

# Create Demo Project-React-Webapp Using Docker

## 🌱 Step 1: Install Prerequisites

Make sure you have these installed:

- Node.js (v16 or higher) → <https://nodejs.org>
- npm (comes with Node) or yarn (optional)
- Code Editor → VS Code recommended

Check versions:

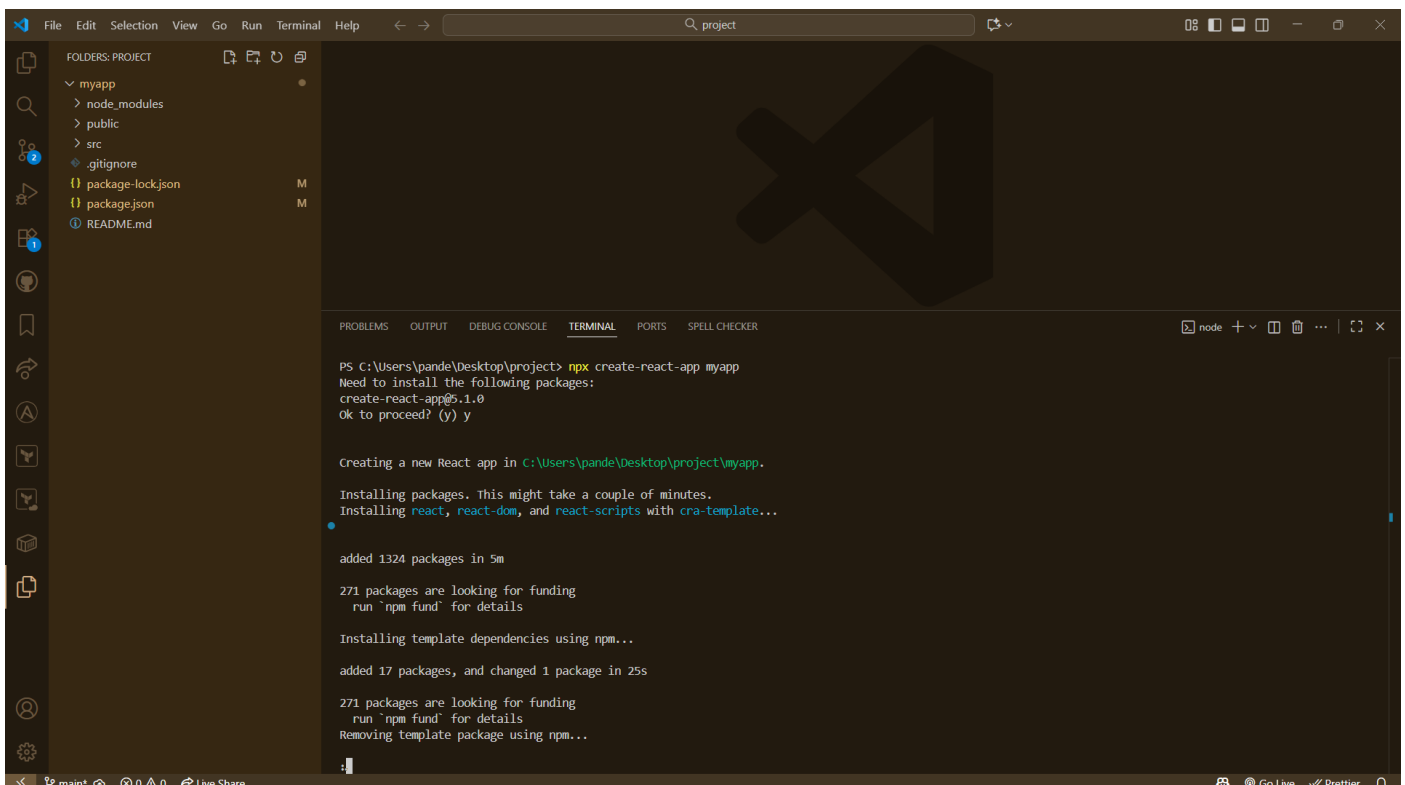
```
bash

node -v

npm -v
```

## ⚙️ Step 2: Create a New React App

Using npx: -



The screenshot shows the Visual Studio Code interface. The left sidebar displays the file explorer with a project structure: `myapp` (folder), `node_modules` (folder), `public` (folder), `src` (folder), `.gitignore` (file), `package-lock.json` (file), `package.json` (file), and `README.md` (file). The main editor area shows the output of the command `npx create-react-app myapp` in the terminal. The output text is as follows:

```
PS C:\Users\pande\Desktop\project> npx create-react-app myapp
Need to install the following packages:
create-react-app@5.1.0
Ok to proceed? (y) y

Creating a new React app in C:\Users\pande\Desktop\project\myapp.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts with cra-template...

added 1324 packages in 5m

271 packages are looking for funding
  run `npm fund` for details

Installing template dependencies using npm...

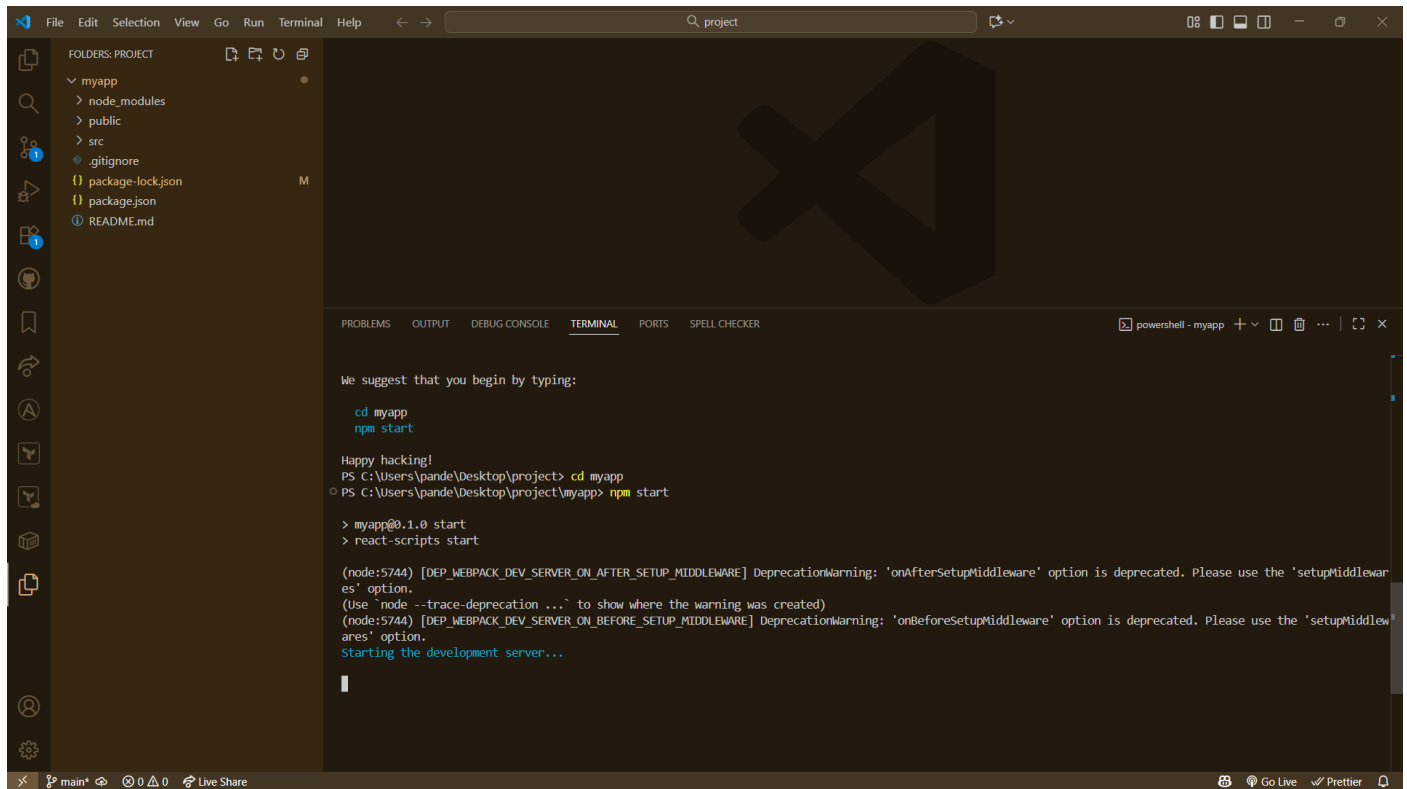
added 17 packages, and changed 1 package in 25s

271 packages are looking for funding
  run `npm fund` for details
Removing template package using npm...
```

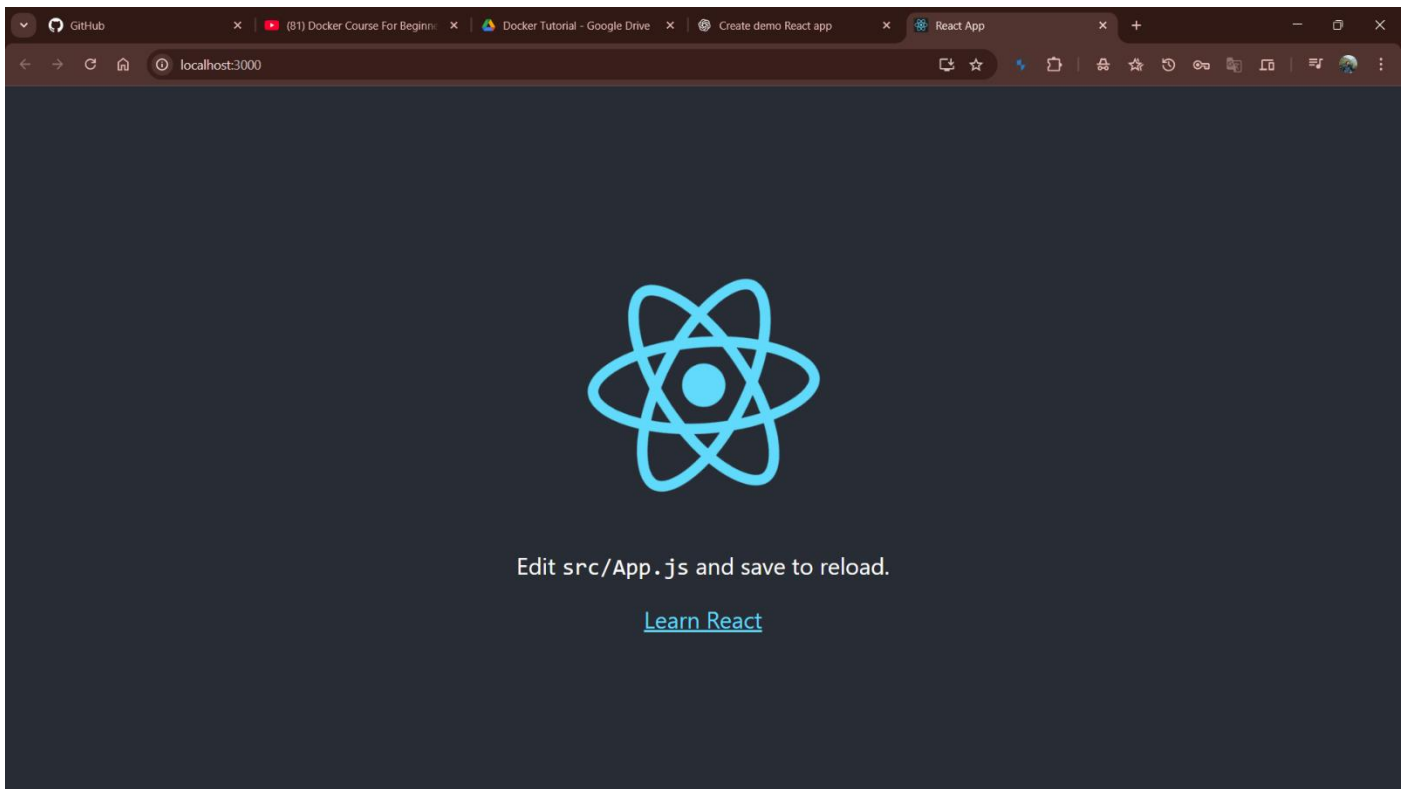
Then:

We suggest that you begin by typing:

```
cd myapp
npm start
```



React Webpage: -



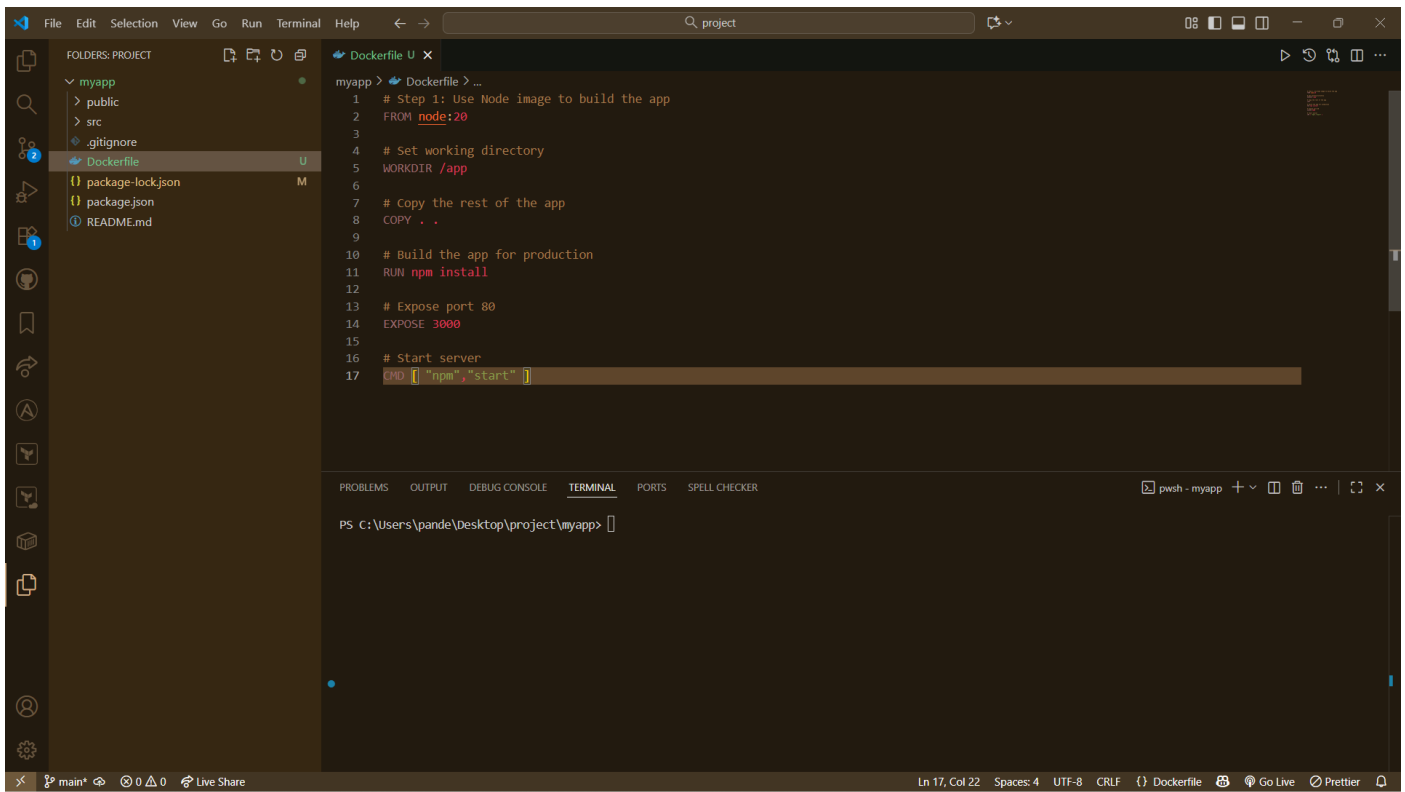
## How to create Docker file?

### 1 What is a Dockerfile?

A Dockerfile is a script with instructions to build a Docker image — like a recipe for packaging your app (code + dependencies + runtime) into a container.

### 2 Basic Dockerfile for a React App

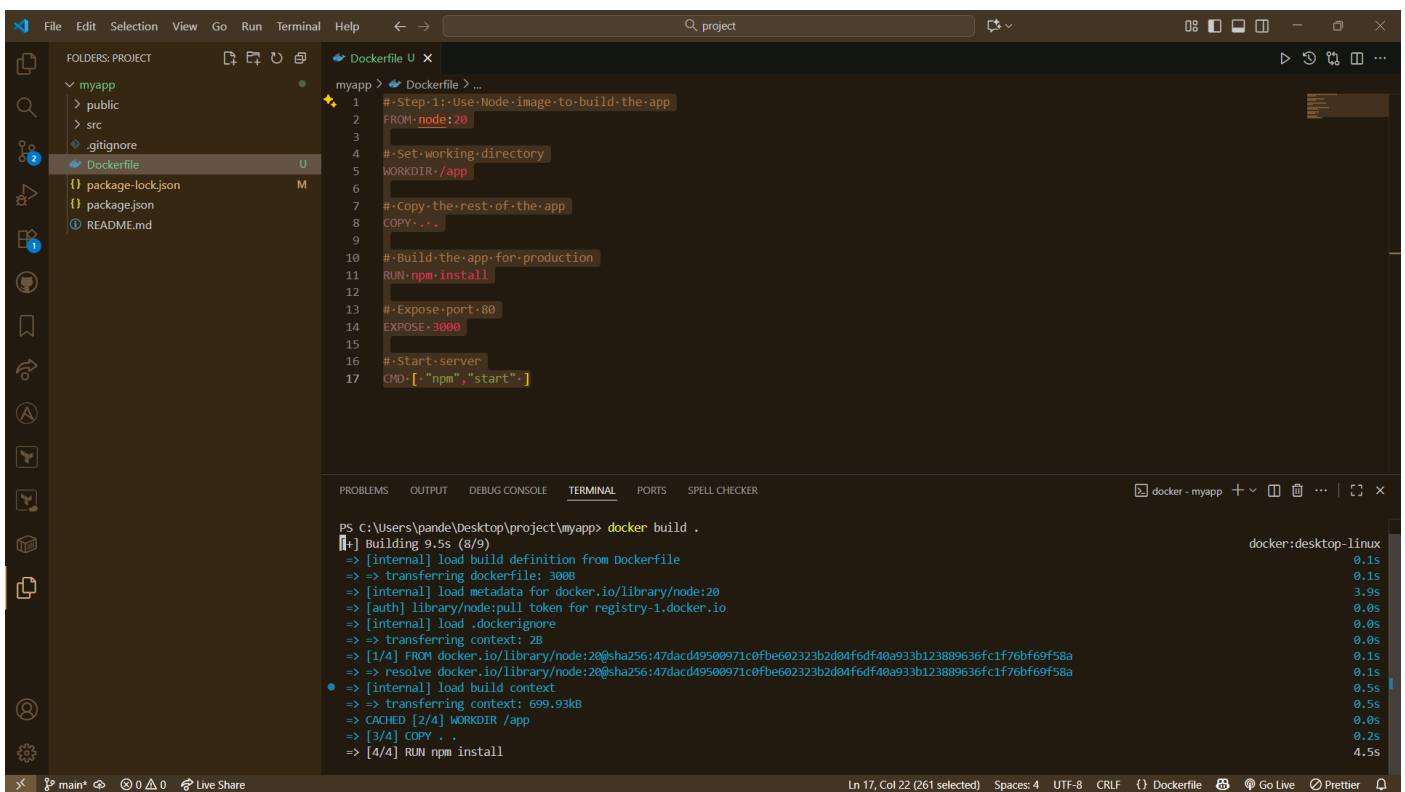
Create a file named Dockerfile in your project's root (same folder as package.json):



## How to Build Docker Image: -

Use Command: -

Docker Build .



Summary:

Step	Command	Description
1	<code>docker build -t my-react-app .</code>	Build image
2	<code>docker images</code>	List images
3	<code>docker run -d -p 8080:80 my-react-app</code>	Run container
4	<code>docker ps</code>	See running containers

Docker images: -

The screenshot shows a Visual Studio Code editor with a project named 'myapp'. The file explorer on the left shows the project structure: 'myapp' (containing 'public', 'src', '.gitignore', 'Dockerfile', 'package-lock.json', 'package.json', and 'README.md'). The 'Dockerfile' is open in the editor, showing the following content:

```

1 #Step 1:- Use Node image to build the app
2 FROM node:20
3
4 #Set working directory
5 WORKDIR /app
6
7 #Copy the rest of the app
8 COPY . .
9
10 #Build the app for production
11 RUN npm install
12
13 #Expose port 80
14 EXPOSE 3000
15
16 #Start server
17 CMD ["npm", "start"]

```

The terminal at the bottom shows the output of the command `docker image ls`:

```

PS C:\Users\pande\Desktop\project\myapp> docker image ls

```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
<none>	<none>	99cd62671d91	About a minute ago	2.11GB

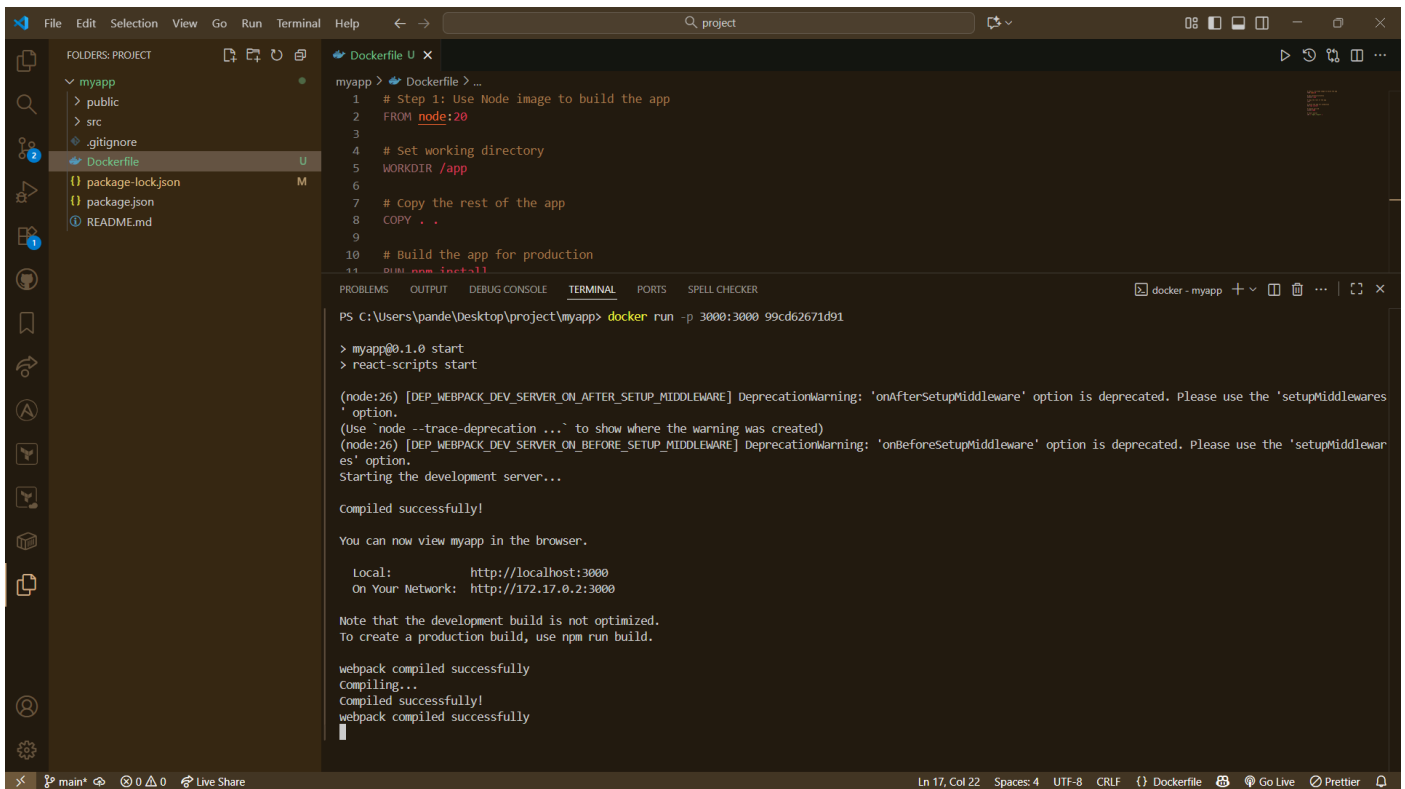
The terminal prompt is `PS C:\Users\pande\Desktop\project\myapp>`.

Manage And Running Container: -

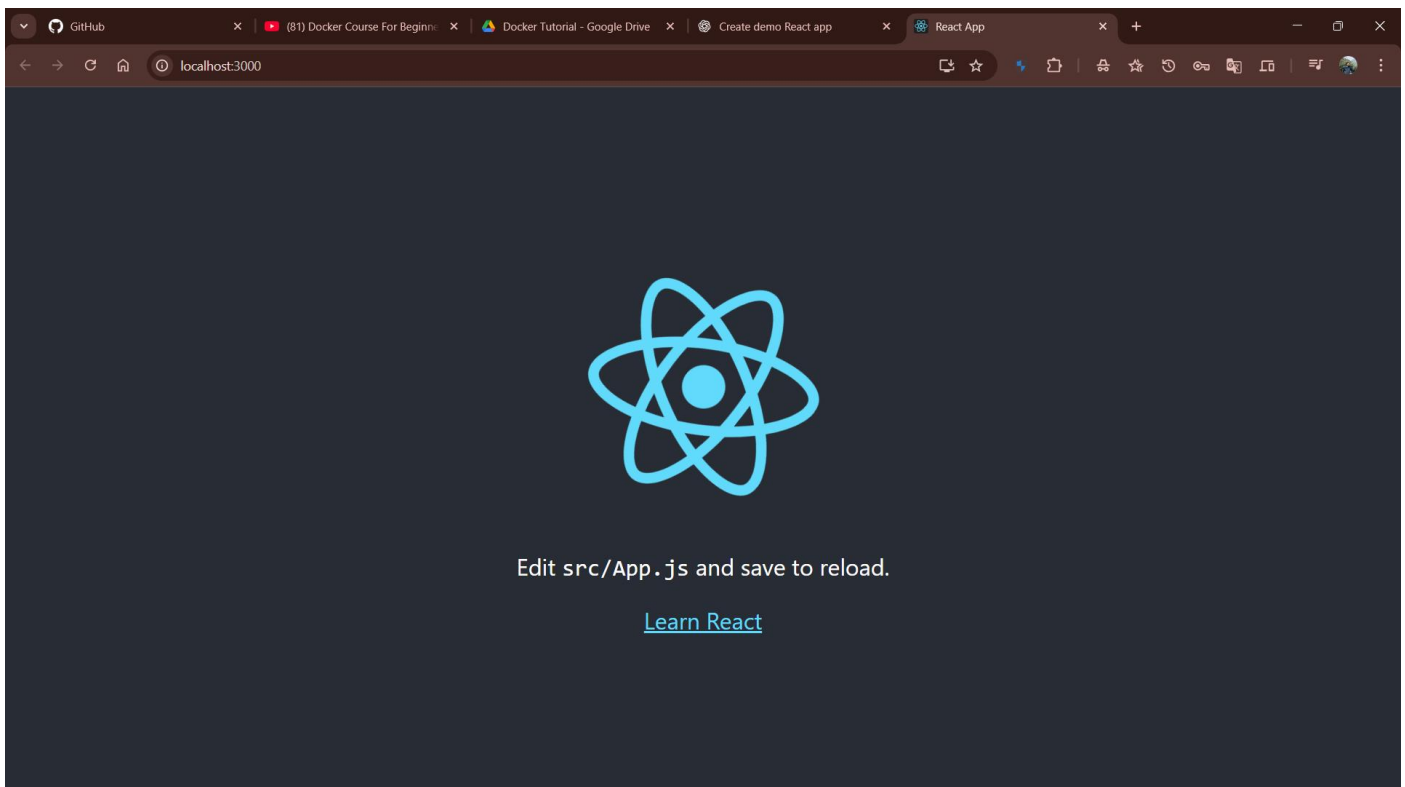
Use Command: -

Docker run -image id

Comm.: - **`docker run -p 3000:3000 99cd62671d91`**



## Now See Webpage Is Running on the Docker Container



## View Of Docker Desktop:

Running Container: -

Ask Gordon BETA

Containers

Images

Volumes

Kubernetes

Builds

Models

MCP Toolkit BETA

Docker Hub

Docker Scout

Extensions

Containers Give feedback

Container CPU usage ⓘ  
0.01% / 400% (4 CPUs available)

Container memory usage ⓘ  
292.4MB / 5.59GB

Show charts

Search

Only show running containers

	Name	Container ID	Image	Port(s)	CPU (%)	Last started	Actions
<input type="checkbox"/>	<input type="radio"/> awesome_davinci	dfad29891147	<a href="#">99cd62671d91</a>		0%	6 minutes ago	<div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div></div>
<input type="checkbox"/>	<input checked="" type="radio"/> vigilant_neumann	8bdb43182dcd	<a href="#">99cd62671d91</a>	<a href="#">3000:3000</a>	0.01%	3 minutes ago	<div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div></div>

Showing 2 items

Engine running

RAM 2.57 GB CPU 0.25% Disk: 3.32 GB used (limit 1006.85 GB)

Terminal v4.50.0

Image: -

Ask Gordon BETA

Containers

Images

Volumes

Kubernetes

Builds

Models

MCP Toolkit BETA

Docker Hub

Docker Scout

Extensions

Images Give feedback

Local My Hub

1.61 GB / 2.67 GB in use 1 images

Last refresh: 46 minutes ago

Search

	Name	Tag	Image ID	Created	Size	Actions
<input type="checkbox"/>	<input checked="" type="radio"/> <none>	<none>	99cd62671d91	12 minutes ag	2.1 GB	<div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div></div> <div><div></div><div></div><div></div></div>

Showing 1 item

Engine running

RAM 2.59 GB CPU 0.00% Disk: 4.30 GB used (limit 1006.85 GB)

Terminal v4.50.0