Apache Lab:1

1. Install Apache HTTP server

==> Sudo apt-get update
==> Sudo apt-get install apache2

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.

```
page1.html
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/python_new$ sudo vi page2.html
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/python_new$ sudo vi page1.html
```



```html
<html>
  <head>
    <title>page2 </title>
  </head>
  <body>
    <h1>welcom to page 2 Example</h1>
    <p>
      <a href="#">page 1</a> shows you how and where you can contribute to freeCodeCamp's community and growth.
    </p>
  </body>
</html>
```



```html
<html>
  <head>
    <title>page1 </title>
  </head>
  <body>
    <h1>welcom to page 1 Example</h1>
    <p>
      <a href="#">page 1</a> shows you how and where you can contribute to freeCodeCamp's community and growth.
    </p>
  </body>
</html>
```


localhost/python_new/

Index of /python_new

Name	Last modified	Size	Description
Parent Directory		-	
page1.html	2024-08-10 17:54	687	
page2.html	2024-08-10 17:54	687	

Apache/2.4.52 (Ubuntu) Server at localhost Port 80

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/python_new$ sudo vi .htaccess
[sudo] password for ibrahim:
```


ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/python_new

ibrahim@ibrahim-Lenovo-ideapad-...   ×   ibrahim@ibrahim-Lenovo-ideapad-...   ×   ibrahim@ibrahim-L

```
Redirect /python_new/page1.html /python_new/page2.html

~
~
~
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/python_new$ sudo nano /etc/apache2/sites-available/000-default.conf
```

ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/...   ×   ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/...   ×   ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /v

```
<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

        <Directory /var/www/html/python_new>
            AllowOverride All
        </Directory>
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/python_new$ sudo systemctl restart apache2
```

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

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ sudo mkdir qu3
[sudo] password for ibrahim:
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ cd qu3/
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu3$ sudo htpasswd -c /etc/apache2/.htpasswd ibra
New password:
Re-type new password:
Adding password for user ibra
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu3$ sudo vi /etc/apache2/sites-available/000-default.conf
```

```
<Directory /var/www/html/qu3>
    AuthType Basic
    AuthName "Restricted Content"
    AuthUserFile /etc/apache2/.htpasswd
    Require valid-user
</Directory>
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu3$ sudo systemctl restart apache2
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu3$
```

localhost/qu3

Sign in

http://localhost

Username [|]

Password [ ]

Cancel   Sign in

4. Apply authentication before downloading PDF files.

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/qu4              ×        ibrahim@ibrahim

ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ sudo mkdir qu4
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ ls
index.html   python_new   qu3   qu4
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ cd qu4
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu4$ pwd
/var/www/html/qu4
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/Downloads$ sudo cp Apache_Day1.pdf /var/www/html/qu4
[sudo] password for ibrahim:
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:~/Downloads$ ▮
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu4$ ls
Apache_Day1.pdf
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu4$ sudo vi /var/www/html/qu4/.htaccess
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/qu4              ×        ibrahim@ibrahim-Le

<Files "Apache_Day1.pdf">
    AuthType Basic
    AuthName "Restricted Content"
    AuthUserFile /etc/apache2/.htpasswd
    Require valid-user
</Files>
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu4$ sudo systemctl restart apache2
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu4$ sudo systemctl restart apache2
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu4$ sudo htpasswd -c /etc/apache2/.htpasswd ibra
New password:
Re-type new password:
Adding password for user ibra
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu4$ sudo systemctl restart apache2
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu4$ sudo vi /etc/apache2/apache2.conf
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/qu4              ×        ibrahim@ibrahim-Lenovo-ide

Include ports.conf


# Sets the default security model of the Apache2 HTTPD server. It does
# not allow access to the root filesystem outside of /usr/share and /var/www.
# The former is used by web applications packaged in Debian,
# the latter may be used for local directories served by the web server. If
# your system is serving content from a sub-directory in /srv you must allow
# access here, or in any related virtual host.
<Directory />
        Options FollowSymLinks
        AllowOverride None
        Require all denied
</Directory>

<Directory /usr/share>
        AllowOverride None
        Require all granted
</Directory>

<Directory /var/www/>
        Options Indexes FollowSymLinks
        AllowOverride None
        Require all granted
</Directory>                    ▮

#<Directory /srv/>
#        Options Indexes FollowSymLinks
#        AllowOverride None
#        Require all granted
#</Directory>
```

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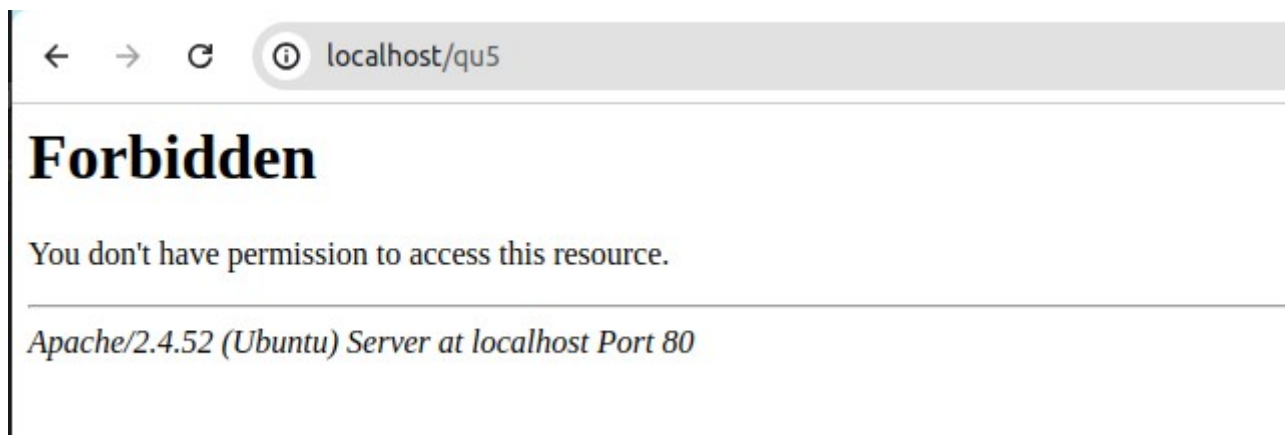


```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/qu5        ×    ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/qu4
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu4$ cd ..
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ sudo mkdir /var/www/html/qu5
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ cd qu5
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu5$ echo "<h1>Restricted Area</h1>" | sudo tee index.html
<h1>Restricted Area</h1>
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu5$ cat index.html
<h1>Restricted Area</h1>
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu5$ ls
index.html
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu5$ sudo nano /etc/apache2/sites-available/000-default.conf
```

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/qu5        ×    ibrahim@ibrahim-Lenovo-ideapa
  GNU nano 6.2                              /etc/apache2/sites-available/000-default.conf *
<Directory /var/www/html/qu3>
    AuthType Basic
    AuthName "Restricted Content"
    AuthUserFile /etc/apache2/.htpasswd
    Require valid-user
</Directory>

<Directory /var/www/html/qu5>
    Require ip 192.168.1.3
    Require all denied
</Directory>

ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu5$ sudo systemctl restart apache2
```

==> Trying to access the qu5 from my pc ==>
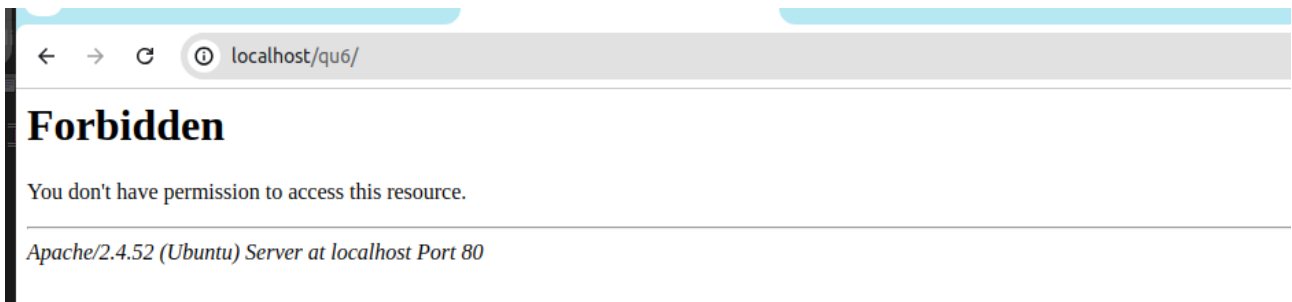

==> Trying to access the qu5 from my phone :) ==>

6. Disable listing the directory content (hint use indexs)


```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu5$ cd ..
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ sudo mkdir /var/www/html/qu6
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ cd qu6
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu6$ sudo nano /etc/apache2/sites-available/000-default.conf
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu6$ sudo systemctl restart apache2
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu6$
```

ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/qu6

```
  GNU nano 6.2                                        /etc/apache2/sites-availabl
        <Directory /var/www/html/python_new>

            AllowOverride All
        </Directory>

<Directory /var/www/html/qu6>
    Options -Indexes
</Directory>
```

← → C ⓘ localhost/qu6/

Forbidden

You don't have permission to access this resource.

Apache/2.4.52 (Ubuntu) Server at localhost Port 80

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

```
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ sudo mkdir qu7
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html$ cd qu7
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu7$ ls
ibrahim@ibrahim-Lenovo-ideapad-100-15IBD:/var/www/html/qu7$ sudo vi default.html
```

ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/qu7   ×   ibrahim@ibrahim-Lenovo-ide

```html
<!DOCTYPE html>
<html>
<head>
    <title>Default Page</title>
</head>
<body>
    <h1>Hi from the Default Page</h1>
</body>
</html>
```

ibrahim@ibrahim-Lenovo-ideapad-100-15IBD: /var/www/html/qu7   ×   ibrahim@ibrahim-Lenovo-id

```
<Directory /var/www/html/qu3>
    AuthType Basic
    AuthName "Restricted Content"
    AuthUserFile /etc/apache2/.htpasswd
    Require valid-user
</Directory>

<Directory /var/www/html/qu5>
    Require ip 192.168.1.3
    Require all denied
</Directory>

<Directory /var/www/html/qu7>
    DirectoryIndex default.html
</Directory>
```

← → C ⓘ localhost/qu7/default.html

Hi from the Default Page