

Seif El-Din Mohamed Aboelhassan Hendawy

Lab 1

1. Install Apache HTTP server

```
seif@alienware-17-r5:~$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enable
   Active: active (running) since Mon 2023-08-21 14:02:44 EEST; 1min 46s ago
     Docs: https://httpd.apache.org/docs/2.4/
   Main PID: 7560 (apache2)
    Tasks: 55 (limit: 18912)
   Memory: 5.1M
      CPU: 147ms
   CGroup: /system.slice/apache2.service
           └─7560 /usr/sbin/apache2 -k start
             └─7562 /usr/sbin/apache2 -k start
               └─7563 /usr/sbin/apache2 -k start

Aug 21 14:02:44 alienware-17-r5 systemd[1]: Starting The Apache HTTP Server...
Aug 21 14:02:44 alienware-17-r5 apachectl[7559]: AH00558: apache2: Could not reliably de
Aug 21 14:02:44 alienware-17-r5 systemd[1]: Started The Apache HTTP Server.
seif@alienware-17-r5:~$ apache2 -v
Server version: Apache/2.4.52 (Ubuntu)
Server built: 2023-05-03T20:02:51
seif@alienware-17-r5:~$
```

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.

```
seif@alienware-17-r5:~$ cd /var/www/html
seif@alienware-17-r5:/var/www/html$ sudo touch page{1,2}.html
seif@alienware-17-r5:/var/www/html$ ls
index.html  page1.html  page2.html
seif@alienware-17-r5:/var/www/html$ sudo nano page1.html
seif@alienware-17-r5:/var/www/html$ sudo vi page1.html
seif@alienware-17-r5:/var/www/html$ sudo vi page2.html
seif@alienware-17-r5:/var/www/html$ sudo nano page2.html
seif@alienware-17-r5:/var/www/html$ sudo nano page1.html
seif@alienware-17-r5:/var/www/html$ cat page1.html
<html>
<head>
  <meta http-equiv="refresh" content="0;url=/page2.html">
</head>
<body>
  <h1>Page 1.</h1>
</body>
</html>
seif@alienware-17-r5:/var/www/html$
```

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

```
GNU nano 6.2 /etc/apache2/sites-available/secure-  
<Directory /var/www/html/secure>  
    AuthType Basic  
    AuthName "Restricted web page"  
    AuthUserFile /etc/apache2/.htpasswd  
    Require valid-user  
ta</Directory>
```

```
seif@alienware-17-r5:/var/www/html$ sudo mkdir /var/www/html/secure  
[sudo] password for seif:  
seif@alienware-17-r5:/var/www/html$ sudo htpasswd -c /etc/apache2/.htpasswd seif  
New password:  
Re-type new password:  
Adding password for user seif  
seif@alienware-17-r5:/var/www/html$ sudo nano /etc/apache2/sites-available/secure-  
e-directory.conf  
seif@alienware-17-r5:/var/www/html$ sudo a2ensite secure-directory.conf  
Enabling site secure-directory.  
To activate the new configuration, you need to run:  
    systemctl reload apache2  
seif@alienware-17-r5:/var/www/html$ systemctl reload apache2  
seif@alienware-17-r5:/var/www/html$ systemctl reload apache2  
seif@alienware-17-r5:/var/www/html$ systemctl reload apache2  
seif@alienware-17-r5:/var/www/html$ sudo nano /etc/apache2/sites-available/secure-  
e-directory.conf  
seif@alienware-17-r5:/var/www/html$
```

localhost

This site is asking you to sign in.

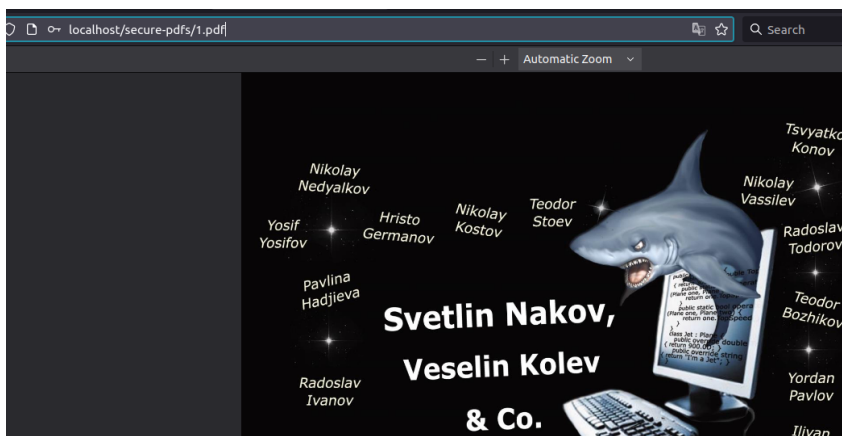
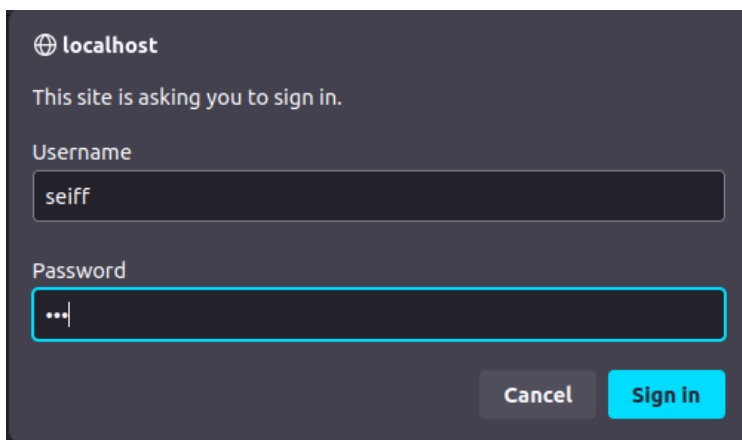
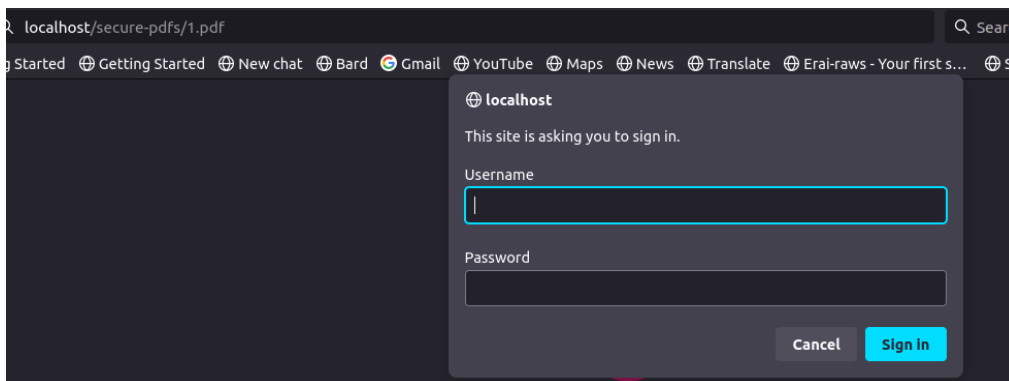
Username

Password

Cancel Sign In

4. Apply authentication before downloading PDF files

```
seif@alienware-17-r5:/var/www/html/secure$ sudo htpasswd -c /etc/apache2/.htpasswd seiff
New password:
Re-type new password:
Adding password for user seiff
seif@alienware-17-r5:/var/www/html/secure$ sudo nano /etc/apache2/sites-available/pdf-authentication.conf
seif@alienware-17-r5:/var/www/html/secure$ sudo a2ensite pdf-authentication.conf
Enabling site pdf-authentication.
To activate the new configuration, you need to run:
systemctl reload apache2
seif@alienware-17-r5:/var/www/html/secure$ sudo systemctl reload apache2
seif@alienware-17-r5:/var/www/html/secure$ cd ..
seif@alienware-17-r5:/var/www/html$ sudo mkdir /var/www/html/secure-pdfs
seif@alienware-17-r5:/var/www/html$ ls
index.html page1.html page2.html secure secure-pdfs
seif@alienware-17-r5:/var/www/html$ cd secure-pdfs/
seif@alienware-17-r5:/var/www/html/secure-pdfs$ sudo mv /var/www/html/secure/*.pdf /var/www/html/secure-pdfs
seif@alienware-17-r5:/var/www/html/secure-pdfs$ ls
```



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

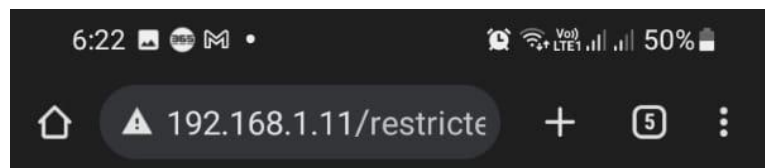
```
seif@alienware-17-r5:/var/www/html$ sudo mkdir restricted
seif@alienware-17-r5:/var/www/html$ ls
index.html page1.html page2.html restricted secure secure-pdfs
seif@alienware-17-r5:/var/www/html$ sudo nano /etc/apache2/sites-available/restricted-directory.conf
seif@alienware-17-r5:/var/www/html$ sudo a2ensite restricted-directory.conf
Enabling site restricted-directory.
To activate the new configuration, you need to run:
    systemctl reload apache2
seif@alienware-17-r5:/var/www/html$ sudo systemctl reload apache2
seif@alienware-17-r5:/var/www/html$ sudo nano /etc/apache2/sites-available/pdf-authentication.conf
seif@alienware-17-r5:/var/www/html$ sudo nano /etc/apache2/sites-available/restricted-directory.conf
seif@alienware-17-r5:/var/www/html$ sudo nano /etc/apache2/sites-available/restricted-directory.conf
seif@alienware-17-r5:/var/www/html$ sudo systemctl reload apache2
Job for apache2.service failed.
See "systemctl status apache2.service" and "journalctl -xeu apache2.service" for details.
seif@alienware-17-r5:/var/www/html$ sudo apachectl configtest
AH00526: Syntax error on line 7 of /etc/apache2/sites-enabled/restricted-directory.conf:
Argument for 'Require all' must be 'granted' or 'denied'
Action 'configtest' failed.
The Apache error log may have more information.
seif@alienware-17-r5:/var/www/html$ sudo nano /etc/apache2/sites-available/restricted-directory.conf
seif@alienware-17-r5:/var/www/html$ sudo systemctl reload apache2
```

```
GNU nano 6.2
<Directory /var/www/html/restricted>
    Deny from all
    Allow from 192.168.1.2
</Directory>
```

Forbidden

You don't have permission to access this resource.

Apache/2.4.52 (Ubuntu) Server at localhost Port 80



Index of /restricted

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
 Parent Directory		-	
 page1.html	2023-08-21 16:53	124	
 page2.html	2023-08-21 16:53	51	

Apache/2.4.52 (Ubuntu) Server at 192.168.1.11 Port 80

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



Index of /secure

Name	Last modified	Size	Description
 Parent Directory		-	

Apache/2.4.52 (Ubuntu) Server at localhost Port 80

```
<Directory /var/www/html/secure>
  AllowOverride All
  AuthType Basic
  AuthName "Restricted web page"
  AuthUserFile /etc/apache2/.htpasswd
  Require valid-user
</Directory>
```

After



Forbidden

You don't have permission to access this resource.

Apache/2.4.52 (Ubuntu) Server at localhost Port 80

```
seif@alienware-17-r5:/var/www/html$ cat /etc/ap
<Directory /var/www/html/secure>
  Options -Indexes
  AllowOverride All
  AuthType Basic
  AuthName "Restricted web page"
  AuthUserFile /etc/apache2/.htpasswd
  Require valid-user
</Directory>
```

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

```
seif@alienware-17-r5:/var/www/html$ sudo nano /etc/apache2/mods-available/dir.conf
seif@alienware-17-r5:/var/www/html$ cat /etc/apache2/mods-available/dir.conf
<IfModule mod_dir.c>
    #DirectoryIndex index.html index.cgi index.pl index.php index.xhtml index.htm
    DirectoryIndex default.html
</IfModule>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
seif@alienware-17-r5:/var/www/html$ sudo systemctl restart apache2
seif@alienware-17-r5:/var/www/html$
```