

1. Install Apache HTTP server

>>Done

2. Create two simple html pages named "page1.html, page2.html" then use the suitable directive to automatically redirect from localhost/page1.html to localhost/page2.html

```
ayoooya@ayoooya-HP-Pavilion-Laptop-14-ce3xxx:~$ cat /var/www/html/page1.html
h1>page.1<h2>
ayoooya@ayoooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo nano /var/www/html/page2.html
ayoooya@ayoooya-HP-Pavilion-Laptop-14-ce3xxx:~$ cat /var/www/html/page2.html
h1>page.2<h2>
ayoooya@ayoooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo nano /var/www/html/page2.html
ayoooya@ayoooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo nano /etc/apache2/sites-available/000-default.conf
ayoooya@ayoooya-HP-Pavilion-Laptop-14-ce3xxx:~$ gedit /etc/apache2/apache2.conf
ayoooya@ayoooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo nano /etc/apache2/sites-available/000-default.conf
[sudo] password for ayoooya:

Sorry, try again.
[sudo] password for ayoooya:

Sorry, try again.
[sudo] password for ayoooya:
ayoooya@ayoooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo nano /etc/apache2/sites-available/000-default.conf
ayoooya@ayoooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo systemctl restart apache2
```

```
GNU nano 6.2 /etc/apache2/sites-available/000-default.conf
VirtualHost *:80>
    # The ServerName directive sets the request scheme, hostname and port that
    # the server uses to identify itself. This is used when creating
    # redirection URLs. In the context of virtual hosts, the ServerName
    # specifies what hostname must appear in the request's Host: header to
    # match this virtual host. For the default virtual host (this file) this
    # value is not decisive as it is used as a last resort host regardless.
    # However, you must set it for any further virtual host explicitly.
    #ServerName www.example.com

    ServerAdmin webmaster@localhost
    DocumentRoot /var/www/html

    # Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
    # error, crit, alert, emerg.
    # It is also possible to configure the loglevel for particular
    # modules, e.g.
    #LogLevel info ssl:warn
    Redirect 301 /page1.html /page2.html
```

[ Read 32 lines ]

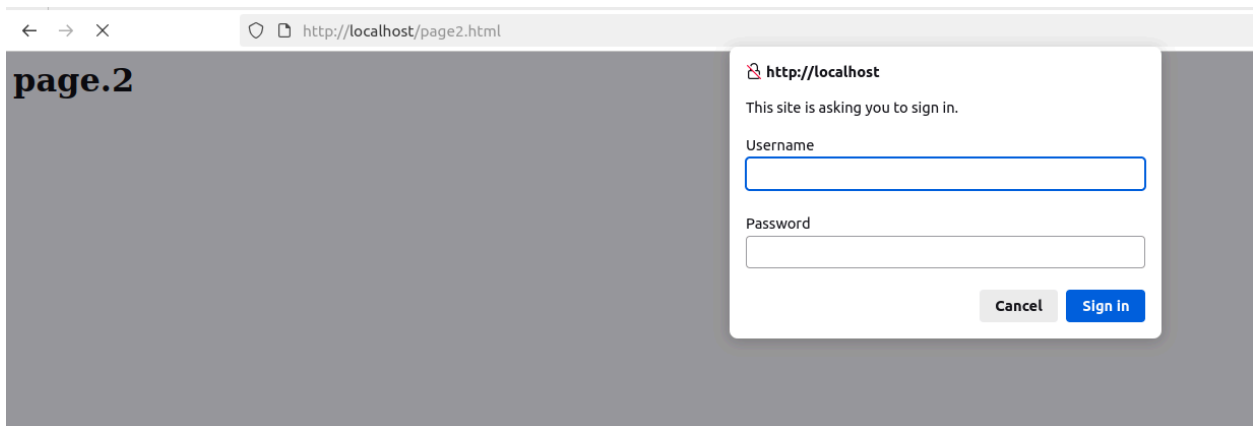
```
<address>Apache/2.4.52 (Ubuntu) Server at localhost Port 80</address>
</body></html>
* Connection #0 to host localhost left intact
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ gedit /etc/apache2/apache2.conf
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ curl -I http://localhost/page1.htm
HTTP/1.1 301 Moved Permanently
Date: Sat, 26 Apr 2025 12:02:29 GMT
Server: Apache/2.4.52 (Ubuntu)
Location: http://localhost/page2.html
Content-Type: text/html; charset=iso-8859-1
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$
```

### 3. Ask for user name and password when accessing a directory

```
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo htpasswd -c /etc/apache2/.htpasswd aya
htpasswd: cannot create file /etc/apache2/.htpasswd
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo apt install apache2-utils
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2-utils is already the newest version (2.4.52-1ubuntu4.14).
apache2-utils set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 144 not upgraded.
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo htpasswd -c /etc/apache2/.htpasswd ayooya
New password:
Re-type new password:
Adding password for user ayooya
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$
```

```
#Include conf-available/serve-cgi-bin.conf
<Directory "/var/www/html/secure">
    AuthType Basic
    AuthName "Restricted Content"
    AuthUserFile /etc/apache2/.htpasswd
    Require valid-user
</Directory>

<Files "page2.html">
    AuthType Basic
    AuthName "Protected Page"
    AuthUserFile /etc/apache2/.htpasswd
    Require valid-user
</Files>
```



```
re-type new password.
Adding password for user ayooya
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo nano /etc/apache2/sites-available/000-default.conf
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo apache2ctl configtest
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.1.1. Set the 'ServerName' directive globally to suppress this message
Syntax OK
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo systemctl restart apache2
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$
```

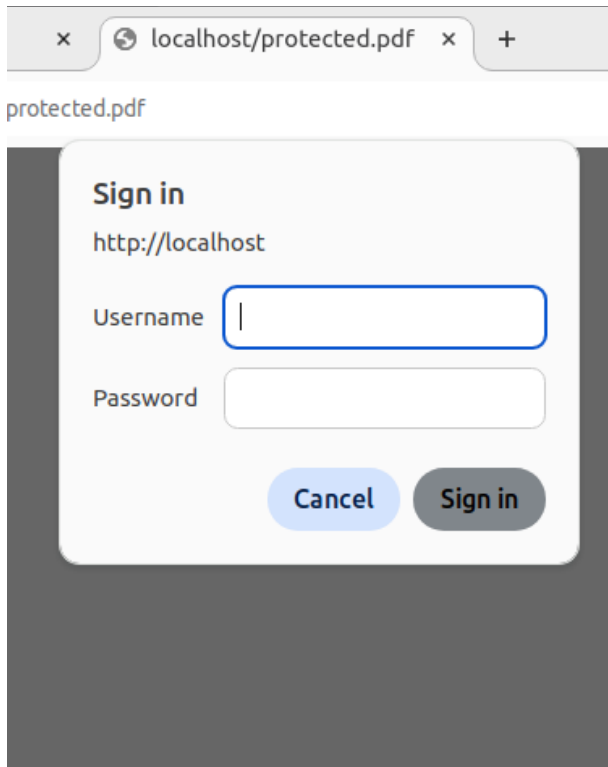
4. Apply authentication before downloading PDF files.

```
RHSA1_Day1.pdf
RHSA1_Day2.pdf
RHSA1_Day3.pdf
RHSA1_Day4new.pdf
RHSA1_Day5new.pdf
'Screenshot from 2025-04-24 16-29-46.png'
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo cp /Downloads/ RHSA1_Day1.pdf
/var/www/html/protected.pdf
cp: target '/var/www/html/protected.pdf' is not a directory
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo cp ~/Downloads/RHSA1_Day1.pdf
/var/www/html/protected.pdf
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo chown www-data:www-data /var/
www/html/protected.pdf
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo chown www-data:www-data /var/
www/html/protected.pdf
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo chmod 644 /var/www/html/prote
cted.pdf
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo nano /etc/apache2/sites-avail
able/000-default.conf
```

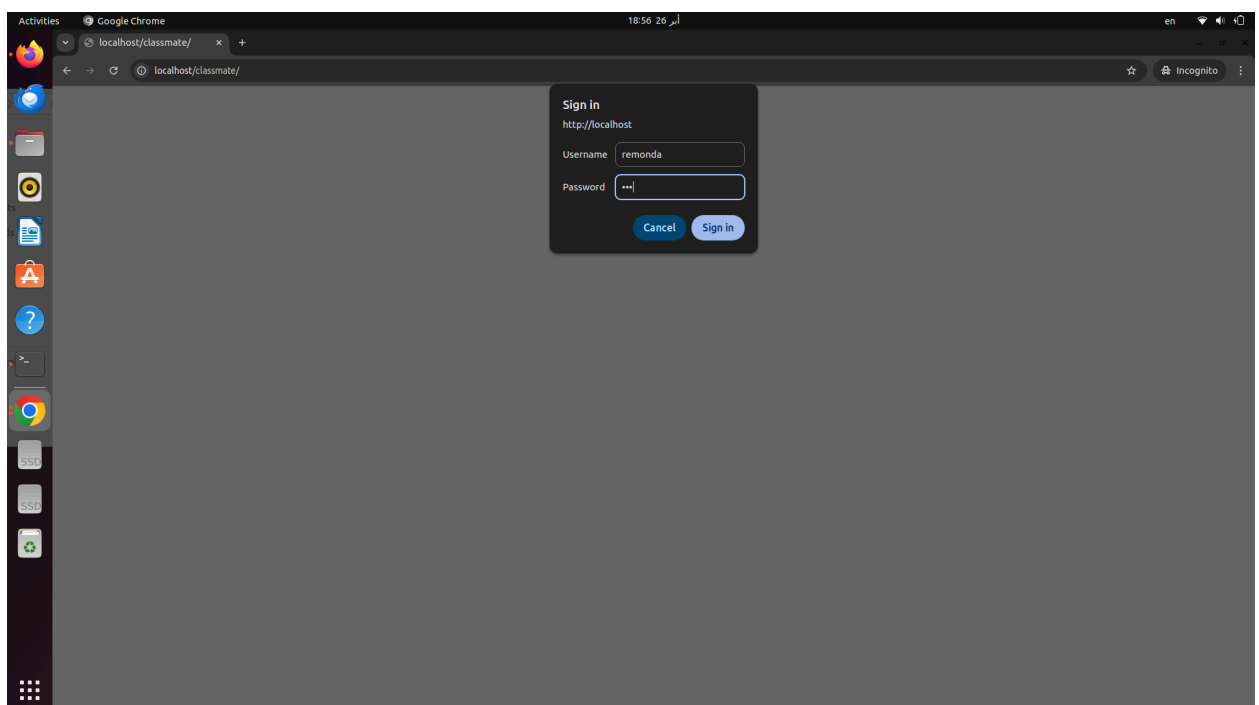
```
        AuthUserFile /etc/apache2/.htpasswd
        Require valid-user
    </Directory>

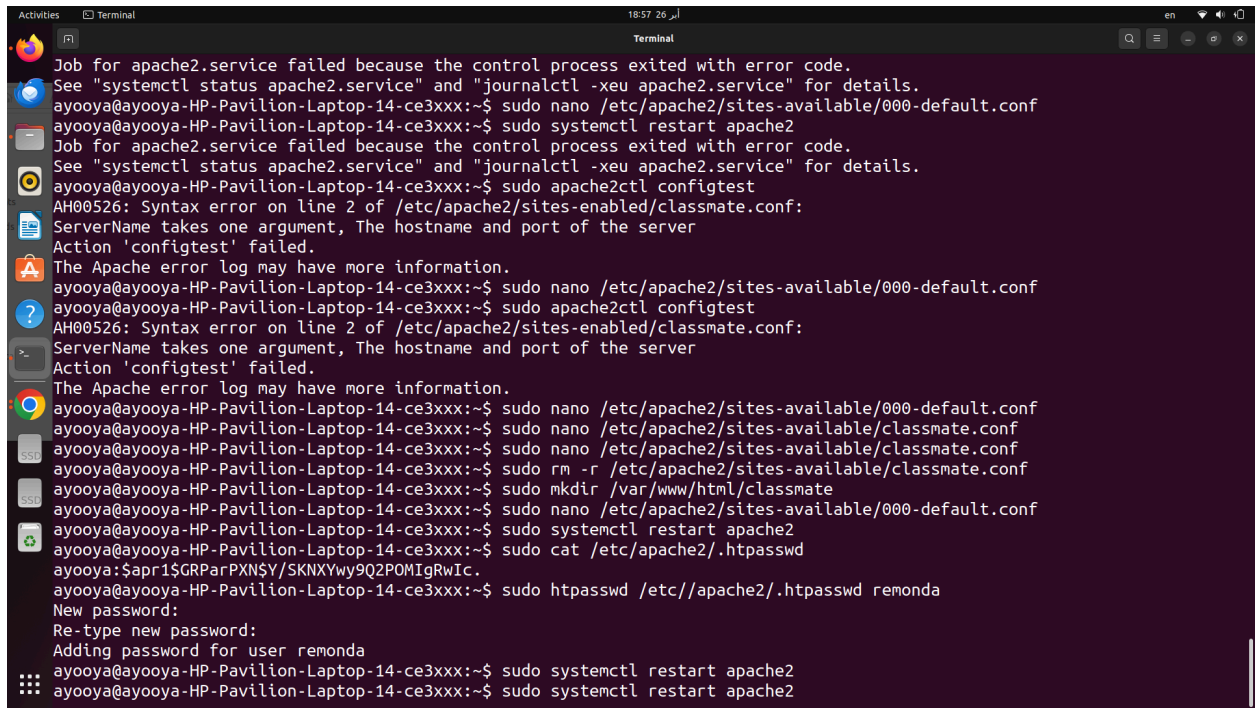
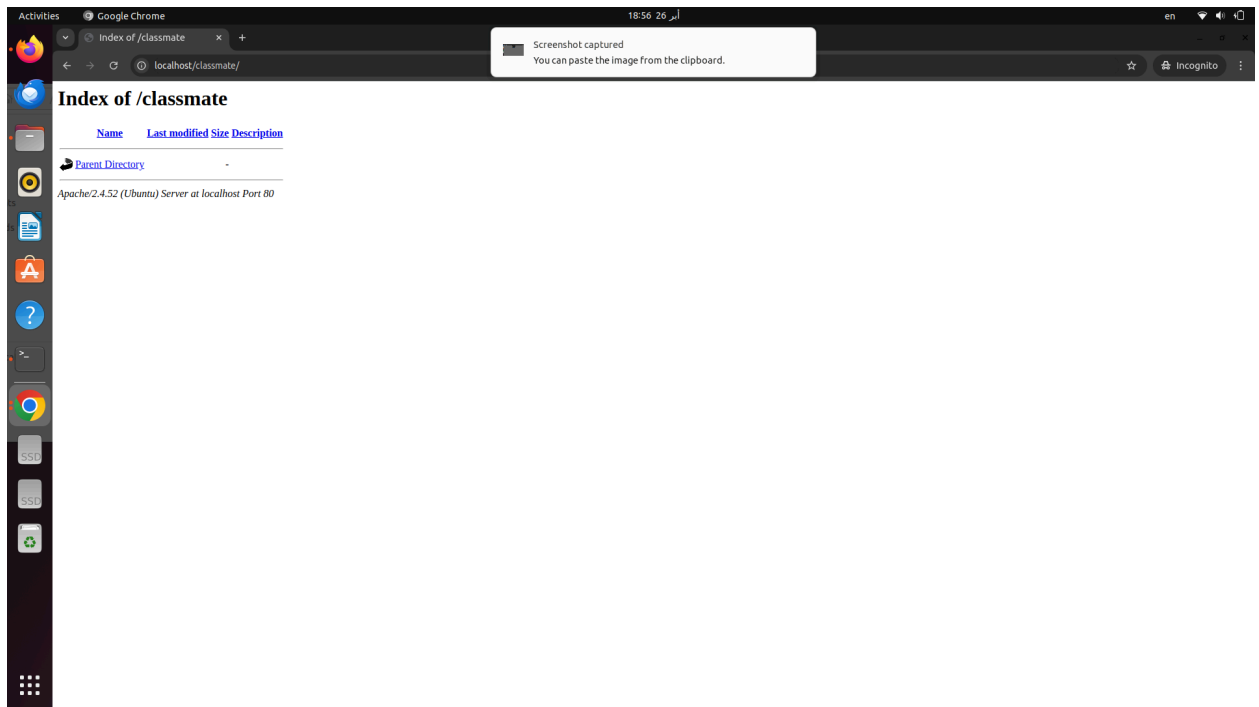
<FilesMatch "\.pdf$">
    AuthType Basic
    AuthName "PDF Access"
    AuthUserFile /etc/apache2/.htpasswd
    Require valid-user
</FilesMatch>

</VirtualHost>
```



5. Create a directory then allow access to one of your classmates only.





```
</FilesMatch>
<Directory "/var/www/html/classmate">

    AuthType Basic
    AuthName "Classmate Portal"
    AuthUserFile /etc/apache2/.htpasswd
    Require user remonda # Only allows remonda
</Directory>
```

## 6. Disable listing the directory content

```
</directory>
DirectoryIndex default.html index.html

ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo systemctl restart apache2
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo nano /etc/apache2/sites-available/000-default.conf
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ echo "This is INDEX.HTML" | sudo tee /var/www/html/index.html
echo "This is DEFAULT.HTML" | sudo tee /var/www/html/default.html
This is INDEX.HTML
This is DEFAULT.HTML
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo nano /etc/apache2/sites-available/000-default.conf
ayooya@ayooya-HP-Pavilion-Laptop-14-ce3xxx:~$ sudo systemctl restart apache2
```



7. Change the default index page to be default.html instead of index.html (use DirectoryIndex)

```
<Directory "/var/www/html">
    Options -Indexes
</Directory>
```

