

WIPRO EXERCISE

Steps to build my-website

Step 1: Create Project Directory

Open your terminal and run:

```
mkdir my-website  
cd my-website
```

Step 2: Create Website Content

Create a file named `index.html` with the following content:

File: `index.html`

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <meta charset="UTF-8">  
  <title>My Docker Website</title>  
</head>  
<body>  
  <h1>Welcome to My Docker Website!</h1>  
  <p>This is a simple static website hosted using Nginx and Docker.</p>  
</body>  
</html>
```

Step 3: Create Dockerfile

Create a file named `Dockerfile` in the same directory:

File: `Dockerfile`

```
# 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;"]
```

Step 4: Build and Run the Docker Container

1. **Build the Docker image:**
2. `docker build -t my-website .`
3. **Run the Docker container (map container port 80 to host port 8080):**
4. `docker run -d -p 8080:80 --name my-website-container my-website`

Step 5: Access the Website

Open your browser and go to:

☐ <http://localhost:8080>

You should see the "Welcome to My Docker Website!" page.

Step 6: Stop and Clean Up (Optional)

1. **Stop and remove the container:**
2. `docker stop my-website-container`
3. `docker rm my-website-container`
4. **Remove the Docker image:**
5. `docker rmi my-website`

SCREENSHOT OF THE STEPS

STEP-1

```
Windows PowerShell
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PS C:\Users\ASUS> cd \Desktop\
PS C:\Users\ASUS\Desktop> cd \2141019161_WIPRO\
PS C:\Users\ASUS\Desktop\2141019161_WIPRO> cd .\my-website\
PS C:\Users\ASUS\Desktop\2141019161_WIPRO\my-website> docker build -t my-website .
[+] Building 2.6s (8/8) FINISHED
=> [internal] load build definition from Dockerfile
=> transferring dockerfile: 355B
=> [internal] load metadata for docker.io/library/nginx:alpine
=> [auth] library/nginx:pull token for registry-1.docker.io
=> [internal] load .dockerignore
=> transferring context: 2B
=> [internal] load build context
=> transferring context: 32B
=> [1/2] FROM docker.io/library/nginx:alpine@sha256:65645c7bb6a0661892a8b03b89d0743208a18dd2f3
=> CACHED [2/2] COPY index.html /usr/share/nginx/html/index.html
=> exporting to image
=> exporting layers
=> writing image sha256:9396b24a47574467f8ef18f6df5660e1e0229e96e0cb0139e7ea9070cd15c42d
=> naming to docker.io/library/my-website
PS C:\Users\ASUS\Desktop\2141019161_WIPRO\my-website> docker run -d -p 8080:80 --name my-website-container my-website
467357bad5576a0941987e04e9ad2b966303d4711349e3ad419384d075eb25747
docker: Error response from daemon: failed to set up container networking: driver failed programming external connectivity on endpoint my-website-container (0c620010410bfdd04f18fc53efe89165cb588328afe6346faa2a316d5418a150): Bind for 0.0.0.0:8080 failed: port is already allocated

Run 'docker run --help' for more information
PS C:\Users\ASUS\Desktop\2141019161_WIPRO\my-website> |

ASUSBLAPTOP-EFNNP3TA MINGW64 ~ (master)
$ cd Desktop/
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop (master)
$ cd 21
2101287315 (2).pdf 2101287315.pdf 2141019161_WIPRO/
2101287315(1).pdf 2141019161/
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop (master)
$ cd 2141019161_WIPRO/
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO (master)
$ touch index.html
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO (master)
$ touch Dockerfile
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO (master)
$ cd
Dockerfile index.html my-website/
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO (master)
$ cd my-website/
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO/my-website (master)
$ cd .
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO (master)
$ mkdir my-bootstrap-website
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO (master)
$ cd my-bootstrap-website
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO/my-bootstrap-website (master)
$ touch index.html
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO/my-bootstrap-website (master)
$ touch styles.css
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO/my-bootstrap-website (master)
$ touch script.js
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO/my-bootstrap-website (master)
$ touch Dockerfile
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO/my-bootstrap-website (master)
$ .C
ASUSBLAPTOP-EFNNP3TA MINGW64 ~/Desktop/2141019161_WIPRO/my-bootstrap-website (master)
$ |
```

STEP-2

The screenshot shows a Windows PowerShell terminal window and the Docker Desktop application interface.

Windows PowerShell:

```
PS C:\Users\ASUS> cd .\Desktop\
PS C:\Users\ASUS\Desktop> cd .\2141019161_WIPRO\
PS C:\Users\ASUS\Desktop\2141019161_WIPRO> cd my-website\
PS C:\Users\ASUS\Desktop\2141019161_WIPRO\my-website> docker build -t my-website .
[+] Building 2.6s (8/8) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> => transferring dockerfile: 355B 0.0s
=> [internal] load metadata for docker.io/library/nginx:alpine 2.6s
=> [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 0.0s
=> => transferring context: 32B 0.0s
=> [1/2] FROM docker.io/library/nginx:alpine@sha256:65645c7bb6a8661892a8b03b89d8743288a18dd2f3 0.0s
=> CACHED [2/2] COPY index.html /usr/share/nginx/html/index.html 0.0s
=> exporting to image 0.0s
=> exporting layers 0.0s
=> writing image sha256:9396b24a4757446748ef18f6df5660e1e0229e96e0cb0139e7ea9070cd15c42d 0.0s
=> naming to docker.io/library/my-website 0.0s
PS C:\Users\ASUS\Desktop\2141019161_WIPRO\my-website> docker run -d -p 8080:80 --name my-website-container my-website
4e7357bad5876a8941987e8e9ad2b5966303df71349e3ad419384d075eb25747
docker: Error response from daemon: failed to set up container networking: driver failed programming external connectivity on endpoint my-website-container (0c628010410bffd04f18fc53efe89165cb588328afe6346faa2a316d65418a159): Bind for 0.0.0.0:8080 failed: port is already allocated

Run 'docker run --help' for more information
PS C:\Users\ASUS\Desktop\2141019161_WIPRO\my-website>
```

Docker Desktop:

The Docker Desktop interface shows the 'Containers' tab. It displays two containers:

Name	Container ID	Image	Actions
my-bootstrap-w	7ffba2a6e7cd	my-bootstrap	[Play] [Vertical Dots] [Trash]
my-website-con	4e7357bad557	my-website	[Play] [Vertical Dots] [Trash]

Below the containers list, there are 'Walkthroughs' for 'Multi-container applications' (8 mins) and 'Containerize your application' (3 mins).

STEP-3

The screenshot shows a web browser window with the URL `localhost:8080`. The page displays a welcome message:

Welcome to My Docker Website!

This is a simple static website hosted using Nginx and Docker.

The browser's address bar shows several tabs, including 'Docker Desktop redirect', 'Summary - Quizizz', 'ayeshimay/Wipro-Exc...', 'index.html', 'My Docker Website', and 'My Docker Website'. The Windows taskbar at the bottom shows the system clock as 7:36 PM on 4/24/2023.

Steps to build my-bootstrap-website

Step 1: Create Project Directory

Open your terminal and run:

```
mkdir my-bootstrap-website
cd my-bootstrap-website
```

Step 2: Create Website Files

File: index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>My Docker Website</title>
  <meta name="viewport" content="width=device-width, initial-scale=1">

  <!-- Bootstrap CSS CDN -->
  <link
href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0/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>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 CDN -->
  <script src="https://code.jquery.com/jquery-3.7.1.min.js"></script>

  <!-- Custom JS -->
  <script src="script.js"></script>
</body>
</html>
```

File: styles.css

```
body {
  background-color: #f8f9fa;
  font-family: Arial, sans-serif;
}

h1 {
  color: #343a40;
}

.lead {
  color: #6c757d;
}
```

File: script.js

```
$(document).ready(function() {
  $('#toggleButton').click(function() {
    $('#message').toggleClass('d-none');
  });
});
```

Step 3: Create Dockerfile

File: Dockerfile

```
# 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;"]
```

Step 4: Build and Run the Docker Container

1. Build the Docker image:

```
docker build -t my-bootstrap-website .
```

2. Run the Docker container:

```
docker run -d -p 8080:80 --name my-bootstrap-website-container my-bootstrap-website
```

Step 5: Access the Website

Open your browser and visit:

☐ <http://localhost:8080>

You should see a Bootstrap-styled page with a button and a message that toggles using jQuery.

Step 6: Stop and Clean Up (Optional)

1. Stop and remove the container:

```
docker stop my-bootstrap-website-container
docker rm my-bootstrap-website-container
```

2. Remove the Docker image:

```
docker rmi my-bootstrap-website
```

SCREENSHOT OF THE STEPS

STEP-1

The screenshot shows a Windows PowerShell terminal window and a Windows File Explorer window. The PowerShell window displays the commands and output for building and running a Docker container. The File Explorer window shows the contents of the 'my-bootstrap-website' directory, including 'index.html', 'Dockerfile', 'index.html', 'my-website', and 'my-website-container'.

```
Windows PowerShell
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PS C:\Users\ASUS> cd \Desktop\
PS C:\Users\ASUS\Desktop> cd \2141019161_WIPRO\
PS C:\Users\ASUS\Desktop\2141019161_WIPRO> cd my-website\
PS C:\Users\ASUS\Desktop\2141019161_WIPRO\my-website> docker build -t my-website .
[+] Building 2.6s (8/8) FINISHED
=> [internal] load build definition from Dockerfile 0.0s
=> [internal] load metadata for docker.io/library/nginx:alpine 2.6s
=> [auth] library/nginx:pull token for registry-1.docker.io 0.0s
=> [internal] load .dockerignore 0.0s
=> [internal] load build context 0.0s
=> transferring context: 32B 0.0s
=> [1/2] FROM docker.io/library/nginx:alpine@sha256:65648c7b66a8661892a8b03b89d9743208a18dd2f3 0.0s
=> CACHED [2/2] COPY index.html /usr/share/nginx/html/index.html 0.0s
=> exporting to image 0.0s
=> writing image sha256:9396b24a475744678ef18f6df5660e1e0229e96e0cb0139e7ea9070cd15c42d 0.0s
=> naming to docker.io/library/my-website 0.0s
PS C:\Users\ASUS\Desktop\2141019161_WIPRO\my-website> docker run -d -p 8080:80 --name my-website-container my-website
4e7357b4d537e8991907e84e3d396c383d7f73093a2d119384d477bcb25707
docker: Error response from daemon: failed to set up container networking: driver failed programming external connectivity on endpoint my-website-container (0c620010410bffd04f18fc53efeb9165cb588320afe6346faa2a316d5d18a150): Bind for 0.0.0.0:8080 failed: port is already allocated

Run 'docker run --help' for more information
PS C:\Users\ASUS\Desktop\2141019161_WIPRO\my-website> |
```

The File Explorer window shows the following files and folders:

- index.html
- Dockerfile
- index.html
- my-website
- my-website-container

STEP-2

The screenshot shows a Windows PowerShell terminal window on the left and the Docker Desktop application on the right.

PowerShell Terminal:

```
PS C:\Users\ASUS> cd .\Desktop\  
PS C:\Users\ASUS\Desktop> cd .\2141819161_WIPRO\  
PS C:\Users\ASUS\Desktop\2141819161_WIPRO> cd .\my-bootstrap-website\  
PS C:\Users\ASUS\Desktop\2141819161_WIPRO\my-bootstrap-website> docker build -t my-bootstrap-website .  
  
[+] Building 1.3s (9/9) FINISHED docker:desktop-linux  
=> [internal] load build definition from Dockerfile 0.0s  
=> transferring dockerfile: 411B 0.0s  
=> [internal] load metadata for docker.io/library/nginx:alpine 1.1s  
=> [internal] load .dockerignore 0.0s  
=> transferring context: 2B 0.0s  
=> [1/4] FROM docker.io/library/nginx:alpine@sha256:65645c7bb6a0661892a8b03b89d0743286a18dd2f3 0.0s  
=> [internal] load build context 0.0s  
=> transferring context: 91B 0.0s  
=> CACHED [2/4] COPY index.html /usr/share/nginx/html/ 0.0s  
=> CACHED [3/4] COPY styles.css /usr/share/nginx/html/ 0.0s  
=> CACHED [4/4] COPY script.js /usr/share/nginx/html/ 0.0s  
=> exporting to image 0.0s  
=> exporting layers 0.0s  
=> writing image sha256:0bb02c85168e76de930664a2c9f673c6e05319185bcb610fel2cc6686887840a 0.0s  
=> naming to docker.io/library/my-bootstrap-website 0.0s  
PS C:\Users\ASUS\Desktop\2141819161_WIPRO\my-bootstrap-website> docker run -d -p 8080:80 --name my-bootstrap-website-container my-bootstrap-website  
84f2725bca88d0559c7818c82cd3f353c3ef84501a506701e2d82463cbd8a7be  
docker: Error response from daemon: failed to set up container networking: driver failed programming external connectivity on endpoint my-bootstrap-website-container (5a8ea258e89effc2897a0bfc8a74e91c9bda6bacf15af720e2352911c7e368a6): Bind for 0.0.0.0:8080 failed: port is already allocated  
  
Run 'docker run --help' for more information  
PS C:\Users\ASUS\Desktop\2141819161_WIPRO\my-bootstrap-website> |
```

Docker Desktop:

The Docker Desktop interface shows the 'Containers' tab. It displays two containers:

Name	Container ID	Image	Port(s)	Actions
my-website-con	4e7357bad557	my-website	8080:80	stop
my-bootstrap-w	84f2725bca88	my-bootstrap: 8080:80	8080:80	start, stop, restart, delete

Below the containers list, there are 'Walkthroughs' for 'Multi-container applications' (8 mins) and 'Containerize your application' (3 mins).

STEP-3

The screenshot shows a web browser window displaying a simple HTML page. The address bar shows 'localhost:8080'.

The page content is:

Welcome to My Docker Website!

This website uses Bootstrap, jQuery, and custom CSS, hosted with Nginx and Docker.

There is a blue button labeled 'Toggle Message'.

STEP-4



