

1. Install Apache HTTP server

```
aya@Aya:~$ sudo apt update
[sudo] password for aya:
Hit:1 http://archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
Get:3 http://archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]
Get:4 http://archive.ubuntu.com/ubuntu jammy-backports InRelease [109 kB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1056 kB]
Get:6 http://archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:7 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [200 kB]
Get:8 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [1233 kB]
Get:9 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [202 kB]
Get:10 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [824 kB]
Get:11 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [156 kB]
Get:12 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [16.8 kB]
Get:13 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [36.5 kB]
Get:14 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [7060 B]
Get:15 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [260 B]
Get:16 http://archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:17 http://archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:18 http://archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:19 http://archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:20 http://archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:21 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [1268 kB]
```

```
aya@Aya:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser bzip2-doc
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils bzip2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.3-0 mailcap mime-support ssl-cert
0 upgraded, 13 newly installed, 0 to remove and 4 not upgraded.
Need to get 2139 kB of archives.
After this operation, 8518 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libapr1 amd64 1.7.0-8ubuntu0.22.04.1 [108 kB]
Get:2 http://archive.ubuntu.com/ubuntu jammy-updates/main amd64 libaprutil1 amd64 1.6.1-5ubuntu4.22.04.2 [92.8 kB]
```

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.

```
aya@Aya:~$ cd /var/www/html
aya@Aya:/var/www/html$ cd /var/www/html/apachetasks/
aya@Aya:/var/www/html/apachetasks$ touch pag1.html
touch: cannot touch 'pag1.html': Permission denied
aya@Aya:/var/www/html/apachetasks$ sudo touch pag1.html
[sudo] password for aya:
aya@Aya:/var/www/html/apachetasks$ vi pag1.html
aya@Aya:/var/www/html/apachetasks$ sudo vi pag1.html
aya@Aya:/var/www/html/apachetasks$ sudo touch pag2.html
aya@Aya:/var/www/html/apachetasks$ sudo vi pag2.html
aya@Aya:/var/www/html/apachetasks$
```

```

aya@Aya:/var/www/html/apachetasks$ sudo service apache2 start
aya@Aya:/var/www/html/apachetasks$ sudo service apache2 status
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2024-01-05 16:50:03 EET; 9min ago
     Docs: https://httpd.apache.org/docs/2.4/
  Process: 208 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUCCESS)
 Main PID: 238 (apache2)
    Tasks: 55 (limit: 7031)
   Memory: 23.7M
    CGroup: /system.slice/apache2.service
           └─238 /usr/sbin/apache2 -k start
             └─239 /usr/sbin/apache2 -k start
               └─240 /usr/sbin/apache2 -k start

Jan 05 16:50:03 Aya systemd[1]: Starting The Apache HTTP Server...
Jan 05 16:50:03 Aya systemd[1]: Started The Apache HTTP Server.
aya@Aya:/var/www/html/apachetasks$

```

```

ServerAdmin webmaster@localhost
DocumentRoot /var/www/html
Redirect /apachetasks/pag1.html /apachetasks/pag2.html

# Available loglevels: trace8, ..., trace1, debug, info, not
# error, crit, alert, emerg.

```

```

aya@Aya:/etc/apache2/sites-available$ sudo vi 000-default.conf
aya@Aya:/etc/apache2/sites-available$ sudo service apache2 restart

```

localhost/apachetasks/pag2.html

hello from page2

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

```

<Directory /var/www/html/apachetasks>
AuthType basic
AuthName "admins only"
AuthUserFile /var/www/html/apachetasks/.admins
require valid-user
</Directory>

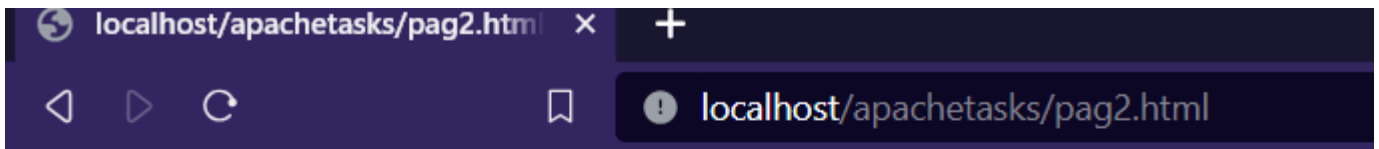
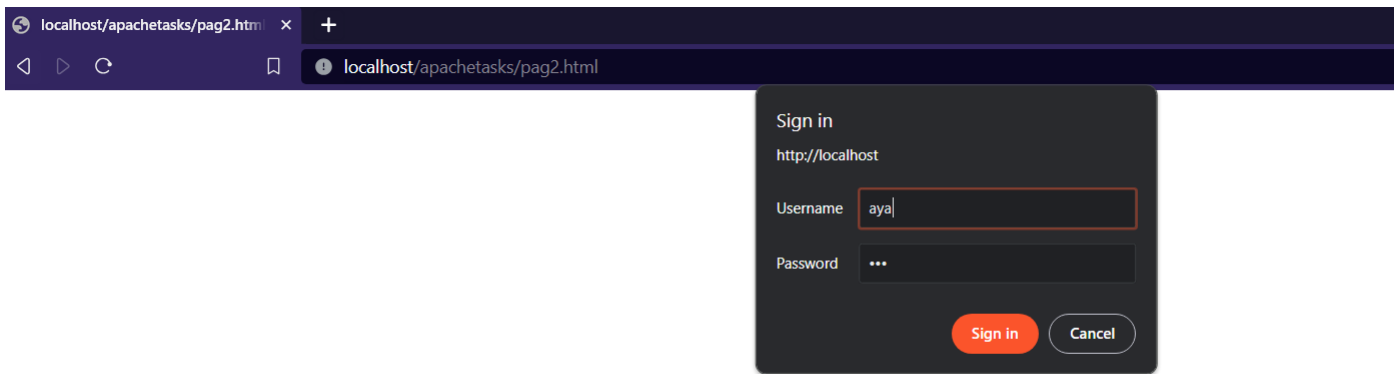
-- INSERT --

```

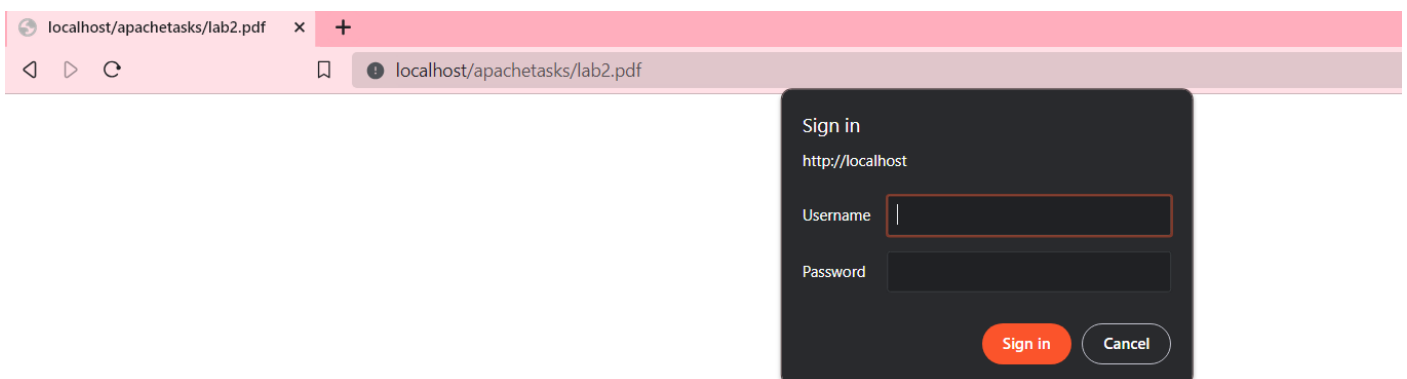
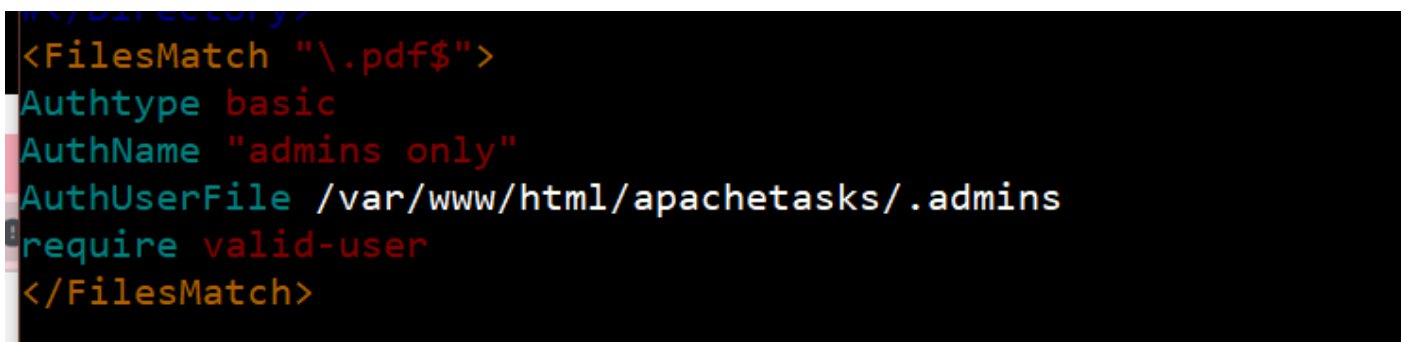
```

aya@Aya:/etc/apache2$ cd /var/www/html/apachetasks/
aya@Aya:/var/www/html/apachetasks$ sudo htpasswd -c .admins aya
New password:
Re-type new password:
Adding password for user aya
aya@Aya:/var/www/html/apachetasks$ sudo service apache2 restart
aya@Aya:/var/www/html/apachetasks$

```

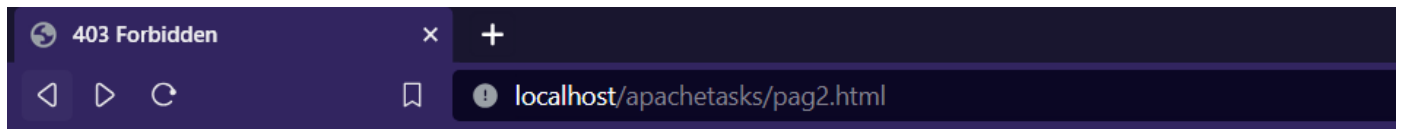


4. Apply authentication before downloading PDF files.



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

```
<Directory /var/www/html/apachetasks>
Allow from 192.168.1.3
Deny from all
order deny,allow
</Directory>
```



Forbidden

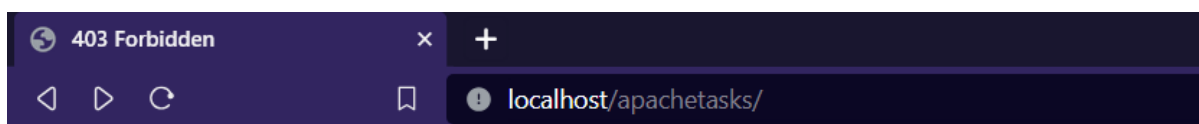
You don't have permission to access this resource.

Apache/2.4.52 (Ubuntu) Server at localhost Port 80

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

```
aya@Aya:/var/www/html/apachetasks$ sudo vi /etc/apache2/apache2.conf
aya@Aya:/var/www/html/apachetasks$ sudo service apache2 restart
```

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



Forbidden

You don't have permission to access this resource.

Apache/2.4.52 (Ubuntu) Server at localhost Port 80

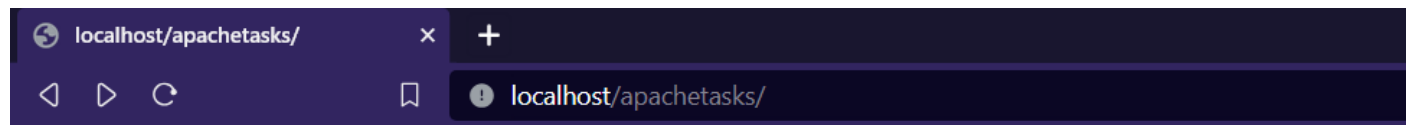
7. Change the default index page to be default.html instead of index.html (use

DirectoryIndex)

```
aya@Aya:/etc/apache2/mods-enabled$ sudo vi /etc/apache2/mods-enabled/dir.conf
aya@Aya:/etc/apache2/mods-enabled$ cd /var/www/html/apachetasks/
aya@Aya:/var/www/html/apachetasks$ sudo vi default.html
aya@Aya:/var/www/html/apachetasks$ sudo service apache2 restart
```

```
aya@Aya: /etc/apache2/mods-enabled
<IfModule mod_dir.c>
    DirectoryIndex default.html index.cgi index.pl index.php index.xhtml index.htm
</IfModule>

# vim: syntax=apache ts=4 sw=4 sts=4 sr noet
~
~
~
~
```



hello from default.html