45.Create a web application with simple web page containing login details and create a docker image of the application.(Use Apache Web server)

46.Run the Docker container from recently created image and run the container at port number 80 in host system.

Step 1: Install Apache Web Server

For Ubuntu/Debian-based systems

sudo apt-get update

sudo apt-get install apache2 -y

Step 2: Create a Simple Web Application with Login Page

Create the directory for your application:

mkdir -p ~/mywebapp

cd ~/mywebapp

create an HTML login page (index.html): Create a simple login form in the index.html file in the same folder using

gedit index.html

In that paste the following code

<!DOCTYPE html>

<html lang="en">

<head>

  <meta charset="UTF-8">

  <meta name="viewport" content="width=device-width, initial-scale=1.0">

  <title>Login Page</title>

</head>

<body>

  <h1>Login</h1>

```html
    <form action="/login" method="POST">

        <label for="username">Username:</label><br>

        <input type="text" id="username" name="username"><br><br>

        <label for="password">Password:</label><br>

        <input type="password" id="password" name="password"><br><br>

        <input type="submit" value="Login">

    </form>

</body>

</html>
```

3. Create a basic `Dockerfile` to set up the Apache server inside a Docker container:

use the following commands

gedit Dockerfile

```dockerfile
# Use official Apache HTTPD image

FROM httpd:2.4

# Set the working directory

WORKDIR /usr/local/apache2/htdocs/

# Copy the web application files into the container

COPY ./index.html .

# Expose port 80

EXPOSE 80
```

Step 3: Create Docker Image

Build the Docker image: In the directory where your Dockerfile and index.html are located, run:

Copy code

sudo docker build -t mywebapp .

Run the Docker container on port 80 of your host system:

sudo docker run -d -p 80:80 --name mywebapp-container mywebapp

Step 5: Test the Application

Check if the container is running:

sudo docker ps

Open a web browser and go to http://localhost (or http://<your-server-ip> if you're not working on localhost). You should see the login page you created earlier.