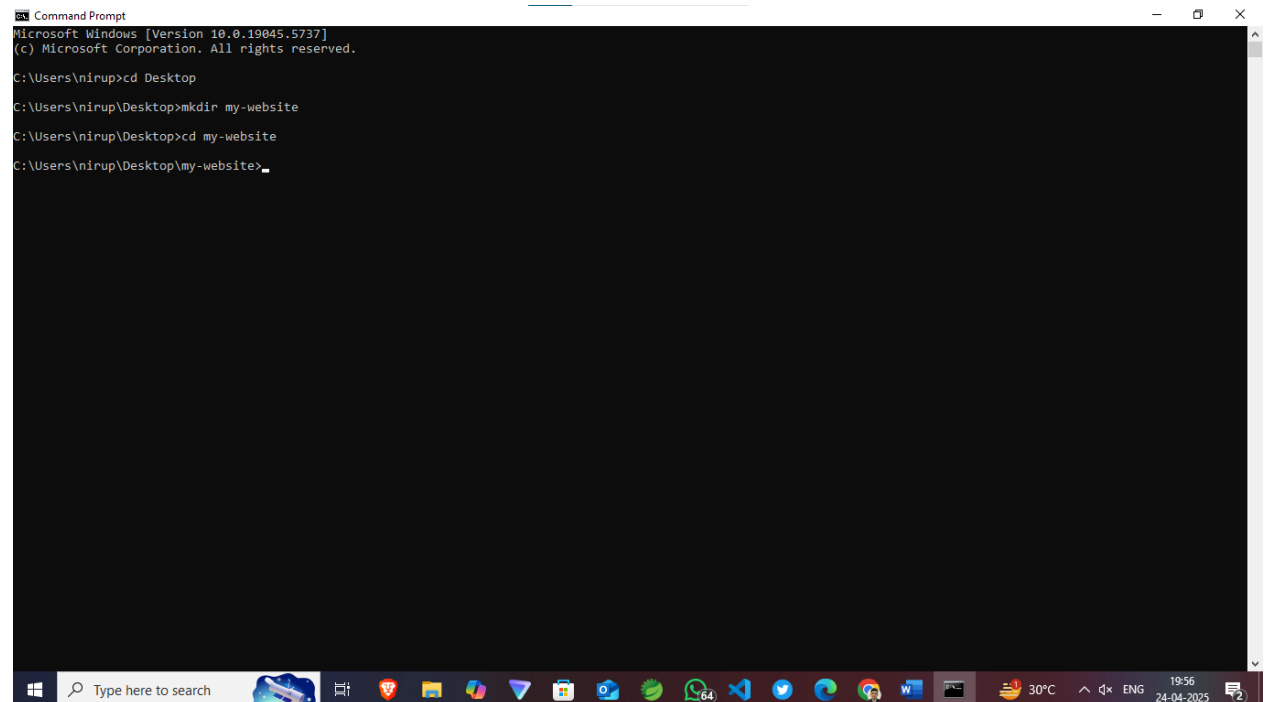


**Name: Nirupom Saha**

**Reg. No: 2141019011**

## **Exercise**

- **Creating Project Directory**

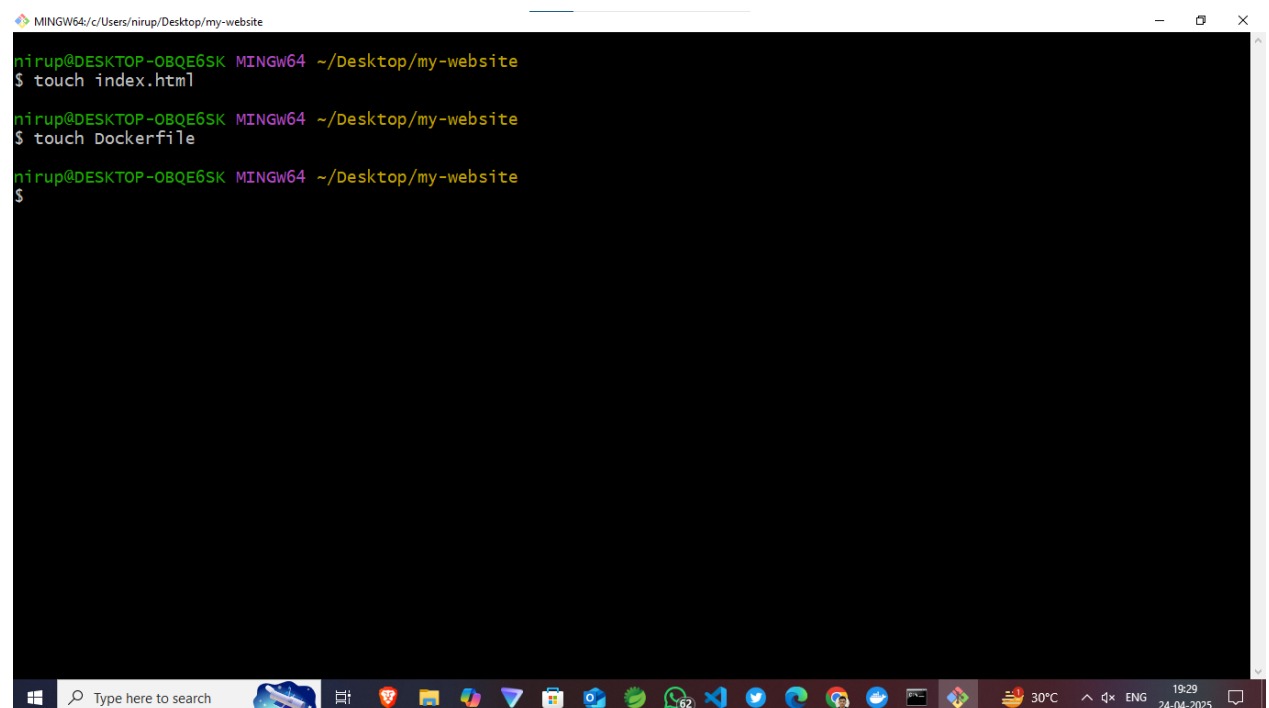


```
Command Prompt
Microsoft Windows [Version 10.0.19045.5737]
(c) Microsoft Corporation. All rights reserved.

C:\Users\nirup>cd Desktop
C:\Users\nirup\Desktop>mkdir my-website
C:\Users\nirup\Desktop>cd my-website
C:\Users\nirup\Desktop\my-website>
```

The screenshot shows a Windows Command Prompt window. The title bar reads "Command Prompt". The text inside shows the user navigating to the Desktop, creating a directory named "my-website" using the "mkdir" command, and then changing the current directory to "my-website" using the "cd" command. The Windows taskbar is visible at the bottom with various application icons and a system tray showing the temperature as 30°C and the date as 24-04-2025.

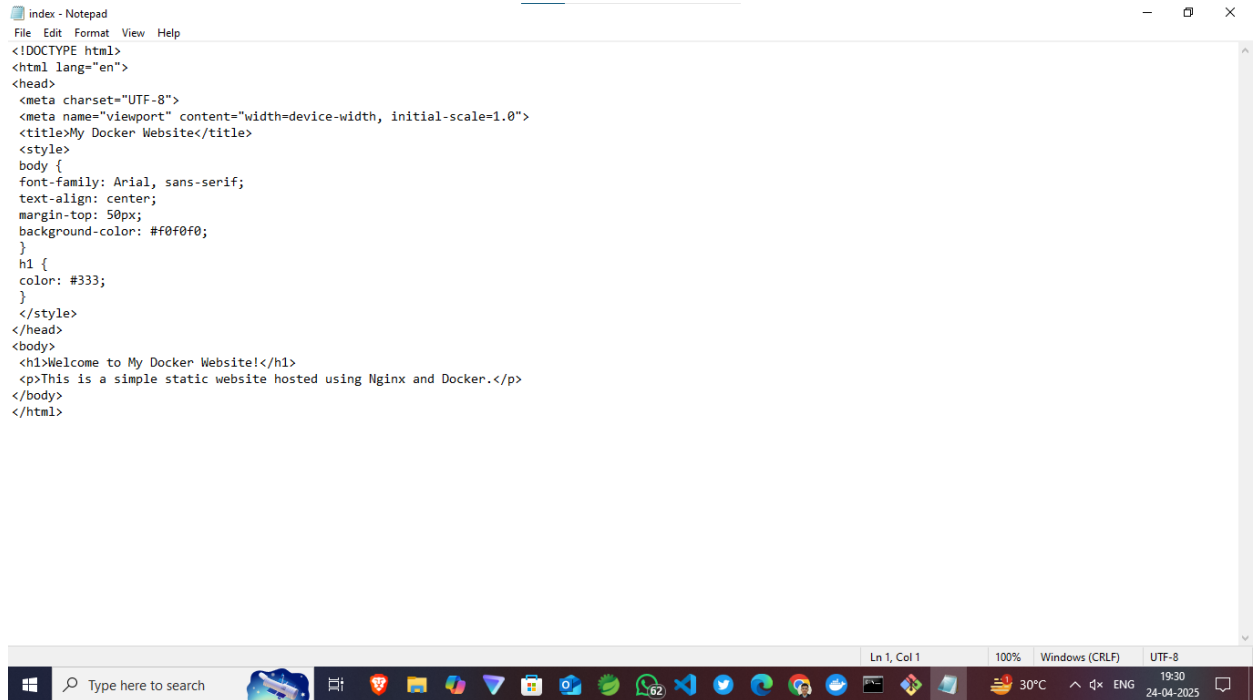
- **Creating Website Files**



```
MINGW64/c/Users/nirup/Desktop/my-website
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/my-website
$ touch index.html
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/my-website
$ touch Dockerfile
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/my-website
$
```

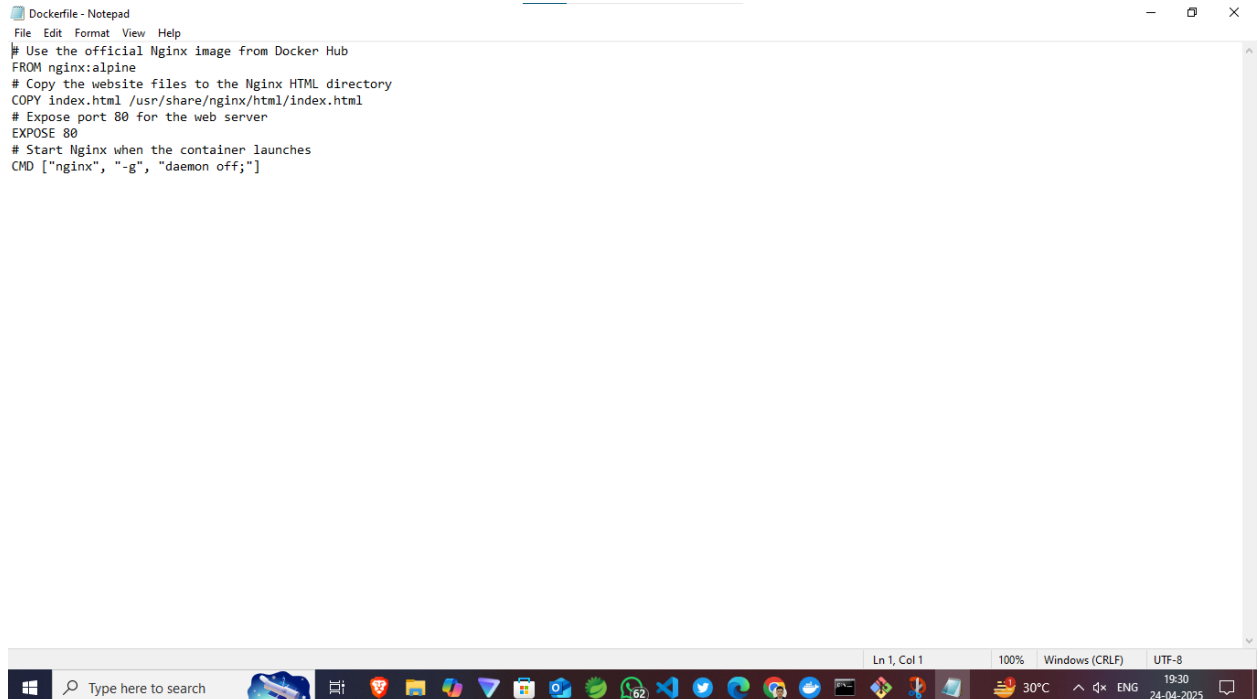
The screenshot shows a Windows Command Prompt window with the title "MINGW64/c/Users/nirup/Desktop/my-website". The text inside shows the user running "touch index.html" and "touch Dockerfile" commands to create files in the current directory. The Windows taskbar is visible at the bottom, similar to the previous screenshot, with the system tray showing 19:29 on 24-04-2025.

- **File: index.html**



```
index - Notepad
File Edit Format View Help
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>My Docker Website</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      margin-top: 50px;
      background-color: #f0f0f0;
    }
    h1 {
      color: #333;
    }
  </style>
</head>
<body>
  <h1>Welcome to My Docker Website!</h1>
  <p>This is a simple static website hosted using Nginx and Docker.</p>
</body>
</html>
```

- **File: Dockerfile**



```
Dockerfile - Notepad
File Edit Format View Help
# Use the official Nginx image from Docker Hub
FROM nginx:alpine
# Copy the website files to the Nginx HTML directory
COPY index.html /usr/share/nginx/html/index.html
# Expose port 80 for the web server
EXPOSE 80
# Start Nginx when the container launches
CMD ["nginx", "-g", "daemon off;"]
```

- **Building and Running the Docker Container**

```

Microsoft Windows [Version 10.0.19045.5737]
(c) Microsoft Corporation. All rights reserved.

C:\Users\nirup>cd Desktop

C:\Users\nirup\Desktop>mkdir my-website

C:\Users\nirup\Desktop>cd my-website

C:\Users\nirup\Desktop\my-website>docker build -t my-website .
[+] Building 8.0s (8/8) FINISHED                                docker:desktop-linux
=> [internal] load build definition from Dockerfile             0.1s
=> => transferring dockerfile: 335B                             0.0s
=> [internal] load metadata for docker.io/library/nginx:alpine  7.5s
=> [auth] library/nginx:pull token for registry-1.docker.io     0.0s
=> [internal] load .dockerignore                                0.0s
=> => transferring context: 2B                                    0.0s
=> [internal] load build context                                0.1s
=> => transferring context: 528B                                  0.0s
=> [1/2] FROM docker.io/library/nginx:alpine@sha256:65645c7bb6a0661892a8b03b89d0743208a18dd2f3f17a54ef4b76fb8e2f 0.0s
=> CACHED [2/2] COPY index.html /usr/share/nginx/html/index.html 0.0s
=> exporting to image                                           0.1s
=> => exporting layers                                           0.0s
=> => writing image sha256:52984b46b673aa92299bb93145488f985faefaeae9039697af3b6517681c3984 0.0s
=> naming to docker.io/library/my-website                      0.0s

View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/tef5a72d5exj0rn8b93tzffsc

C:\Users\nirup\Desktop\my-website>docker run -d -p 8080:80 --name my-website-container my-website
e55ac8f59d414d2118668fd416f8288625936ff4f6ba65daa81cabb9746f4964

C:\Users\nirup\Desktop\my-website>

```

docker.desktop

PERSONAL

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N

Ask Gordon BETA

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Container CPU usage

0.00% / 400% (4 CPUs available)

Container memory usage

6.21MB / 7.52GB

Show charts

Only show running containers

<input type="checkbox"/>	Name	Container ID	Image	Port(s)	CPU (%)	Last started	Actions
<input type="checkbox"/>	client-run-3ffcea	b339eb0b0c50	<a href="#">c-client</a>		0%	14 days ago	<a href="#">▶</a> <a href="#">⋮</a> <a href="#">🗑</a>
<input type="checkbox"/>	server-run-c05ei	9bf948a48886	<a href="#">c-server</a>		0%	14 days ago	<a href="#">▶</a> <a href="#">⋮</a> <a href="#">🗑</a>
<input type="checkbox"/>	clever_borg	dabc49c6d780	<a href="#">hello-world:lates</a>		0%	14 days ago	<a href="#">▶</a> <a href="#">⋮</a> <a href="#">🗑</a>
<input type="checkbox"/>	optimistic_kare	59aa41258327	<a href="#">python:lates</a>		0%	14 days ago	<a href="#">▶</a> <a href="#">⋮</a> <a href="#">🗑</a>
<input type="checkbox"/>	my-website-con	e55ac8f59d41	<a href="#">my-website</a>	8080:80	0%	3 minutes ago	<a href="#">▶</a> <a href="#">⋮</a> <a href="#">🗑</a>
<input type="checkbox"/>	c	-	-	-	0%	14 days ago	<a href="#">▶</a> <a href="#">⋮</a> <a href="#">🗑</a>
<input type="checkbox"/>	python	-	-	-	0%	14 days ago	<a href="#">▶</a> <a href="#">⋮</a> <a href="#">🗑</a>

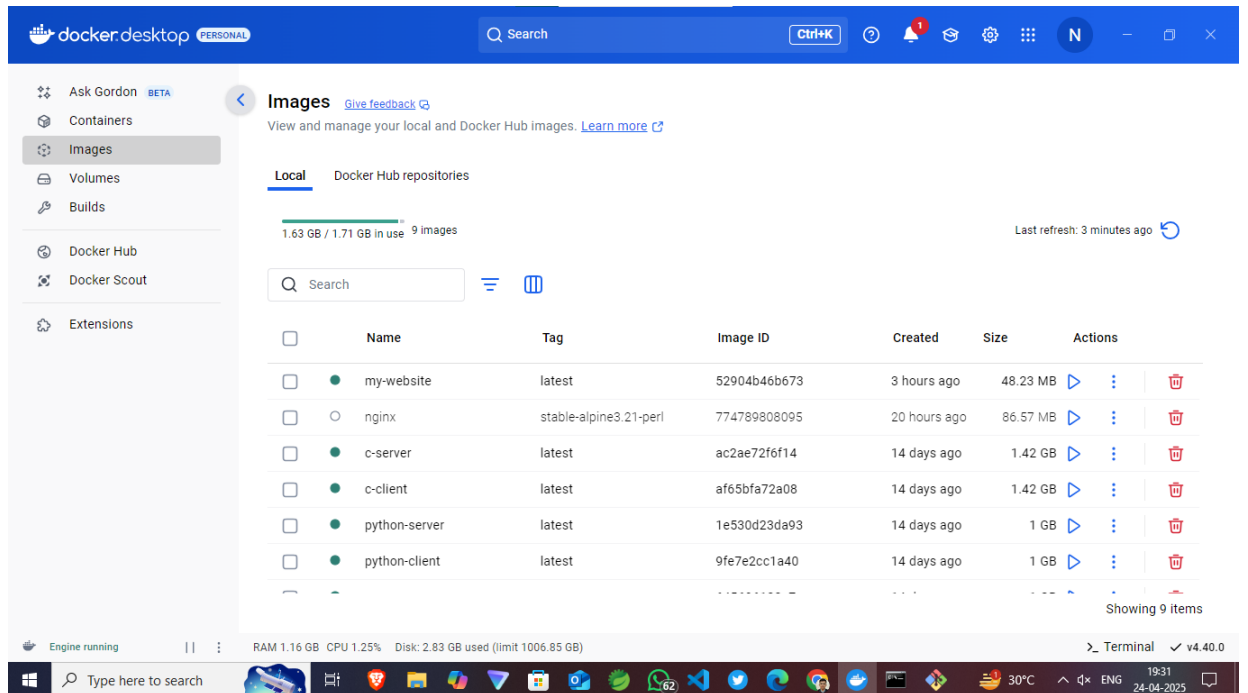
Showing 7 items

Engine running

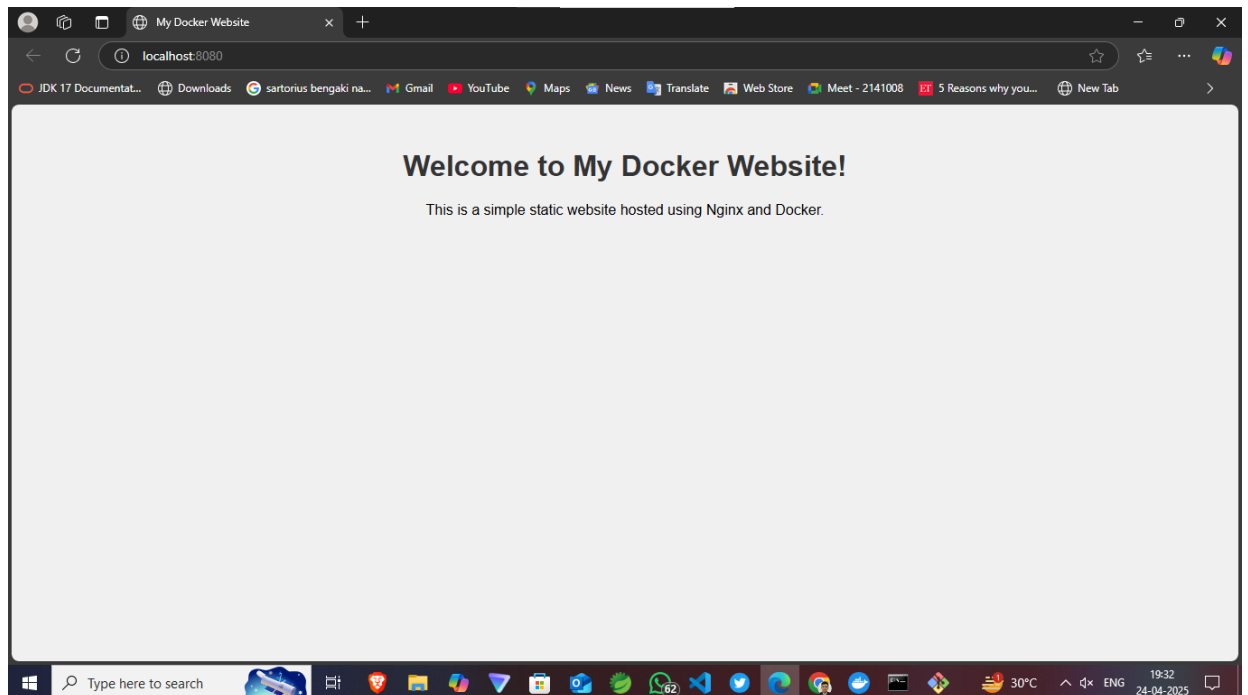
RAM 1.15 GB CPU 0.75% Disk: 2.83 GB used (limit 1006.85 GB)

Terminal

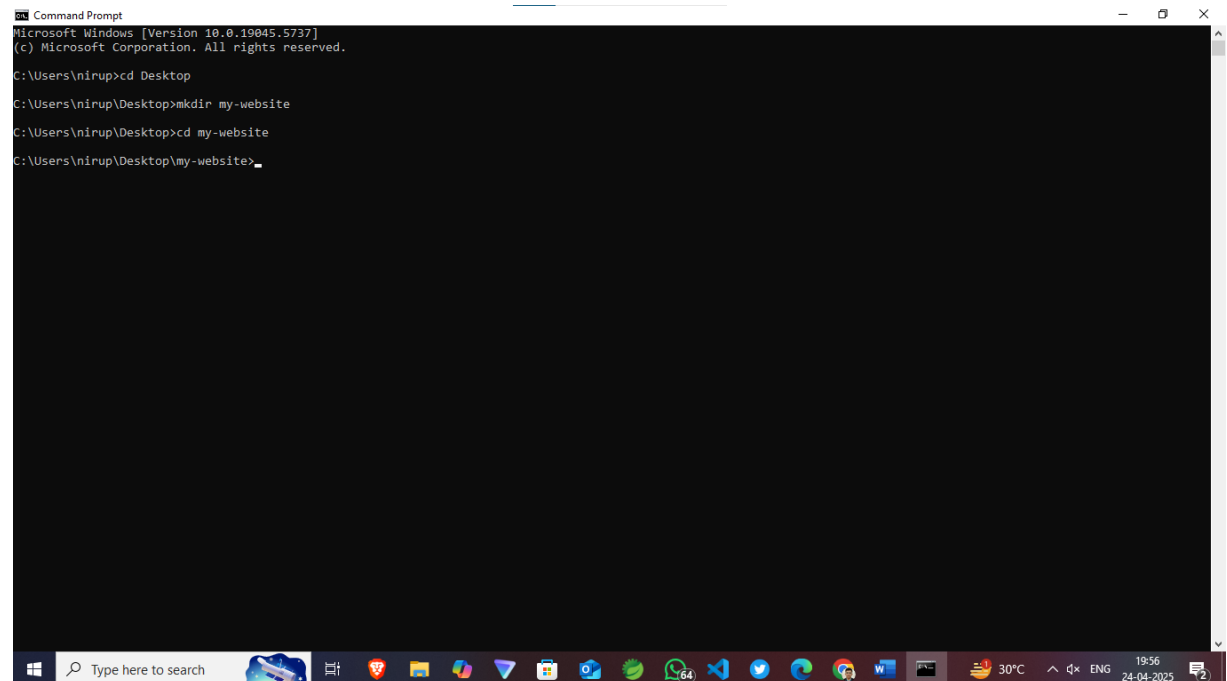
v4.40.0



- **Accessing the Website**



- **Creating Project Directory**

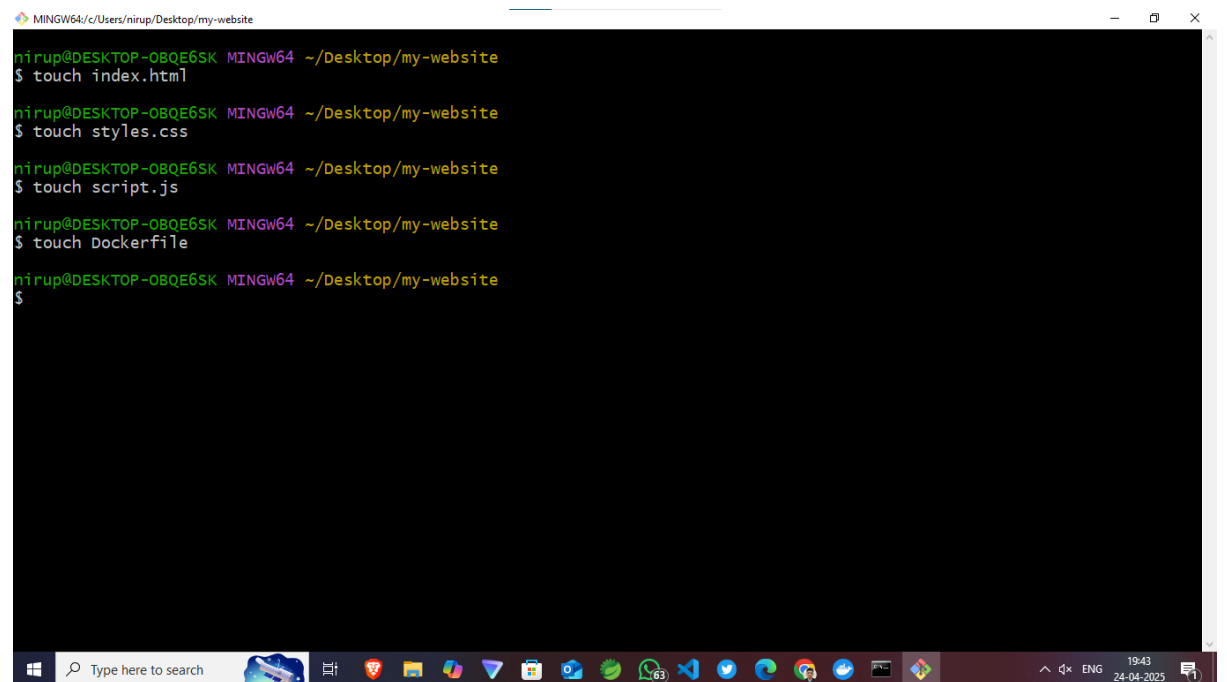


```
Command Prompt
Microsoft Windows [Version 10.0.19045.5737]
(c) Microsoft Corporation. All rights reserved.

C:\Users\nirup>cd Desktop
C:\Users\nirup\Desktop>mkdir my-website
C:\Users\nirup\Desktop>cd my-website
C:\Users\nirup\Desktop\my-website>
```

The screenshot shows a Windows Command Prompt window. The title bar reads "Command Prompt". The window content shows the following commands and their outputs:   
1. `cd Desktop`   
2. `mkdir my-website`   
3. `cd my-website`   
4. The prompt is now `C:\Users\nirup\Desktop\my-website>`.   
The Windows taskbar is visible at the bottom, showing the search bar, task view button, and various application icons. The system tray on the right shows the temperature as 30°C, language as ENG, and the time as 19:56 on 24-04-2025.

- **Creating Website Files**



```
MINGW64/c/Users/nirup/Desktop/my-website

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/my-website
$ touch index.html

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/my-website
$ touch styles.css

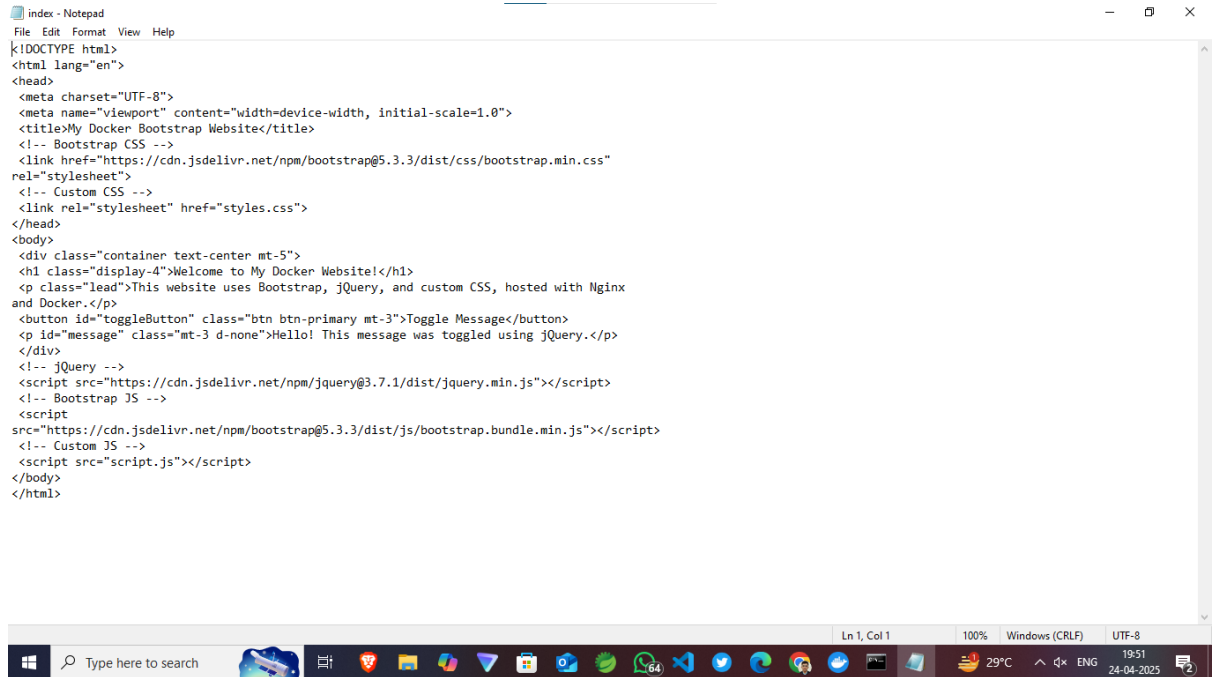
nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/my-website
$ touch script.js

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/my-website
$ touch Dockerfile

nirup@DESKTOP-OBQE6SK MINGW64 ~/Desktop/my-website
$
```

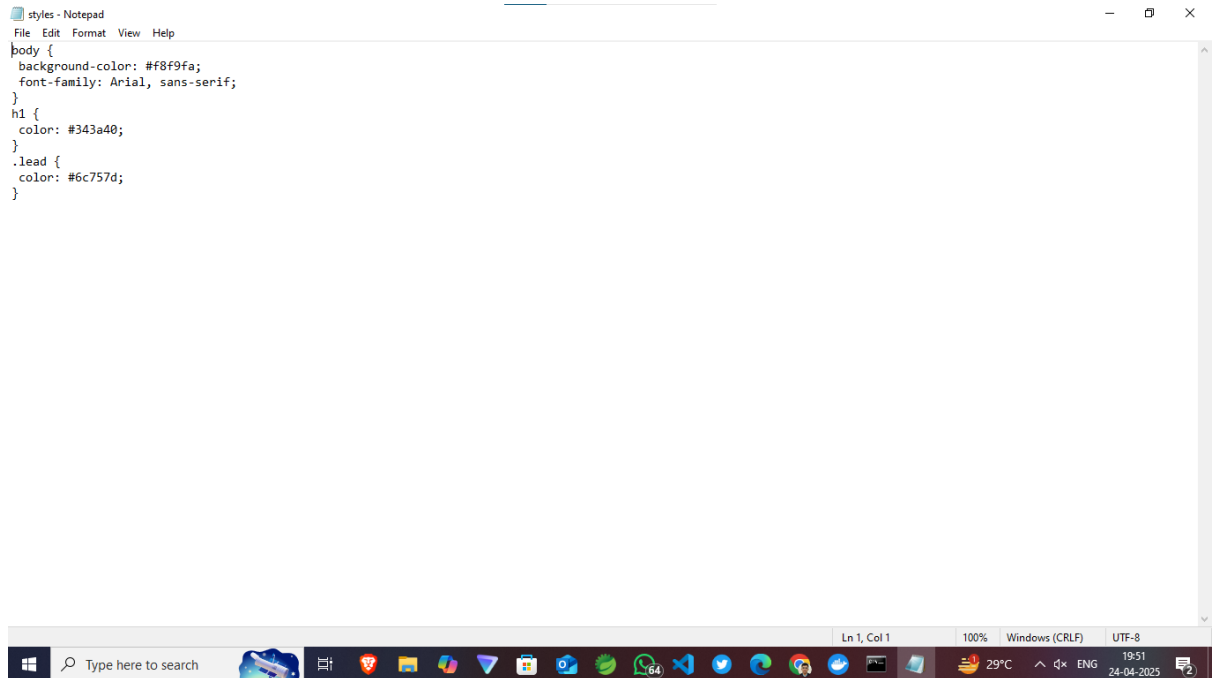
The screenshot shows a MINGW64 terminal window. The title bar reads "MINGW64/c/Users/nirup/Desktop/my-website". The window content shows the following commands and their outputs:   
1. `touch index.html`   
2. `touch styles.css`   
3. `touch script.js`   
4. `touch Dockerfile`   
5. The prompt is now `$`.   
The Windows taskbar is visible at the bottom, showing the search bar, task view button, and various application icons. The system tray on the right shows the temperature as 30°C, language as ENG, and the time as 19:43 on 24-04-2025.

- **File: index.html**



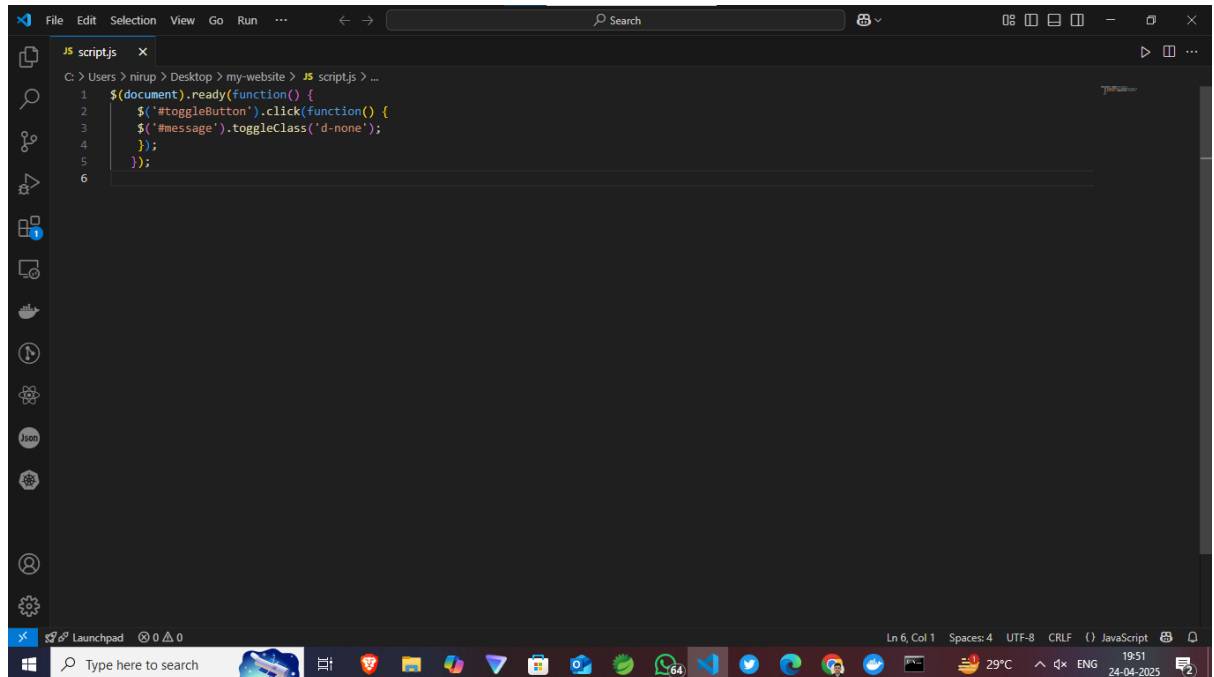
```
index - Notepad
File Edit Format View Help
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>My Docker Bootstrap Website</title>
  <!-- Bootstrap CSS -->
  <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/css/bootstrap.min.css"
rel="stylesheet">
  <!-- Custom CSS -->
  <link rel="stylesheet" href="styles.css">
</head>
<body>
  <div class="container text-center mt-5">
    <h1 class="display-4">Welcome to My Docker Website!</h1>
    <p class="lead">This website uses Bootstrap, jQuery, and custom CSS, hosted with Nginx
and Docker.</p>
    <button id="toggleButton" class="btn btn-primary mt-3">Toggle Message</button>
    <p id="message" class="mt-3 d-none">Hello! This message was toggled using jQuery.</p>
  </div>
  <!-- jQuery -->
  <script src="https://cdn.jsdelivr.net/npm/jquery@3.7.1/dist/jquery.min.js"></script>
  <!-- Bootstrap JS -->
  <script
src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js"></script>
  <!-- Custom JS -->
  <script src="script.js"></script>
</body>
</html>
```

- **File: styles.css**



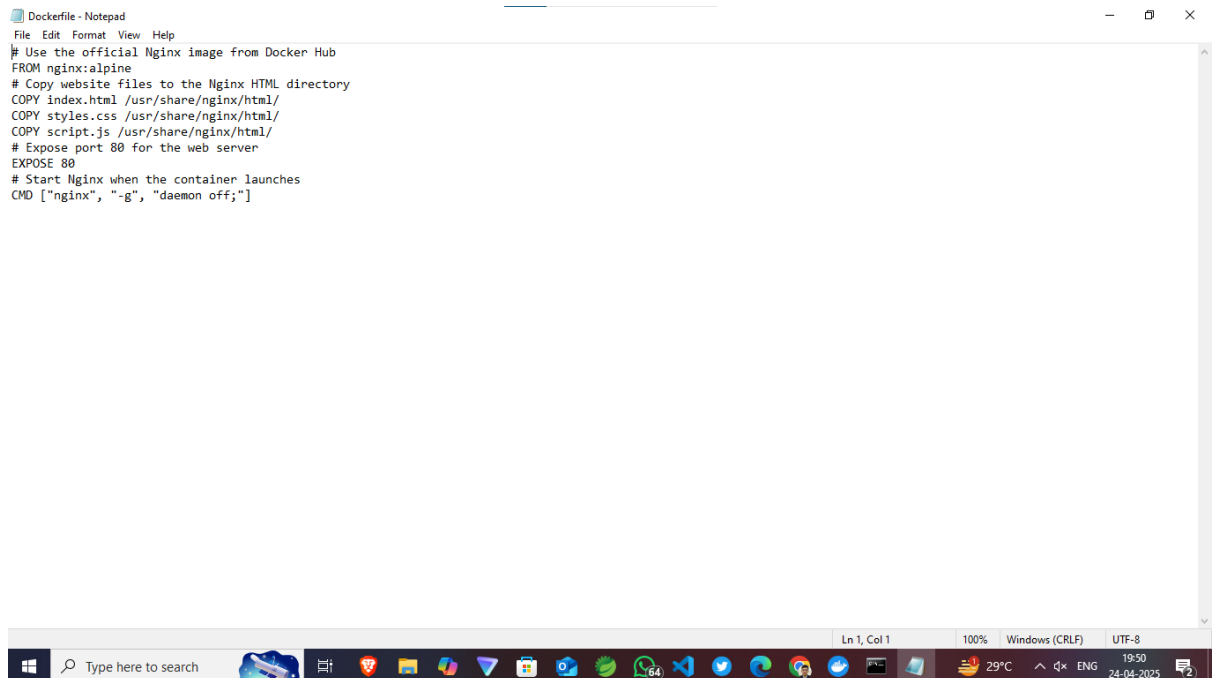
```
styles - Notepad
File Edit Format View Help
body {
  background-color: #f8f9fa;
  font-family: Arial, sans-serif;
}
h1 {
  color: #343a40;
}
.lead {
  color: #6c757d;
}
```

- **File: script.js**



```
1 $(document).ready(function() {
2     $('#toggleButton').click(function() {
3         $('#message').toggleClass('d-none');
4     });
5 });
6
```

- **Creating Dockerfile**



```
File Edit Format View Help
# Use the official Nginx image from Docker Hub
FROM nginx:alpine
# Copy website files to the Nginx HTML directory
COPY index.html /usr/share/nginx/html/
COPY styles.css /usr/share/nginx/html/
COPY script.js /usr/share/nginx/html/
# Expose port 80 for the web server
EXPOSE 80
# Start Nginx when the container launches
CMD ["nginx", "-g", "daemon off;"]
```

- **Building and Running the Docker Container**

```

Microsoft Windows [Version 10.0.19045.5737]
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C:\Users\nirup>cd Desktop

C:\Users\nirup\Desktop>mkdir my-website

C:\Users\nirup\Desktop>cd my-website

C:\Users\nirup\Desktop\my-website>docker build -t my-bootstrap-website .
[+] Building 8.2s (10/10) FINISHED
=> [internal] load build definition from Dockerfile                                0.1s
=> => transferring dockerfile: 400B                                              0.0s
=> [internal] load metadata for docker.io/library/nginx:alpine                  6.5s
=> [auth] library/nginx:pull token for registry-1.docker.io                     0.0s
=> [internal] load dockerignore                                                  0.0s
=> => transferring context: 2B                                                  0.0s
=> CACHED [1/4] FROM docker.io/library/nginx:alpine@sha256:65645c7bb6a8661892a8b03b89d0743208a18dd2f3f17a54ef4b7 0.0s
=> [internal] load build context                                                0.0s
=> => transferring context: 1.48kB                                              0.0s
=> [2/4] COPY index.html /usr/share/nginx/html/                                0.2s
=> [3/4] COPY styles.css /usr/share/nginx/html/                                0.3s
=> [4/4] COPY script.js /usr/share/nginx/html/                                0.2s
=> exporting to image                                                            0.4s
=> => exporting layers                                                            0.3s
=> writing image sha256:d792ee9f1d04c5801ac69d4ee72cd1248246bec995f754639898e18aacac4619 0.0s
=> => naming to docker.io/library/my-bootstrap-website                        0.0s

View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/0e87t2gweaygjqawebg9dcl49

C:\Users\nirup\Desktop\my-website>docker run -d -p 8080:80 --name my-bootstrap-website-container my-bootstrap-website
fddf3bf3f2ff7162bc34c22c6842ee57b4dd04875e484a242550504f61b667f6

C:\Users\nirup\Desktop\my-website>

```

docker desktop

PERSONAL

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Container CPU usage

0.00% / 400% (4 CPUs available)

Container memory usage

5.89MB / 7.52GB

[Show charts](#)

☰

Only show running containers

<input type="checkbox"/>	Name	Container ID	Image	Port(s)	CPU (%)	Last started	Actions
<input type="checkbox"/>	○ client-run-3ffcea	b339eb0b0c50	<a href="#">c-client</a>		0%	14 days ago	
<input type="checkbox"/>	○ server-run-c05ei	9bf948a48886	<a href="#">c-server</a>		0%	14 days ago	
<input type="checkbox"/>	○ clever_borg	dabc49c6d780	<a href="#">hello-world:lates</a>		0%	14 days ago	
<input type="checkbox"/>	○ optimistic_kare	59aa41258327	<a href="#">python:latest</a>		0%	14 days ago	
<input type="checkbox"/>	● my-bootstrap-we	fdcf3bf3f2ff	<a href="#">my-bootstrap-w</a> <a href="#">8080:80</a>		0%	2 minutes ago	
<input type="checkbox"/>	○ g	-	-	-	0%	14 days ago	
<input type="checkbox"/>	○ python	-	-	-	0%	14 days ago	

Showing 7 items

Engine running

RAM 0.76 GB

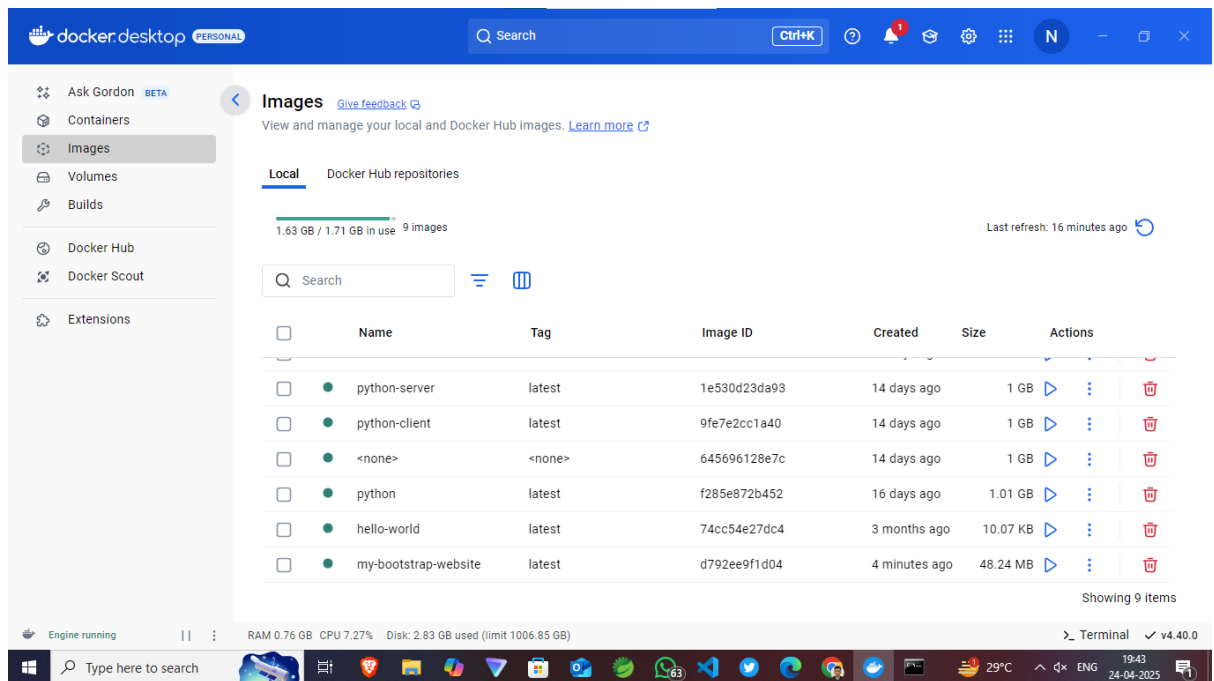
CPU 0.75%

Disk: 2.83 GB used (limit 1006.85 GB)

Terminal

v4.40.0





- **Accessing the Website**

