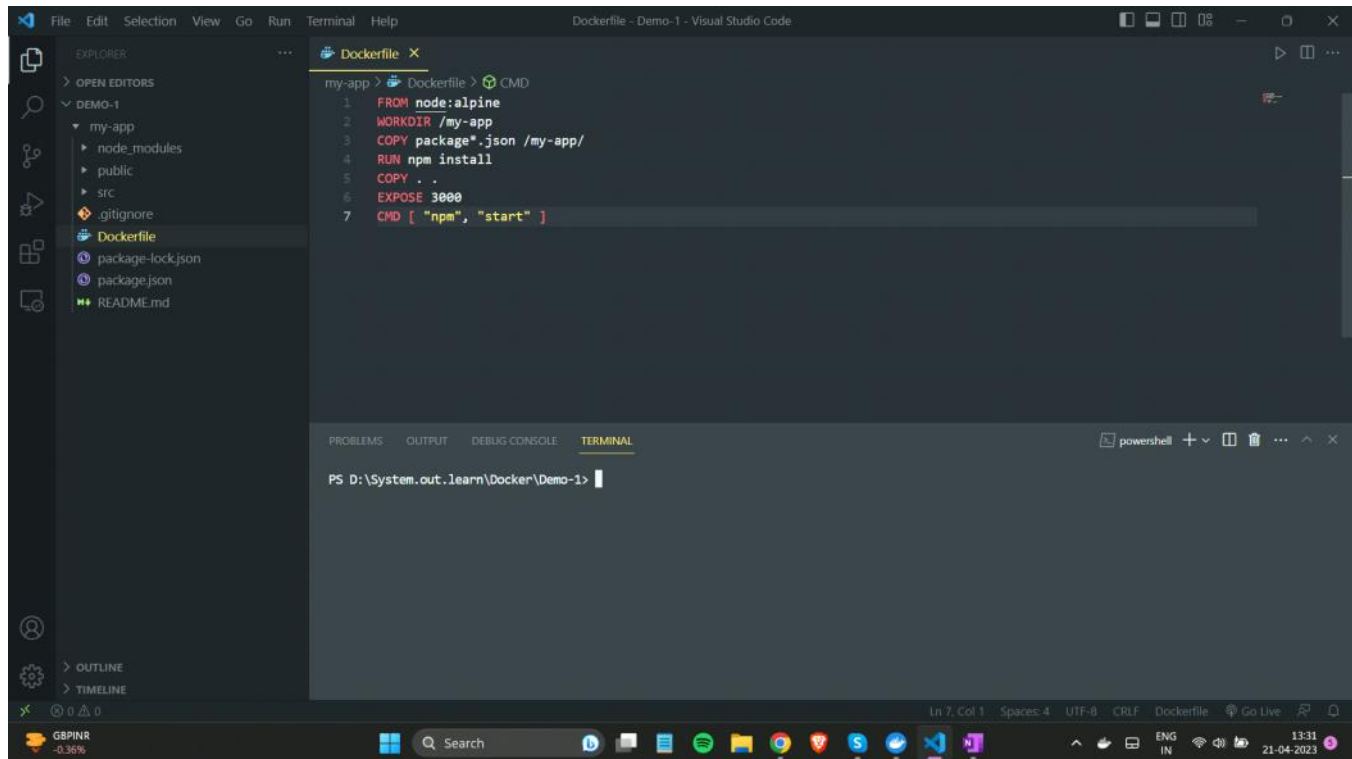
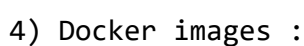
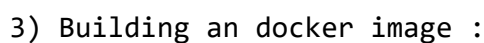


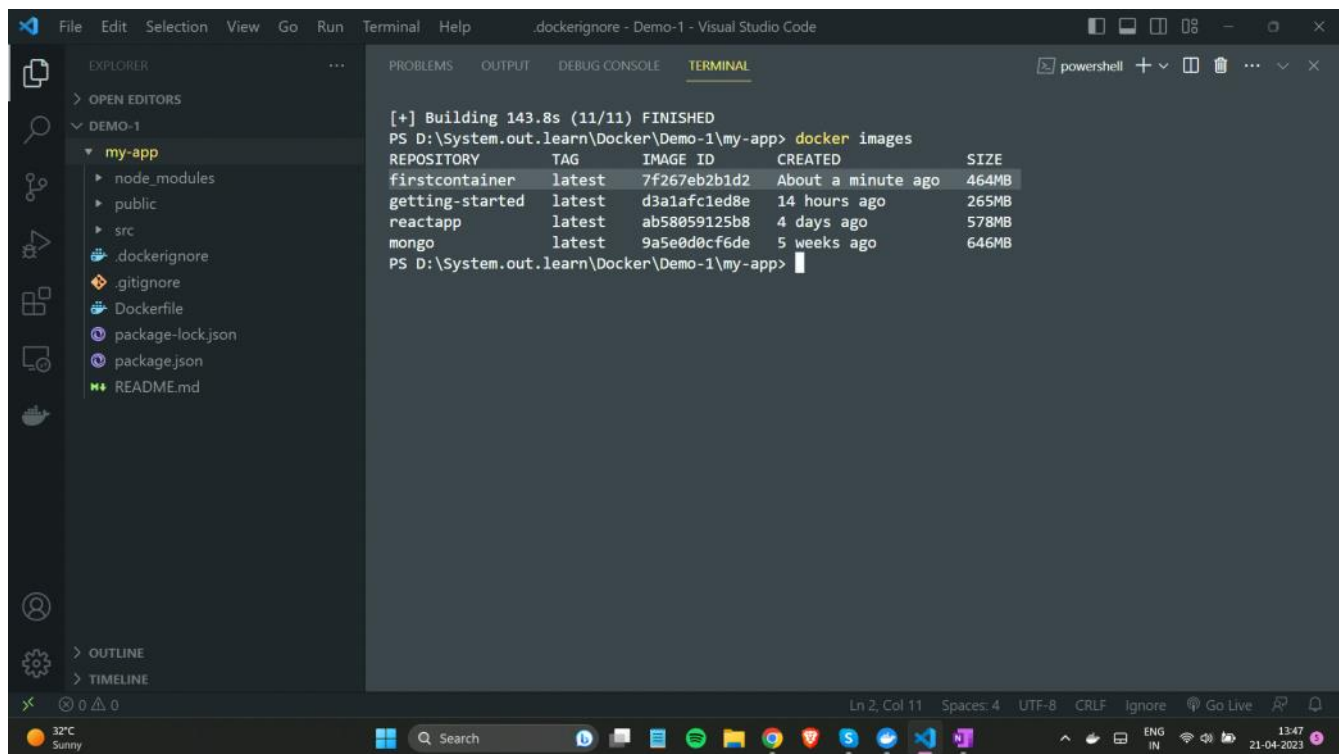
1) Creating a Dockerfile for react application :



2) Creating .dockerignore file :

-The file/directory name you give inside the dockerignore file will be ignored by the docker engine and will not be copied into the image.

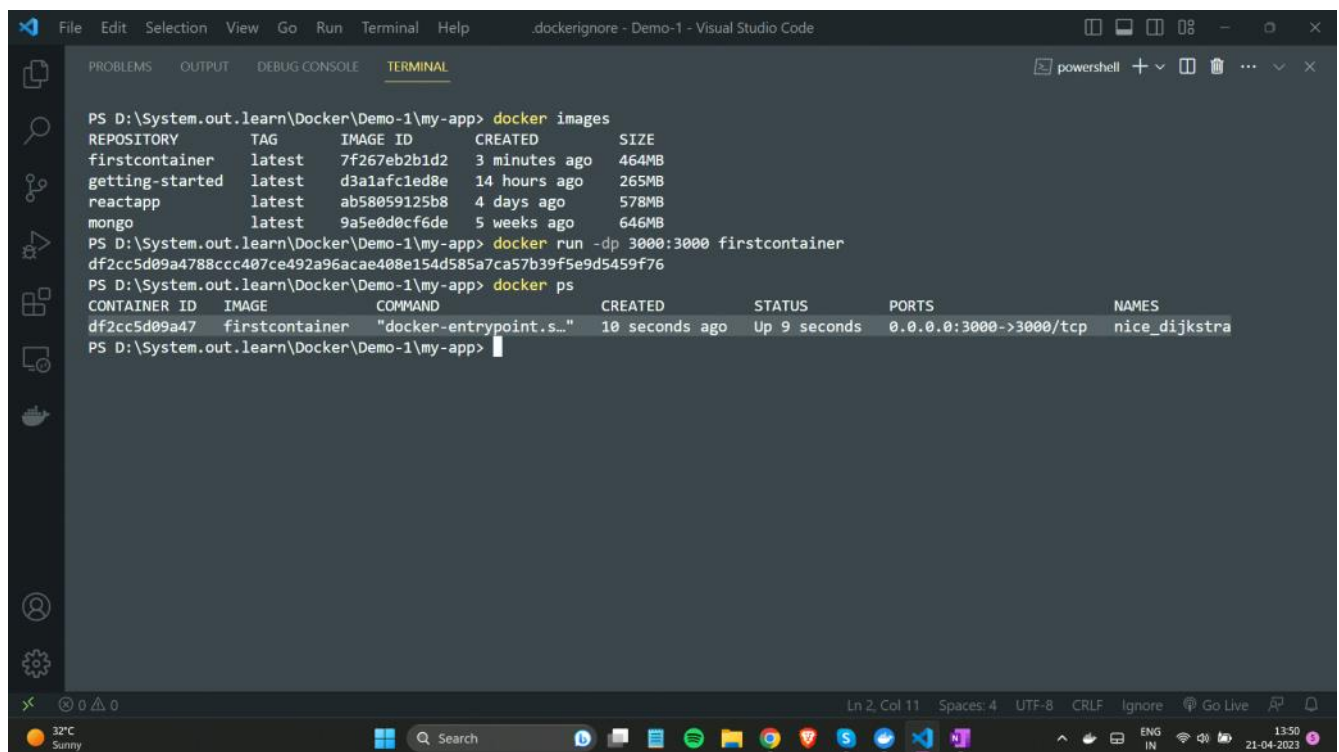




The screenshot shows the Visual Studio Code interface with a terminal window open. The terminal displays the output of the `docker images` command, listing several Docker images. The Explorer sidebar on the left shows the file structure of the `my-app` directory, including `node_modules`, `public`, `src`, `.dockerignore`, `.gitignore`, `Dockerfile`, `package-lock.json`, `package.json`, and `README.md`.

```
[+] Building 143.8s (11/11) FINISHED
PS D:\System.out.learn\Docker\Demo-1\my-app> docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
firstcontainer       latest             7f267eb2b1d2       About a minute ago 464MB
getting-started      latest            d3a1afc1ed8e       14 hours ago       265MB
reactapp             latest            ab58059125b8       4 days ago         578MB
mongo                latest            9a5e0d0cf6de       5 weeks ago        646MB
PS D:\System.out.learn\Docker\Demo-1\my-app>
```

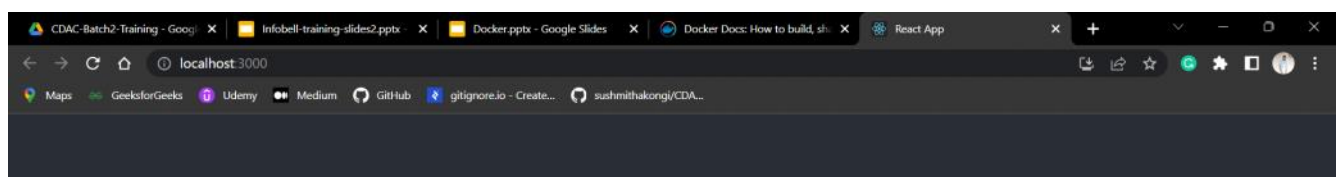
5) Running a created docker image :

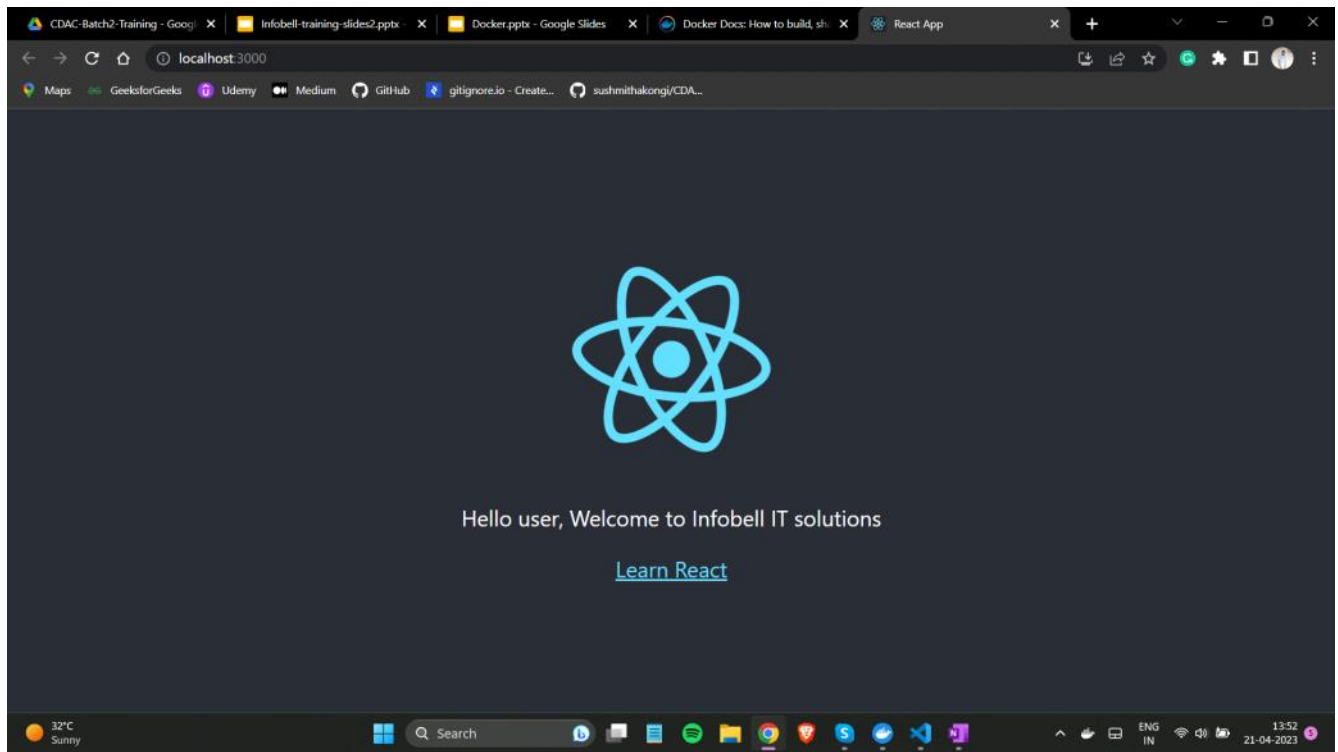


The screenshot shows the Visual Studio Code interface with a terminal window open. The terminal displays the output of the `docker images` command, followed by the `docker run` command to start a container, and then the `docker ps` command to list running containers. The `docker ps` output shows a container named `nice_dijkstra` running on port 3000.

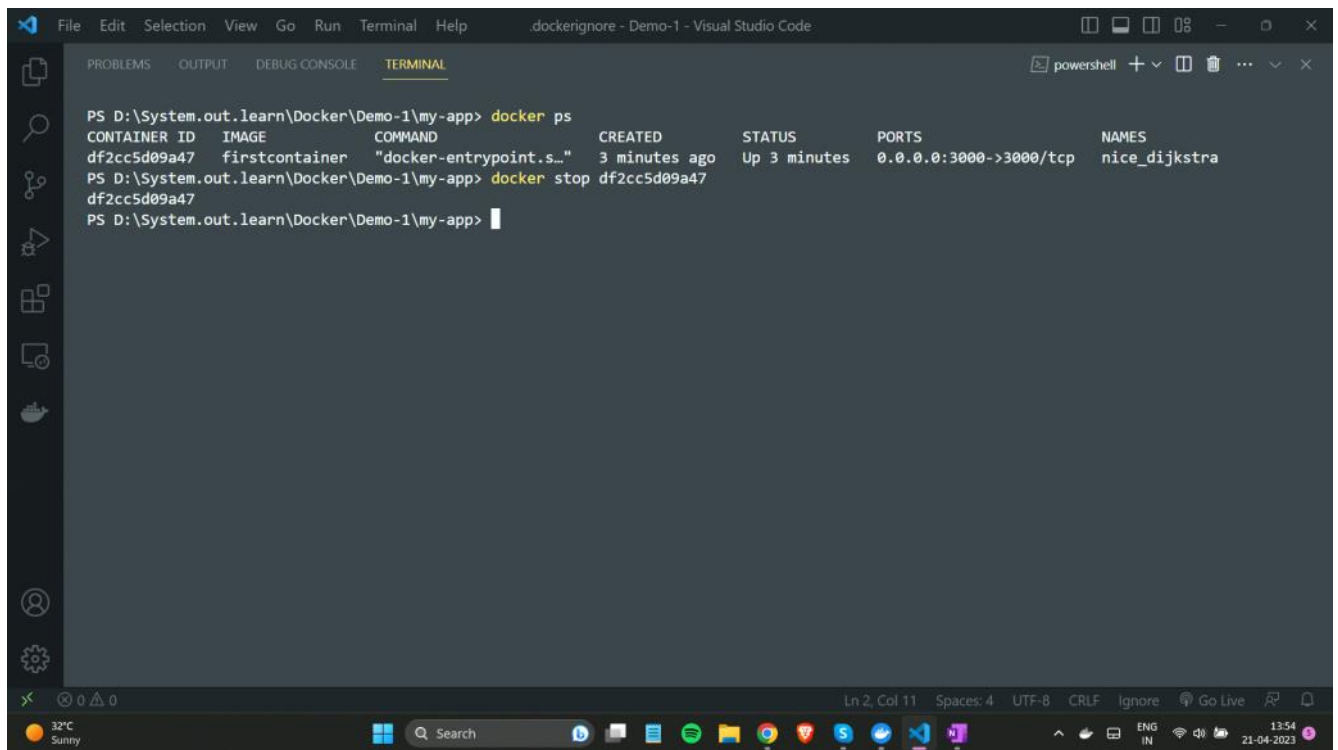
```
PS D:\System.out.learn\Docker\Demo-1\my-app> docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
firstcontainer       latest             7f267eb2b1d2       3 minutes ago      464MB
getting-started      latest            d3a1afc1ed8e       14 hours ago       265MB
reactapp             latest            ab58059125b8       4 days ago         578MB
mongo                latest            9a5e0d0cf6de       5 weeks ago        646MB
PS D:\System.out.learn\Docker\Demo-1\my-app> docker run -dp 3000:3000 firstcontainer
df2cc5d09a478ccc407ce492a96acae408e154d585a7ca57b39f5e9d5459f76
PS D:\System.out.learn\Docker\Demo-1\my-app> docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED           STATUS          PORTS                    NAMES
df2cc5d09a47   firstcontainer "docker-entrypoint.s..." 10 seconds ago   Up 9 seconds   0.0.0.0:3000->3000/tcp   nice_dijkstra
PS D:\System.out.learn\Docker\Demo-1\my-app>
```

After checking the <http://localhost:3000> I was able to see my react app running inside the Container.

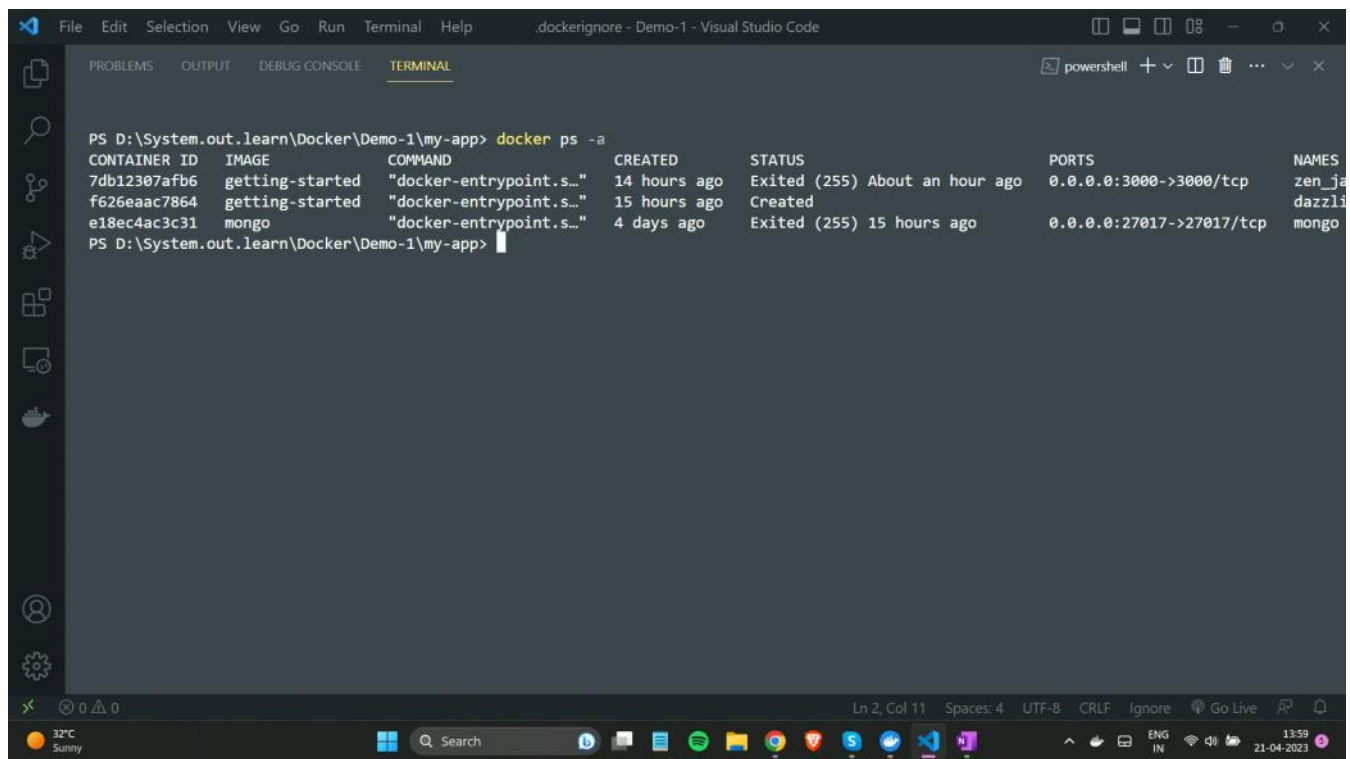




6) In order to stop the running container :



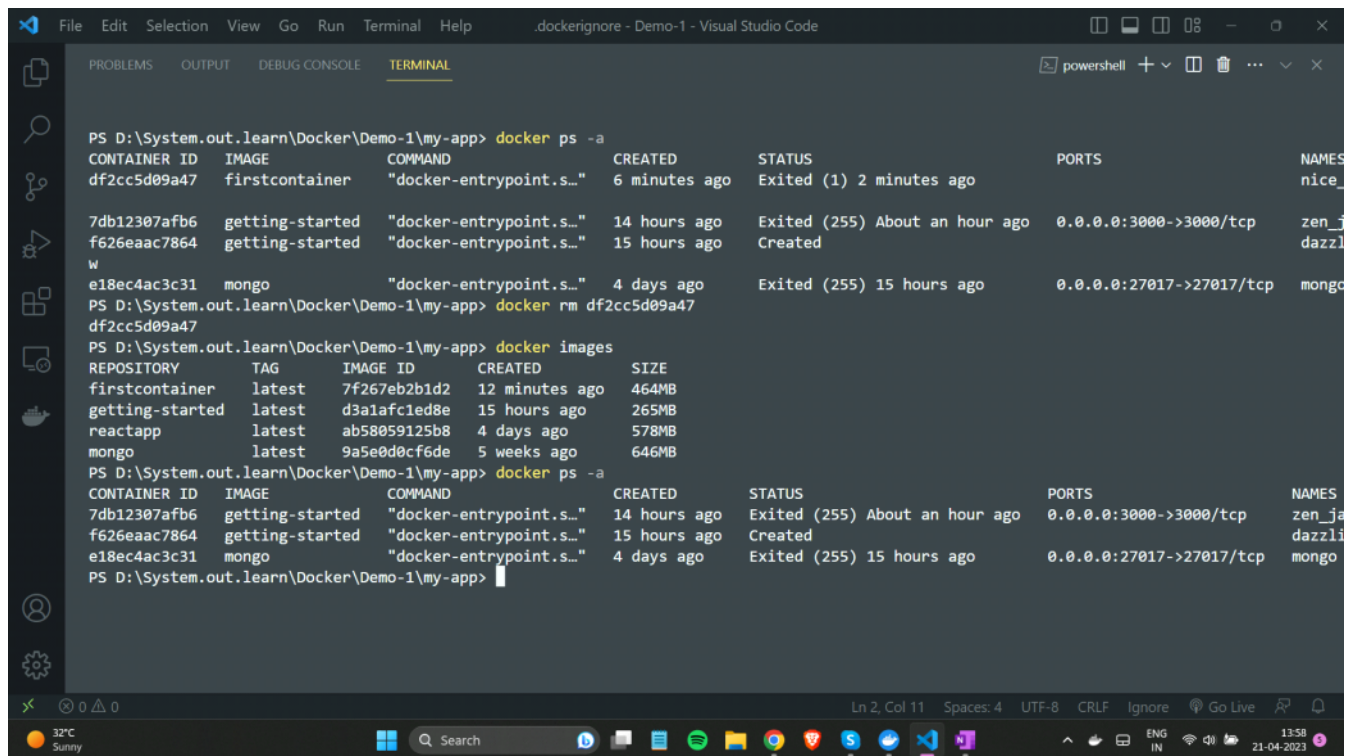
7) To see all the containers weather running or not :



The screenshot shows a Visual Studio Code window with a terminal open. The terminal displays the output of the command `docker ps -a`. The output is a table with columns: CONTAINER ID, IMAGE, COMMAND, CREATED, STATUS, PORTS, and NAMES. The table lists three containers: `7db12307afb6` (getting-started), `f626eaac7864` (getting-started), and `e18ec4ac3c31` (mongo). The terminal also shows the command prompt `PS D:\System.out.learn\Docke\Demo-1\my-app>`.

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
7db12307afb6	getting-started	"docker-entrypoint.s..."	14 hours ago	Exited (255) About an hour ago	0.0.0.0:3000->3000/tcp	zen_ja
f626eaac7864	getting-started	"docker-entrypoint.s..."	15 hours ago	Created		dazzli
e18ec4ac3c31	mongo	"docker-entrypoint.s..."	4 days ago	Exited (255) 15 hours ago	0.0.0.0:27017->27017/tcp	mongo

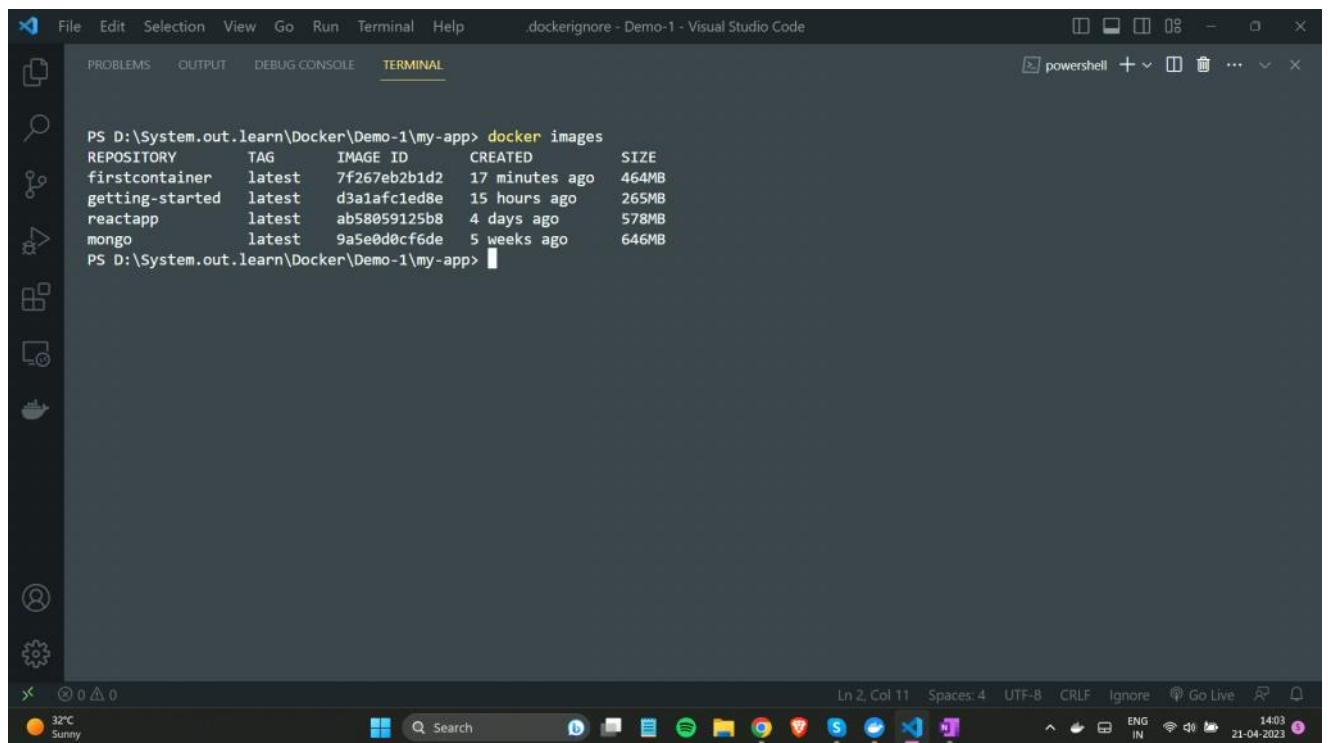
8) To remove an container :



The screenshot shows a Visual Studio Code window with a terminal open. The terminal displays the output of the command `docker ps -a`, followed by the command `docker rm df2cc5d09a47`, and then the command `docker images`. The output of `docker images` is a table with columns: REPOSITORY, TAG, IMAGE ID, CREATED, and SIZE. The table lists five images: `firstcontainer` (latest), `getting-started` (latest), `reactapp` (latest), `mongo` (latest), and `mongo` (latest). The terminal also shows the command prompt `PS D:\System.out.learn\Docke\Demo-1\my-app>`.

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
firstcontainer	latest	7f267eb2b1d2	12 minutes ago	464MB
getting-started	latest	d3a1afc1ed8e	15 hours ago	265MB
reactapp	latest	ab58059125b8	4 days ago	578MB
mongo	latest	9a5e0d0cf6de	5 weeks ago	646MB

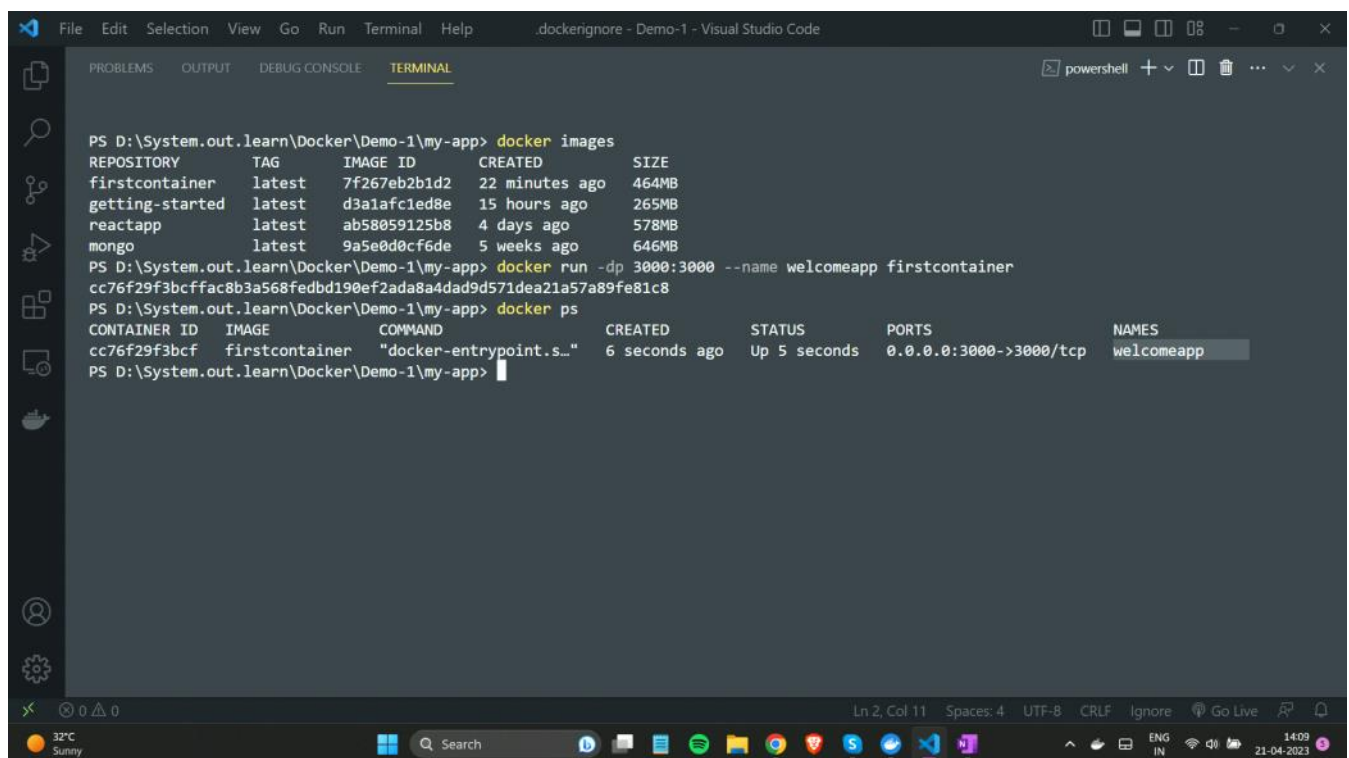
1) To list down all the images:



A screenshot of the Visual Studio Code interface. The terminal window is open, showing the command `docker images` and its output. The output is a table with columns: REPOSITORY, TAG, IMAGE ID, CREATED, and SIZE. The table lists four images: firstcontainer, getting-started, reactapp, and mongo. The status bar at the bottom shows the file path `Ln 2, Col 11`, encoding `UTF-8`, and line endings `CRLF`. The system tray at the bottom indicates a temperature of 32°C and a sunny weather condition.

```
PS D:\System.out.learn\Docker\Demo-1\my-app> docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
firstcontainer       latest             7f267eb2b1d2       17 minutes ago     464MB
getting-started      latest            d3a1afc1ed8e       15 hours ago       265MB
reactapp             latest            ab58059125b8       4 days ago         578MB
mongo                latest            9a5e0d0cf6de       5 weeks ago        646MB
PS D:\System.out.learn\Docker\Demo-1\my-app>
```

9) Providing a name to the container :



A screenshot of the Visual Studio Code interface. The terminal window shows the command `docker run -dp 3000:3000 --name welcomeapp firstcontainer` and its output. The output is a long container ID. Below this, the command `docker ps` is executed, showing a table of running containers. The table has columns: CONTAINER ID, IMAGE, COMMAND, CREATED, STATUS, PORTS, and NAMES. One container is listed with the name `welcomeapp`. The status bar at the bottom shows the file path `Ln 2, Col 11`, encoding `UTF-8`, and line endings `CRLF`. The system tray at the bottom indicates a temperature of 32°C and a sunny weather condition.

```
PS D:\System.out.learn\Docker\Demo-1\my-app> docker run -dp 3000:3000 --name welcomeapp firstcontainer
cc76f29f3bcffac8b3a568fedbd190ef2ada8a4dad9d571dea21a57a89fe81c8
PS D:\System.out.learn\Docker\Demo-1\my-app> docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED         STATUS         PORTS                   NAMES
cc76f29f3bcf   firstcontainer "docker-entrypoint.s..." 6 seconds ago   Up 5 seconds   0.0.0.0:3000->3000/tcp   welcomeapp
PS D:\System.out.learn\Docker\Demo-1\my-app>
```

11) Renaming an container :

PS D:\System.out.learn\docker\Demo-1\my-app> docker ps

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
cc76f29f3bcf	firstcontainer	"docker-entrypoint.s..."	2 minutes ago	Up 2 minutes	0.0.0.0:3000->3000/tcp	welcomeapp

PS D:\System.out.learn\docker\Demo-1\my-app> docker rename welcomeapp infobellwelcomeapp

PS D:\System.out.learn\docker\Demo-1\my-app> docker ps

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
cc76f29f3bcf	firstcontainer	"docker-entrypoint.s..."	3 minutes ago	Up 3 minutes	0.0.0.0:3000->3000/tcp	infobellwelcomeapp

infobellwelcomeapp

PS D:\System.out.learn\docker\Demo-1\my-app> docker stop infobellwelcomeapp

PS D:\System.out.learn\docker\Demo-1\my-app>

12) To remove all the stopped container :

PS D:\System.out.learn\docker\Demo-1\my-app> docker ps -a

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAME
cc76f29f3bcf	firstcontainer	"docker-entrypoint.s..."	14 minutes ago	Exited (1) 10 minutes ago		info
93b53c09525b	firstcontainer	"docker-entrypoint.s..."	17 minutes ago	Exited (1) 16 minutes ago		epic
7db12307afb6	getting-started	"docker-entrypoint.s..."	14 hours ago	Exited (255) About an hour ago	0.0.0.0:3000->3000/tcp	zen
f626eaac7864	getting-started	"docker-entrypoint.s..."	15 hours ago	Created		dazz
e18ec4ac3c31	mongo	"docker-entrypoint.s..."	4 days ago	Exited (255) 15 hours ago	0.0.0.0:27017->27017/tcp	mong

WARNING! This will remove all stopped containers.
Are you sure you want to continue? [y/N] y

Deleted Containers:

cc76f29f3bcffac8b3a568fedbd190ef2ada8a4dad9d571dea21a57a89fe81c8
93b53c09525bf9941bb479b87694f868dbe3c6fc5ee4bb5cf69be963f5bc13d8
7db12307afb6b4bb07bb91639298ff670c62d7cd1c64f31b2d6c5d821ecf7236
f626eaac7864612b86e5a1fca06d6950df326321a68548b15f4197e77a6f3b25
e18ec4ac3c312501046f43f6158c30fb90647f8f91722bab43bf2d3e77a04913

Total reclaimed space: 96.72MB

PS D:\System.out.learn\docker\Demo-1\my-app> docker ps -a

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
--------------	-------	---------	---------	--------	-------	-------

PS D:\System.out.learn\docker\Demo-1\my-app>

13) To search weather a image is present on docker hub or not :

The screenshot shows a Visual Studio Code window with a terminal running the command `docker search redis`. The output is a table listing various Redis Docker images from Docker Hub.

NAME	DESCRIPTION	STARS	OFFICIAL	AUTOMATED
redis	Redis is an open source key-value store that...	12024	[OK]	
bitnami/redis	Bitnami Redis Docker Image	250		[OK]
redislabs/redisinsight	RedisInsight - The GUI for Redis	84		
redislabs/redisearch	Redis With the RedisSearch module pre-loaded...	56		
redislabs/rejson	RedisJSON - Enhanced JSON data type processi...	53		
redis/redis-stack	redis-stack installs a Redis server with add...	46		
redislabs/redis	Clustered in-memory database engine compatib...	36		
redislabs/redismod	An automated build of redismod - latest Redi...	33		[OK]
redis/redis-stack-server	redis-stack-server installs a Redis server w...	30		
redislabs/redisgraph	A graph database module for Redis	26		[OK]
redislabs/rebloom	A probabilistic datatypes module for Redis	22		[OK]
redislabs/redistimeseries	A time series database module for Redis	12		
redislabs/operator		7		
redislabs/redis-py		5		
redislabs/redisgears	An automated build of RedisGears	4		
redislabs/redisai		4		
redislabs/redis-webcli	A tiny Flask app to provide access to Redis ...	3		[OK]
redislabs/redism1	A Redis module that implements several machi...	3		[OK]
redislabs/k8s-controller		2		
redislabs/operator-internal	This repository contains pre-released versio...	1		
redislabs/ng-redis-raft	Redis with redis raft module	0		
redislabs/olmtest	Test artefact for OLM CSV	0		
redislabs/k8s-controller-internal		0		
redislabs/olm-bundle		0		
redislabs/memtier_benchmark	Docker image to run memtier_benchmark	0		

14) To pull/download an image from dockerhub :

The screenshot shows a Visual Studio Code window with a terminal running two commands: `docker images` and `docker pull redis`.

Output of `docker images`:

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
firstcontainer	latest	7f267eb2b1d2	42 minutes ago	464MB
getting-started	latest	d3a1afc1ed8e	15 hours ago	265MB
reactapp	latest	ab58059125b8	4 days ago	578MB
mongo	latest	9a5e0d0cf6de	5 weeks ago	646MB

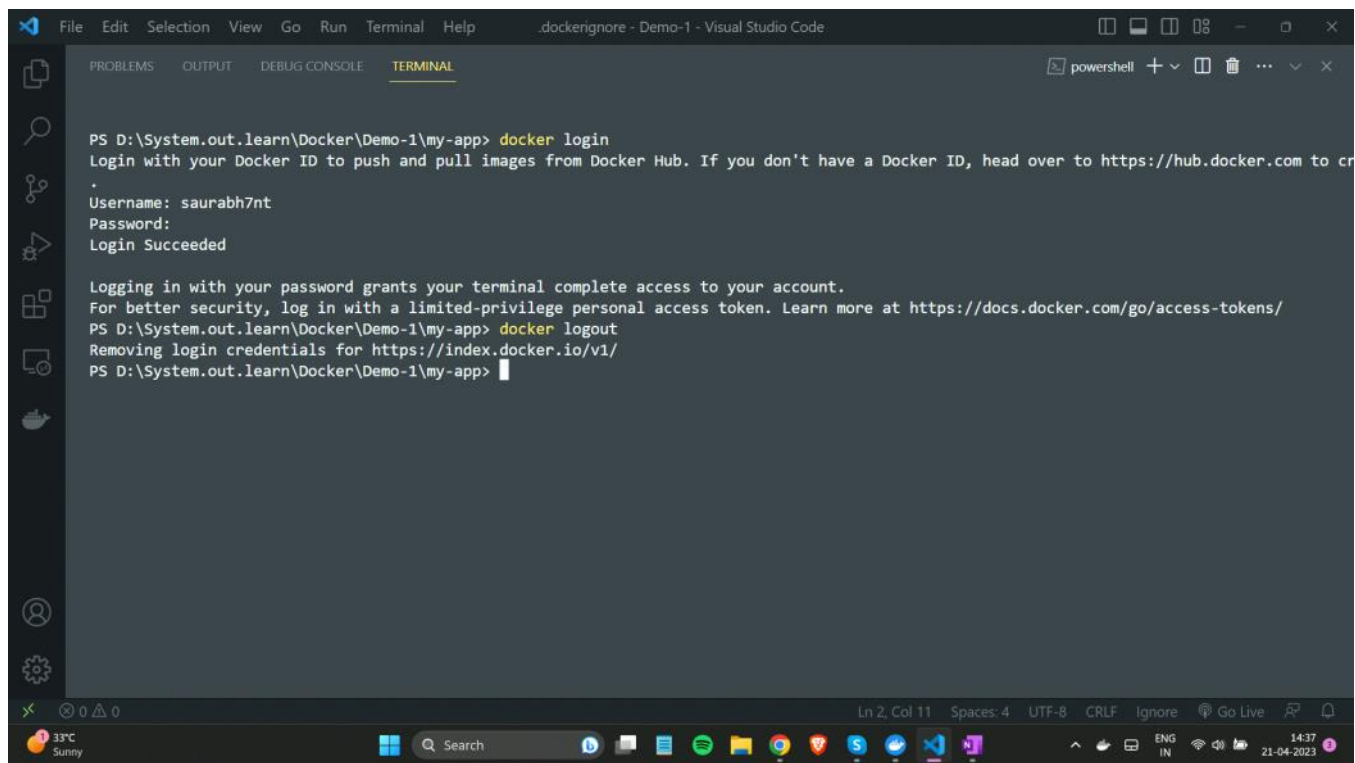
Output of `docker pull redis`:

```
Using default tag: latest
latest: Pulling from library/redis
26c5c85e47da: Already exists
39f79586dcf2: Pull complete
79c71d0520e5: Pull complete
60e988668ca1: Pull complete
873c3fc9fdc6: Pull complete
50ce7f9bf183: Pull complete
Digest: sha256:f50031a49f41e493087fb95f96fdb3523bb25dcf6a3f0b07c588ad3cdbc1d0aa
Status: Downloaded newer image for redis:latest
docker.io/library/redis:latest
```

Output of `docker images` after pull:

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
firstcontainer	latest	7f267eb2b1d2	42 minutes ago	464MB
getting-started	latest	d3a1afc1ed8e	15 hours ago	265MB
redis	latest	eca1379fe8b5	3 days ago	117MB
reactapp	latest	ab58059125b8	4 days ago	578MB
mongo	latest	9a5e0d0cf6de	5 weeks ago	646MB

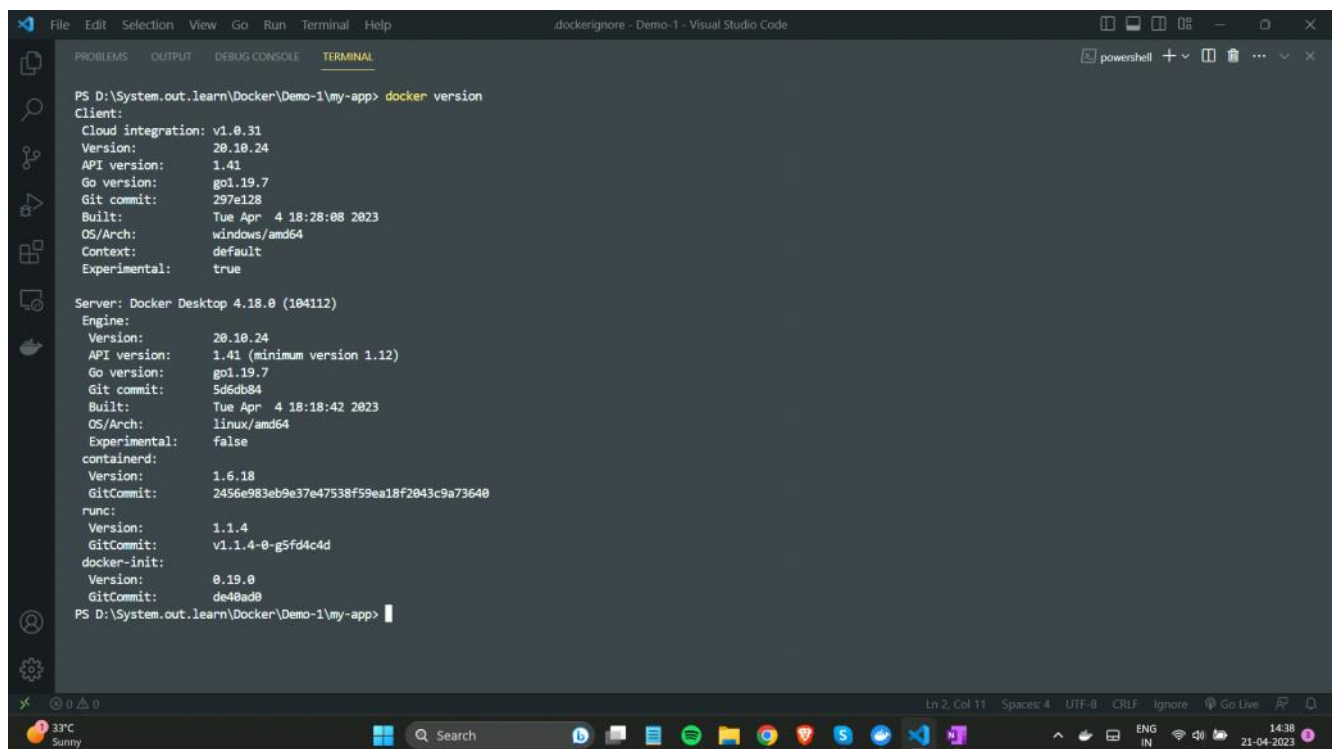
15) To see the history of the docker container :

A screenshot of the Visual Studio Code interface with the terminal window open. The terminal shows the command 'docker login' being executed. The output indicates a successful login for the user 'saurabh7nt'. It also provides instructions on how to use a limited-privilege personal access token for better security. The terminal text is as follows:

```
PS D:\System.out.learn\docker\Demo-1\my-app> docker login
Login with your Docker ID to push and pull images from Docker Hub. If you don't have a Docker ID, head over to https://hub.docker.com to cr
.
Username: saurabh7nt
Password:
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/
PS D:\System.out.learn\docker\Demo-1\my-app> docker logout
Removing login credentials for https://index.docker.io/v1/
PS D:\System.out.learn\docker\Demo-1\my-app>
```

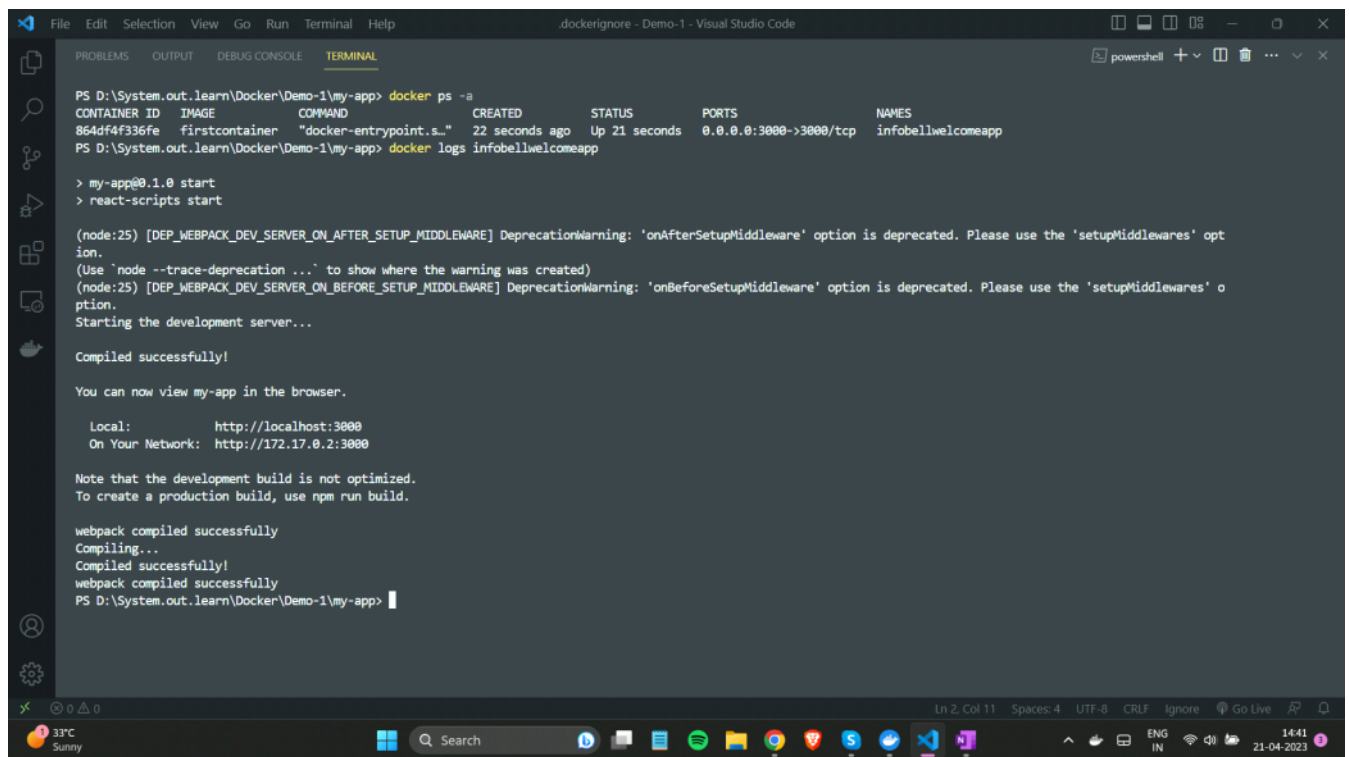
18) To see the version of the docker :

A screenshot of the Visual Studio Code interface with the terminal window open. The terminal shows the command 'docker version' being executed. The output displays the version information for both the Docker client and the server (Docker Desktop). The terminal text is as follows:

```
PS D:\System.out.learn\docker\Demo-1\my-app> docker version
Client:
 Cloud integration: v1.0.31
 Version: 20.10.24
 API version: 1.41
 Go version: go1.19.7
 Git commit: 297e128
 Built: Tue Apr 4 18:28:08 2023
 OS/Arch: windows/amd64
 Context: default
 Experimental: true

Server: Docker Desktop 4.18.0 (104112)
 Engine:
  Version: 20.10.24
  API version: 1.41 (minimum version 1.12)
  Go version: go1.19.7
  Git commit: 5d6db84
  Built: Tue Apr 4 18:18:42 2023
  OS/Arch: linux/amd64
  Experimental: false
 containerd:
  Version: 1.6.18
  GitCommit: 2456e983eb9e37e47538f59ea18f2043c9a73640
 runc:
  Version: 1.1.4
  GitCommit: v1.1.4-0-g5fd4c4d
 docker-init:
  Version: 0.19.0
  GitCommit: de40ad0
PS D:\System.out.learn\docker\Demo-1\my-app>
```

19) To see the log of container :



The screenshot shows a Visual Studio Code window with a terminal open. The terminal output includes the following commands and results:

```
PS D:\System.out.learn\Docker\Demo-1\my-app> docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS                    NAMES
864df4f336fe   firstcontainer "docker-entrypoint.s..." 22 seconds ago Up 21 seconds    0.0.0.0:3000->3000/tcp   infobellwelcomeapp

PS D:\System.out.learn\Docker\Demo-1\my-app> docker logs infobellwelcomeapp

> my-app@0.1.0 start
> react-scripts start

(node:25) [DEP_WEBPACK_DEV_SERVER_ON_AFTER_SETUP_MIDDLEWARE] DeprecationWarning: 'onAfterSetupMiddleware' option is deprecated. Please use the 'setupMiddlewares' option.
(node:25) [DEP_WEBPACK_DEV_SERVER_ON_BEFORE_SETUP_MIDDLEWARE] DeprecationWarning: 'onBeforeSetupMiddleware' option is deprecated. Please use the 'setupMiddlewares' option.
Starting the development server...

Compiled successfully!

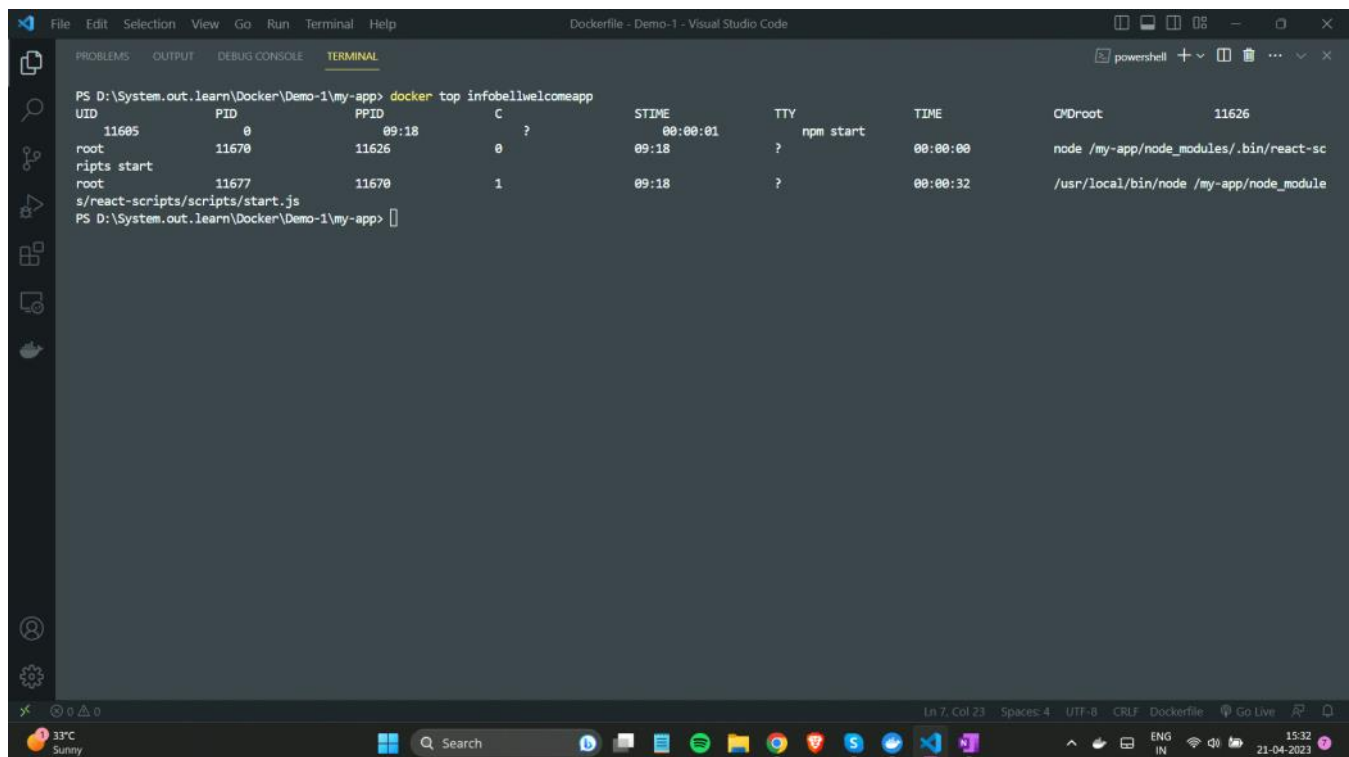
You can now view my-app in the browser.

Local:            http://localhost:3000
On Your Network:  http://172.17.0.2:3000

Note that the development build is not optimized.
To create a production build, use npm run build.

webpack compiled successfully
Compiling...
Compiled successfully!
webpack compiled successfully
PS D:\System.out.learn\Docker\Demo-1\my-app>
```

20) To show running processes inside the container:



The screenshot shows a Visual Studio Code window with a terminal open. The terminal output shows the command `docker top infobellwelcomeapp` and its results:

```
PS D:\System.out.learn\Docker\Demo-1\my-app> docker top infobellwelcomeapp
UID          PID          PPID         C           ?           STIME        TTY          TIME          CMDroot          11626
11605        0            09:18       ?           00:00:01    npm start    00:00:00    node /my-app/node_modules/.bin/react-sc
ripts start  11670       11626       0           09:18       ?           00:00:00    /usr/local/bin/node /my-app/node_module
s/react-scripts/scripts/start.js
root        11677       11670       1           09:18       ?           00:00:32    /usr/local/bin/node /my-app/node_module
PS D:\System.out.learn\Docker\Demo-1\my-app>
```

21) Pushing our own created image into the docker registry :

```
File Edit Selection View Go Run Terminal Help Dockerfile - Demo-1 - Visual Studio Code
TERMINAL
PS D:\System.out.learn\Docker\Demo-1\my-app> docker login -u saurabh7nt
Password:
Login Succeeded

Logging in with your password grants your terminal complete access to your account.
For better security, log in with a limited-privilege personal access token. Learn more at https://docs.docker.com/go/access-tokens/
PS D:\System.out.learn\Docker\Demo-1\my-app> docker tag firstcontainer saurabh7nt/firstcontainer
PS D:\System.out.learn\Docker\Demo-1\my-app> docker push saurabh7nt/firstcontainer
Using default tag: latest
The push refers to repository [docker.io/saurabh7nt/firstcontainer]
99fa9925cf39: Pushed
3ca31ceefd8c: Pushed
7ce958e3f148: Pushed
a8f8d6aabff0: Pushed
58397a68b58b: Mounted from library/node
a29740753823: Mounted from library/node
4998db90ef2c: Mounted from library/node
f1417ff83b31: Mounted from library/node
latest: digest: sha256:d89f41015427e043509434e69bb1f78a13930d785957e311d916240db6df11e6 size: 1997
PS D:\System.out.learn\Docker\Demo-1\my-app>
```

docker hub

Search Docker Hub

Explore Repositories Organizations Help

Upgrade

saurabh7nt

saurabh7nt

Repositories firstcontainer General

Using 0 of 1 private repositories. [Get more](#)

General Tags Builds Collaborators Webhooks Settings

Add a short description for this repository

The short description is used to index your content on Docker Hub and in search engines. It's visible to users in search results.

Update

saurabh7nt / firstcontainer

Description

This repository does not have a description

Last pushed: a few seconds ago

Docker commands

Public View

To push a new tag to this repository,

`docker push saurabh7nt/firstcontainer:tagname`

Tags

This repository contains 1 tag(s).

Tag	OS	Type	Pulled	Pushed
latest		Image	---	2 minutes ago

[See all](#)[Go to Advanced Image Management](#)

Automated Builds

Manually pushing images to Hub? Connect your account to GitHub or Bitbucket to automatically build and tag new images whenever your code is updated, so you can focus your time on creating.

Available with Pro, Team and Business subscriptions. [Read more about automated builds](#)

Upgrade

22) Accessing my image which I pushed on docker registry through another instance using (play-with-docker):

03:40:42

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8
node1

ch164m2e_ch16bng1k7jg00bbsio0

IP

192.168.0.8

OPEN PORT

3000

Memory

4.61% (184.3MiB / 3.906GiB)

CPU

59.07%

SSH

ssh ip172-18-0-103-ch164m2e69v000b1bdgg@direct.labs.i

DELETE

EDITOR

```
# The FWD team.
#####
[node1] (local) root@192.168.0.8 ~
$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
[node1] (local) root@192.168.0.8 ~
$ docker run -dp 3000:3000 saurabh7nt/firstcontainer
Unable to find image 'saurabh7nt/firstcontainer:latest' locally
latest: Pulling from saurabh7nt/firstcontainer
f56be85fc22e: Pull complete
4fa68352a2d3: Pull complete
263faafe3340: Pull complete
78c94c8792d0: Pull complete
abcfe51e966e: Pull complete
ae84a5a10f05: Pull complete
```

33°C Mostly sunny

Search

ENG IN

16:05

21-04-2023

03:39:00

CLOSE SESSION

Instances

+ ADD NEW INSTANCE

192.168.0.8
node1

ch164m2e_ch16bng1k7jg00bbsio0

IP

192.168.0.8

OPEN PORT

3000

Memory

6.23% (249.1MiB / 3.906GiB)

CPU

47.01%

SSH

ssh ip172-18-0-103-ch164m2e69v000b1bdgg@direct.labs.i

DELETE

EDITOR

```
4fa68352a2d3: Pull complete
263faafe3340: Pull complete
78c94c8792d0: Pull complete
abcfe51e966e: Pull complete
ae84a5a10f05: Pull complete
7b9c389cf9bb: Pull complete
ca17f92893a7: Pull complete
Digest: sha256:d89f41015427e043509434e69bb1f78a13930d785957e311d916240db6df11e6
Status: Downloaded newer image for saurabh7nt/firstcontainer:latest
c9a98139a5470e5d5ec9e27a37f3511bccaa32844c68c6ad6b64985aed76361b
[node1] (local) root@192.168.0.8 ~
$ docker images
REPOSITORY          TAG                 IMAGE ID            CREATED             SIZE
saurabh7nt/firstcontainer  latest             7f267eb2b1d2        2 hours ago         464MB
[node1] (local) root@192.168.0.8 ~
```

33°C Mostly sunny

Search

ENG IN

16:06

21-04-2023