of Hosting a Static Website Locally

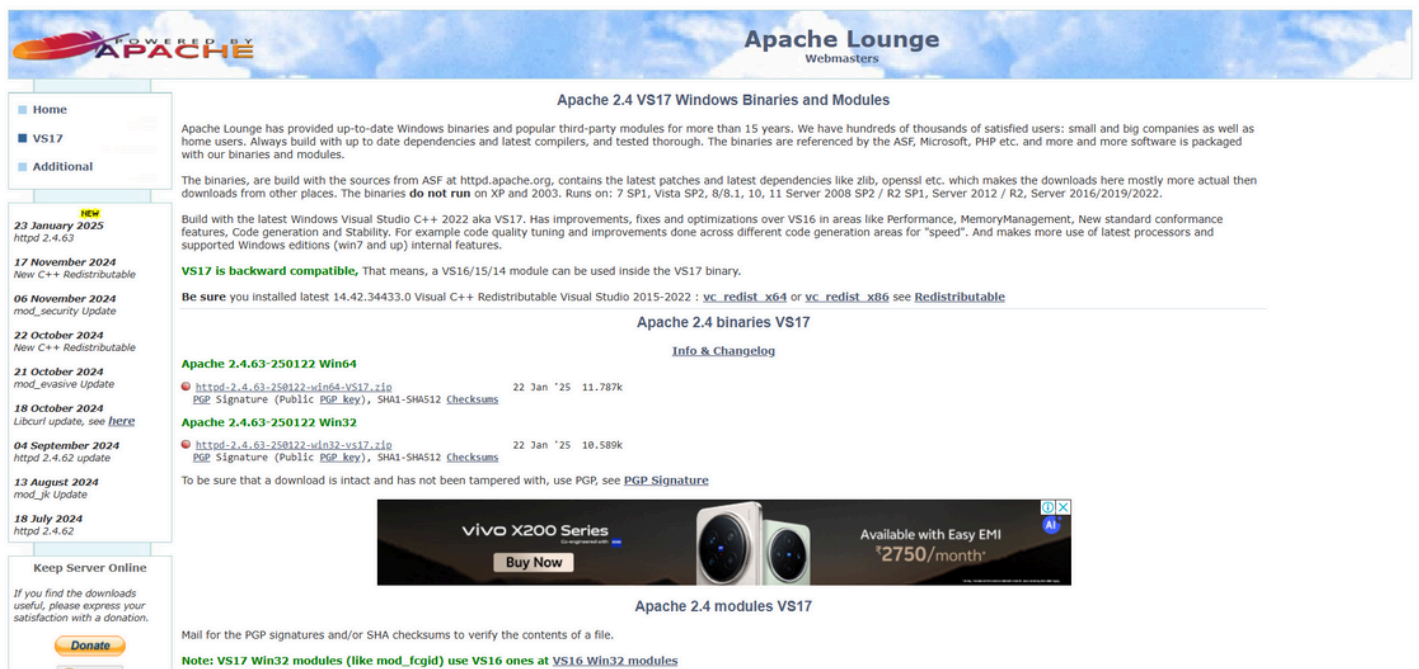
- **Website Development:** Developers can test websites before deployment.
- **Offline Access:** Web pages can be accessed without an internet connection.
- **Security Testing:** Local hosting allows testing security vulnerabilities safely.
- **Learning & Experimentation:** Helps beginners understand web hosting principles.
- **Customization & Debugging:** Developers can customize configurations for optimization.

STEP BY STEP PROCESS

step 1 - Search apache in your web browser.



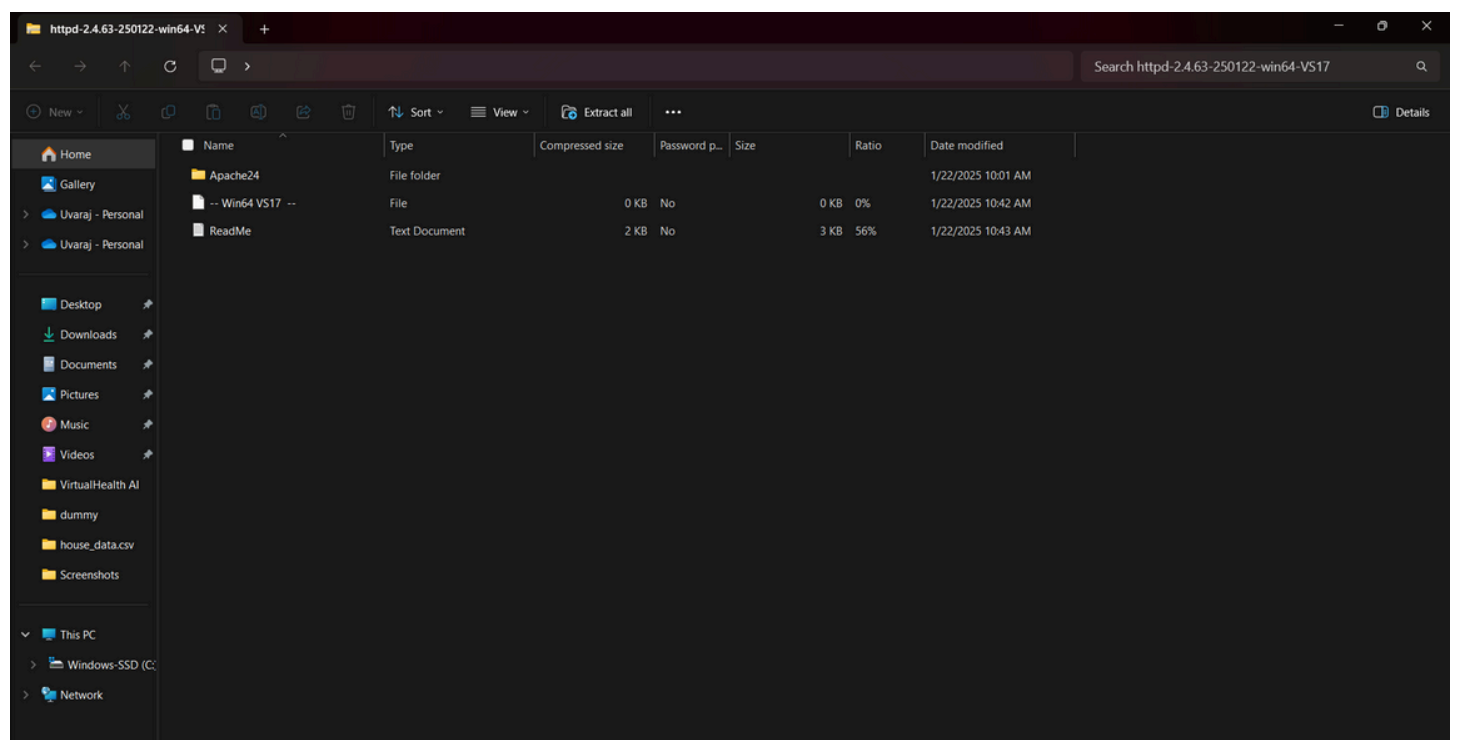
step 2 - Go to downloads column and click
DOWNLOADS



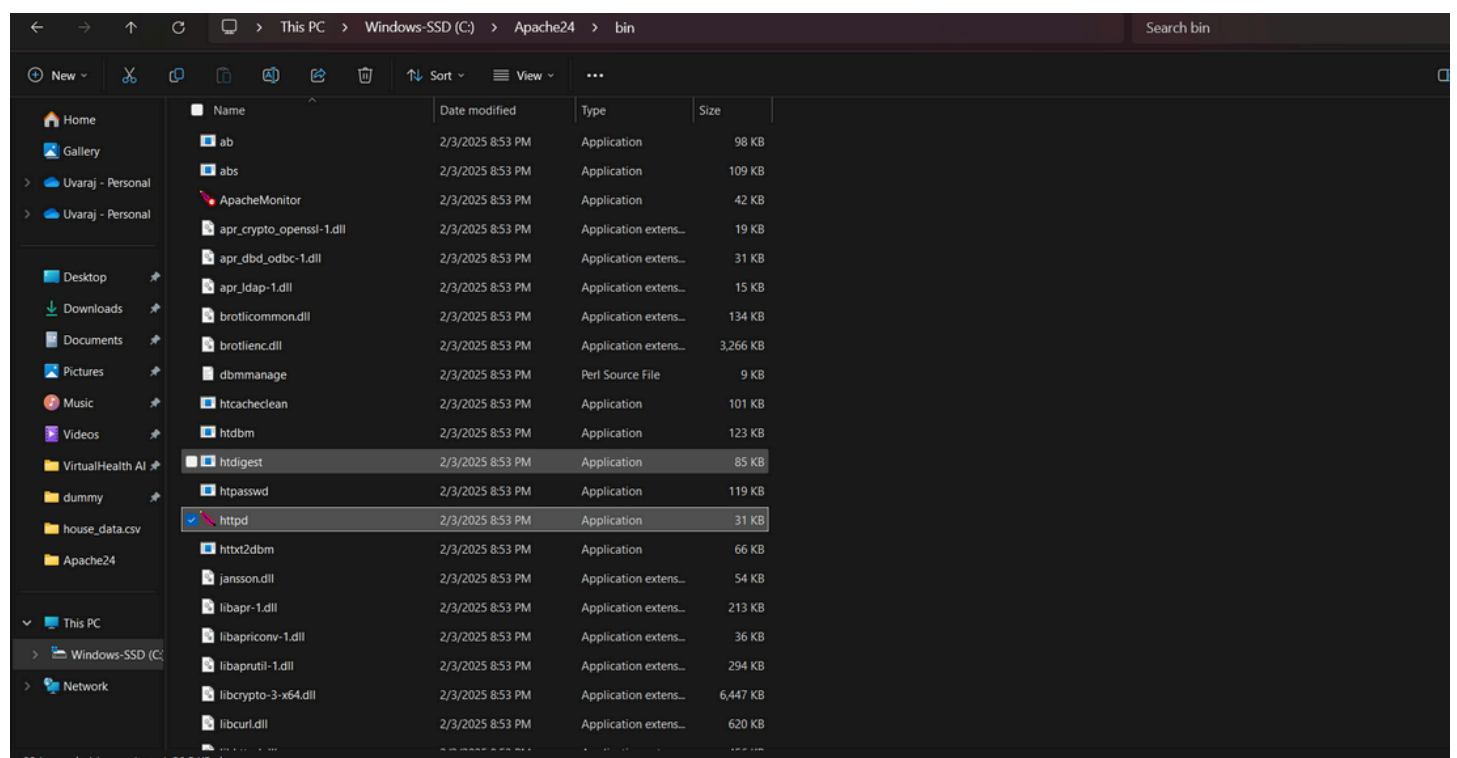
step 3 - Click on link

<https://www.apachelounge.com/download/VS17/binarie>

[s/httpd-2.4.63-250122-win64-VS17.zip](http://httpd-2.4.63-250122-win64-VS17.zip) and download it to extract.

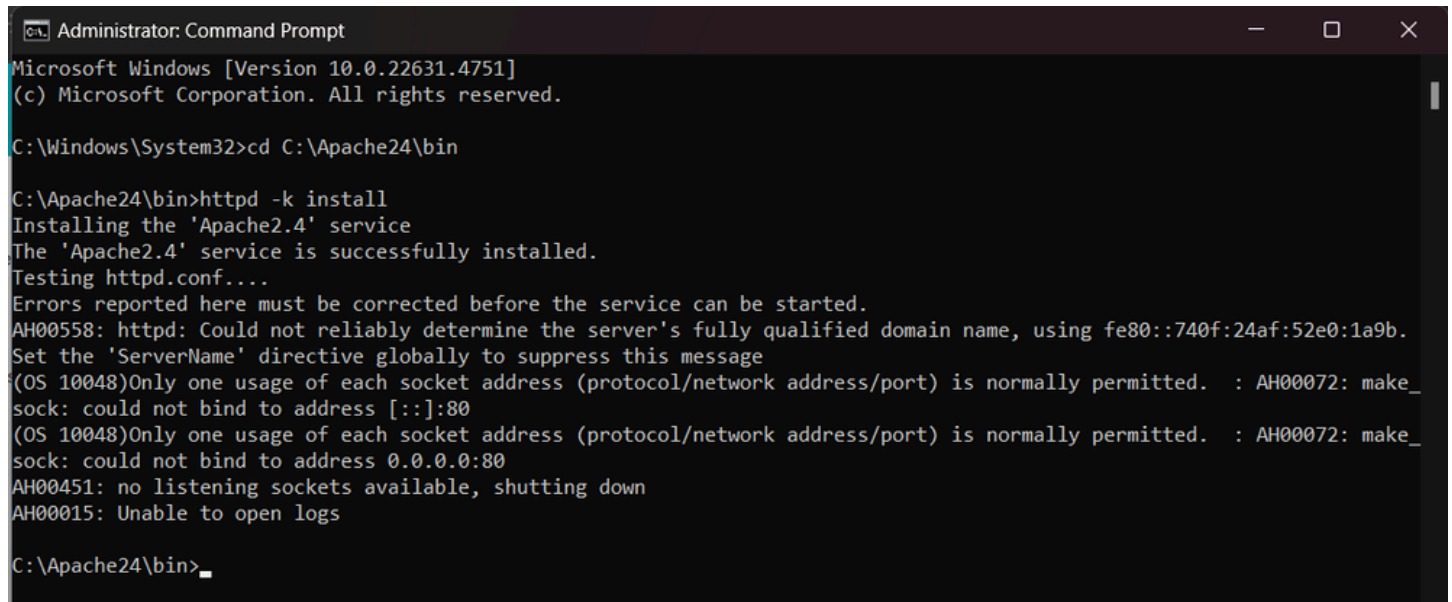


step 4 - open command prompt and use it as an administrator to set the path to apache bin folder.



step 5: Install and Start Apache

1. Open Command Prompt as Administrator.
2. Navigate to the bin directory:
3. `cd C:\Apache24\bin`
4. Install Apache as a service by running:
5. `httpd -k install`
6. Start the Apache service:
7. `httpd -k start`
8. To verify if Apache is running, open a web browser and visit:
9. `http://localhost/`
10. You should see the default Apache welcome page.



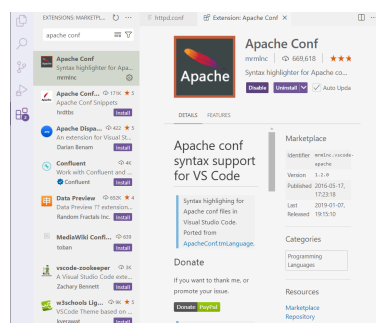
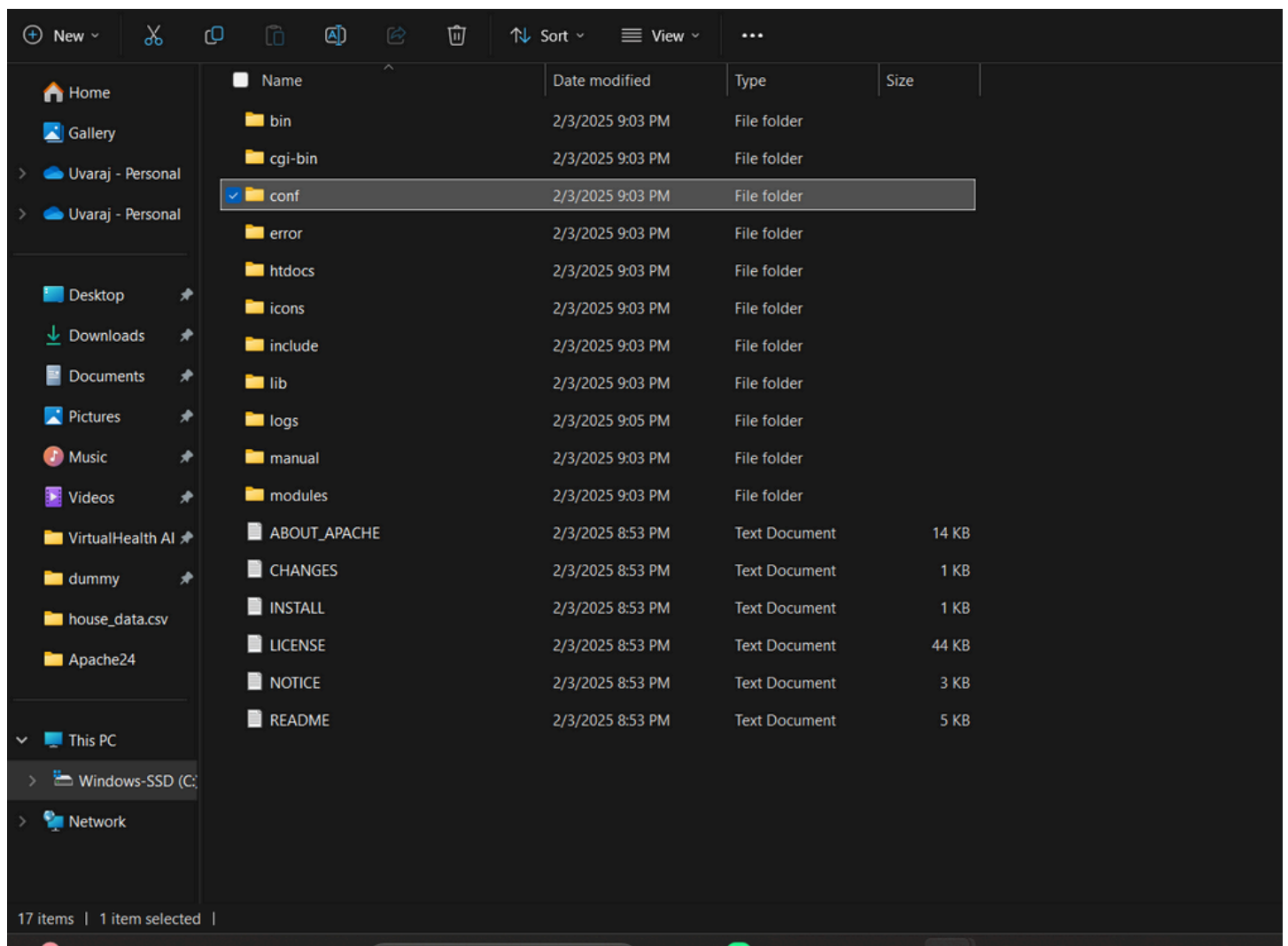
```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.22631.4751]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\System32>cd C:\Apache24\bin

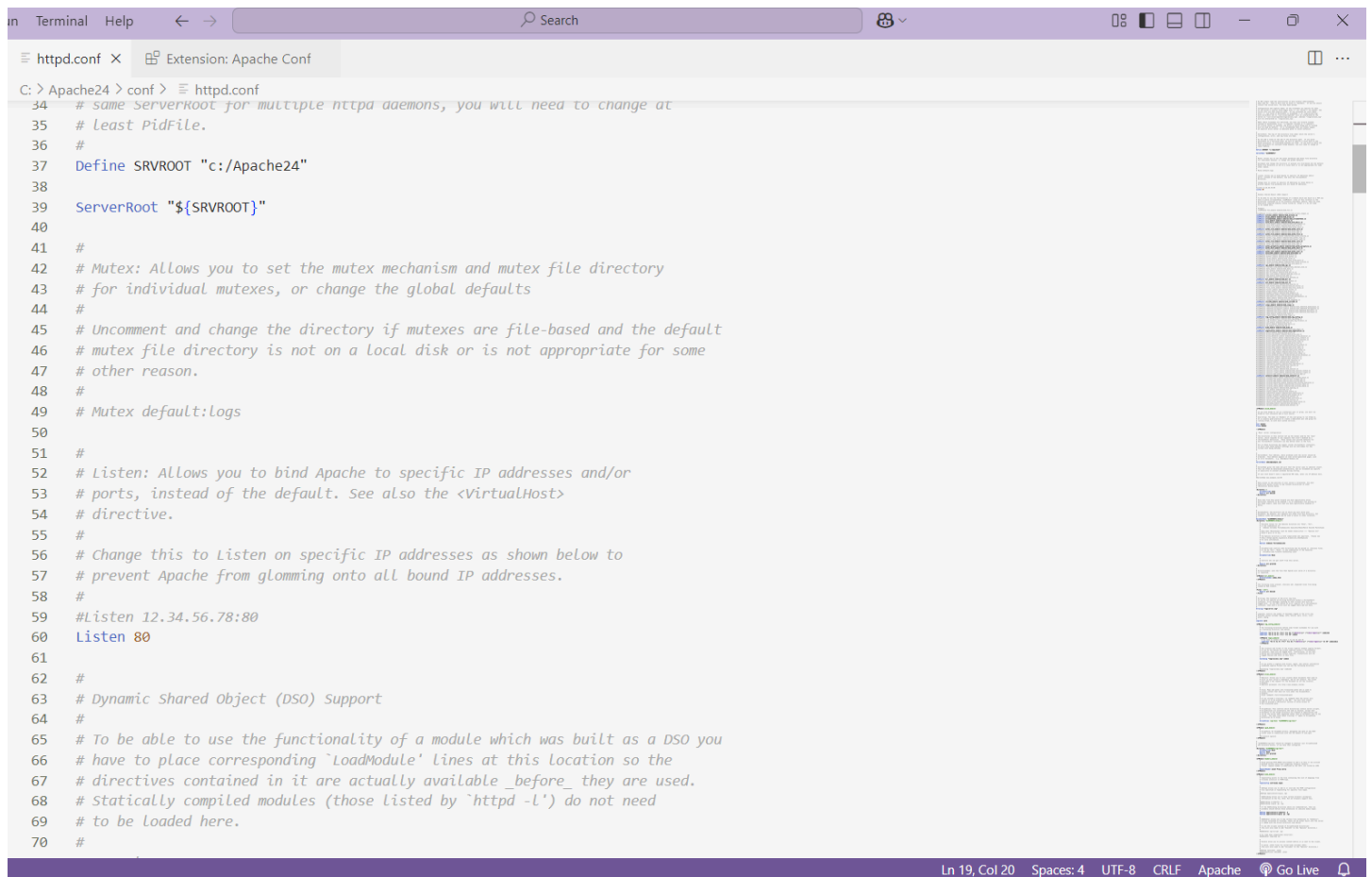
C:\Apache24\bin>httpd -k install
Installing the 'Apache2.4' service
The 'Apache2.4' service is successfully installed.
Testing httpd.conf....
Errors reported here must be corrected before the service can be started.
AH00558: httpd: Could not reliably determine the server's fully qualified domain name, using fe80::740f:24af:52e0:1a9b.
Set the 'ServerName' directive globally to suppress this message
(OS 10048)Only one usage of each socket address (protocol/network address/port) is normally permitted. : AH00072: make_
sock: could not bind to address [::]:80
(OS 10048)Only one usage of each socket address (protocol/network address/port) is normally permitted. : AH00072: make_
sock: could not bind to address 0.0.0.0:80
AH00451: no listening sockets available, shutting down
AH00015: Unable to open logs

C:\Apache24\bin>
```

step 6- Navigate to the config file in which the code will be configured with either vscode or text editors. If vscode is chosen, then the respective extension ApacheConf has to be installed inorder to configure 80.



Step 7 - The Vscode where the config code is installed with the Apache Conf will be accessed and configured.

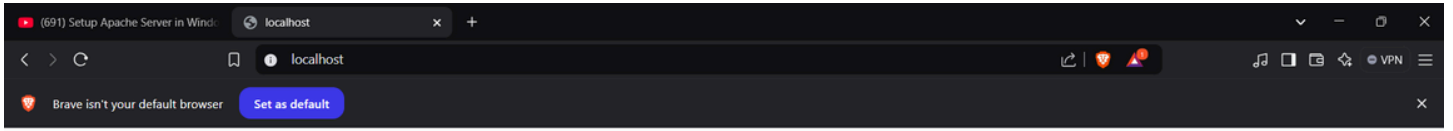


```
34 # same ServerRoot for multiple httpd daemons, you will need to change at
35 # least PidFile.
36 #
37 Define SRVROOT "c:/Apache24"
38
39 ServerRoot "${SRVROOT}"
40
41 #
42 # Mutex: Allows you to set the mutex mechanism and mutex file directory
43 # for individual mutexes, or change the global defaults
44 #
45 # Uncomment and change the directory if mutexes are file-based and the default
46 # mutex file directory is not on a local disk or is not appropriate for some
47 # other reason.
48 #
49 # Mutex default:logs
50
51 #
52 # Listen: Allows you to bind Apache to specific IP addresses and/or
53 # ports, instead of the default. See also the <VirtualHost>
54 # directive.
55 #
56 # Change this to Listen on specific IP addresses as shown below to
57 # prevent Apache from glomming onto all bound IP addresses.
58 #
59 #Listen 12.34.56.78:80
60 Listen 80
61
62 #
63 # Dynamic Shared Object (DSO) Support
64 #
65 # To be able to use the functionality of a module which was built as a DSO you
66 # have to place corresponding 'LoadModule' lines at this location so the
67 # directives contained in it are actually available _before_ they are used.
68 # Statically compiled modules (those listed by `httpd -L') do not need
69 # to be loaded here.
70 #
```

Step 8 - This is the final output of the webpage that is hosted in local host.

Testing

The static webpage created with html is tested with the local web browser using localhost apache.



It works!

Outcomes :

1. **Open Source:** Apache is free and open-source software, making it accessible to anyone for use and modification.
2. **Flexibility:** Apache can run on multiple operating systems, including Linux, Windows, and macOS, making it highly flexible.
3. **Scalability:** Apache is highly scalable, allowing it to handle both small sites and large, complex web applications with high traffic.
4. **Security:** Apache has various security modules and configurations available, including SSL/TLS encryption and the ability to restrict access based on IP or user authentication.
5. **Customizable:** With its extensive configuration files, Apache allows customizations such as URL rewriting,

authentication, and more.

6. **Module Support:** Apache supports various modules to enhance functionality, like `mod_ssl` for SSL encryption, `mod_rewrite` for URL rewriting, `mod_proxy` for reverse proxy, and others.
7. **Virtual Hosting:** Apache supports both name-based and IP-based virtual hosting, allowing multiple websites to be hosted on a single server.
8. **Performance:** While Apache is known for its robustness, its performance can be slightly slower compared to other servers like Nginx, especially under heavy loads. However, with proper optimization and configuration, it can perform well.
9. **Community Support:** Apache has a large community and extensive documentation available, making it easy to troubleshoot and find solutions to issues.
10. **Compatibility:** It is compatible with many programming languages, such as PHP, Python, Perl, and others, which makes it highly versatile for different kinds of web applications.

Would you like to know more about how Apache compares to other web servers or its specific features?