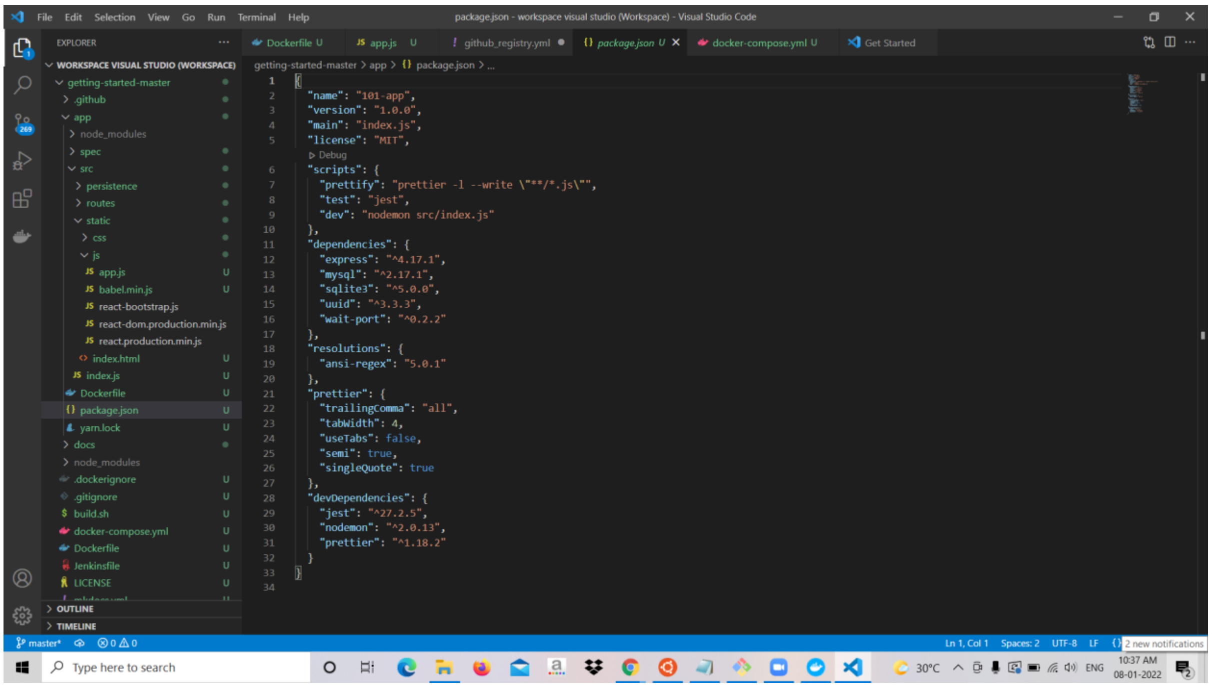
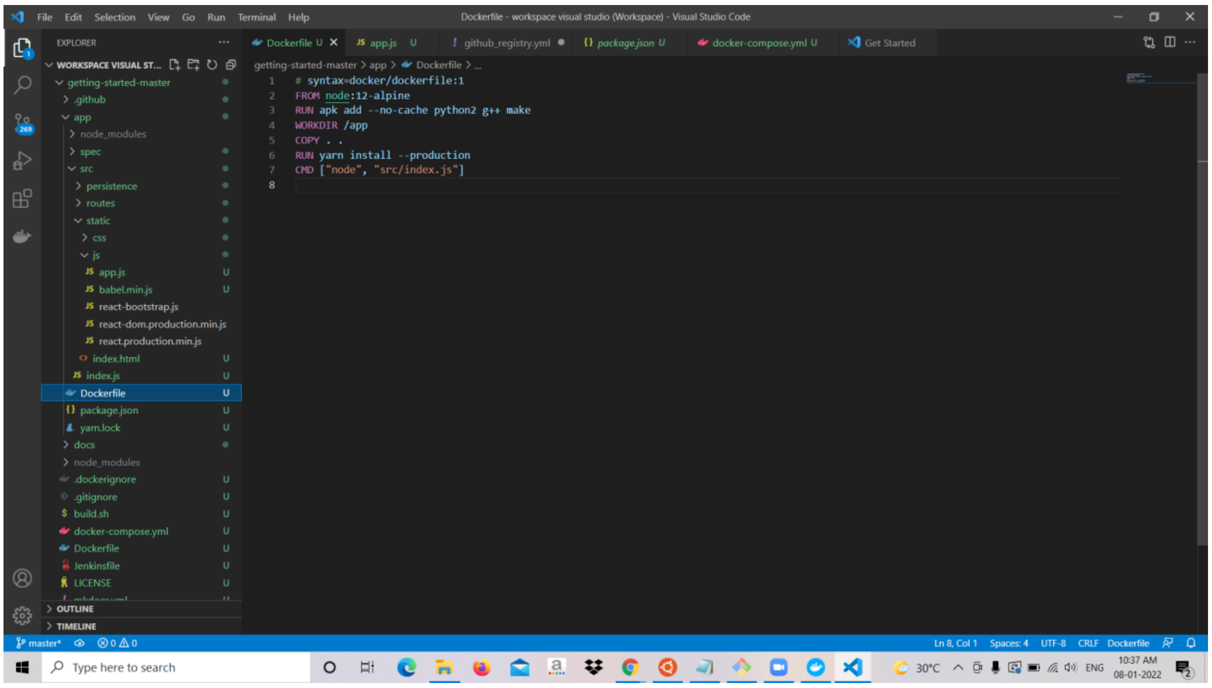
Working with a sample To-do application.

Package.json



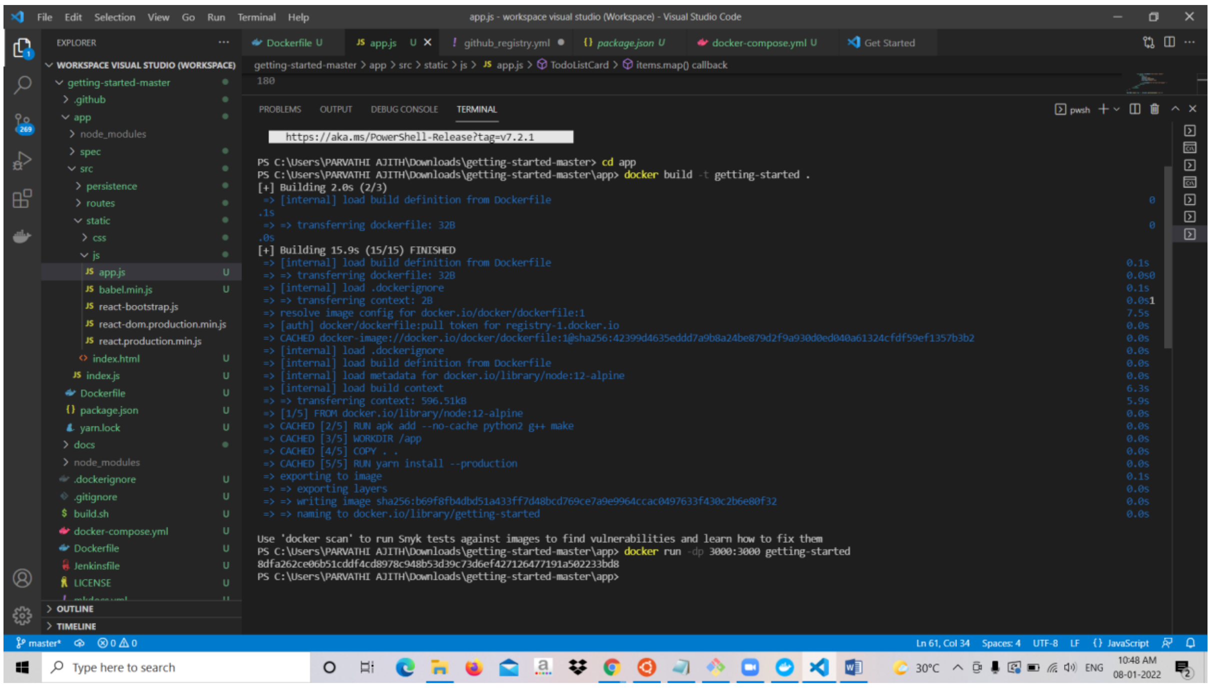
```json
{
  "name": "101-app",
  "version": "1.0.0",
  "main": "index.js",
  "license": "MIT",
  "scripts": {
    "prettify": "prettier -l --write \"**/*.js\"",
    "test": "jest",
    "dev": "nodemon src/index.js"
  },
  "dependencies": {
    "express": "^4.17.1",
    "mysql": "^2.17.1",
    "sqlite3": "^5.0.0",
    "uuid": "^3.3.3",
    "wait-port": "^0.2.2"
  },
  "resolutions": {
    "ansi-regex": "5.0.1"
  },
  "prettier": {
    "trailingComma": "all",
    "tabWidth": 4,
    "useTabs": false,
    "semi": true,
    "singleQuote": true
  },
  "devDependencies": {
    "jest": "^27.2.5",
    "nodemon": "^2.0.13",
    "prettier": "^1.18.2"
  }
}
```

Dockerfile



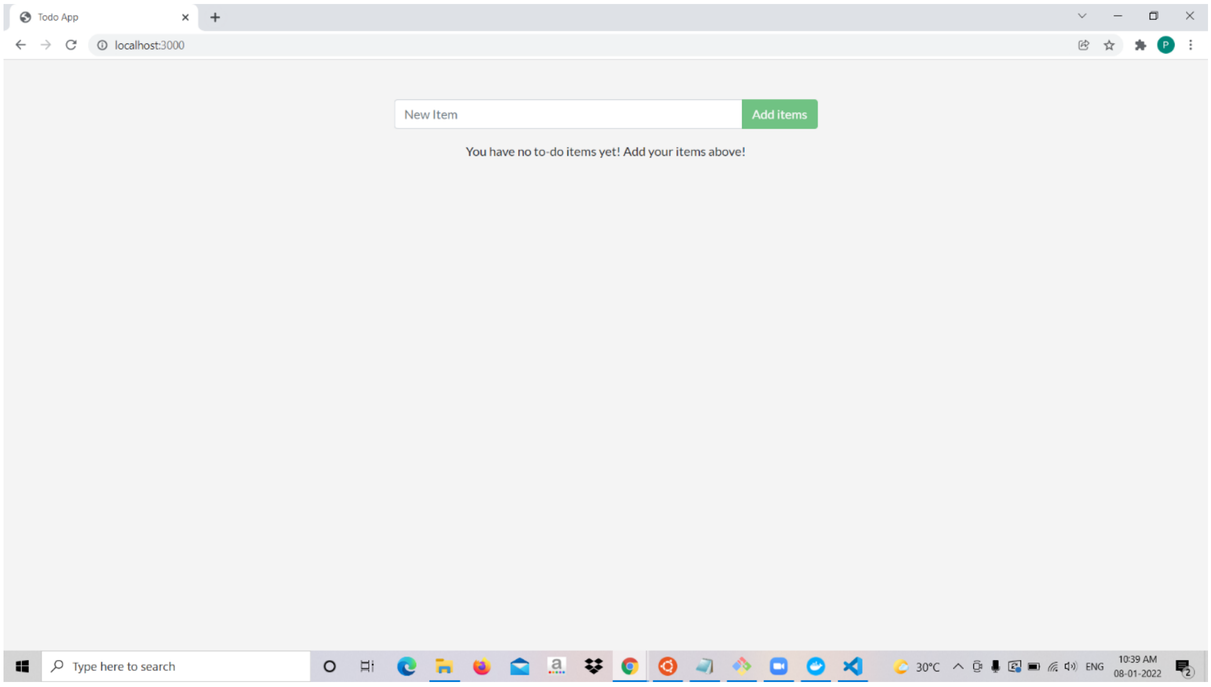
```dockerfile
# syntax=docker/dockerfile:1
FROM node:12-alpine
RUN apk add --no-cache python2 g++ make
WORKDIR /app
COPY . .
RUN yarn install --production
CMD ["node", "src/index.js"]
```

Running and building the image getting-started.



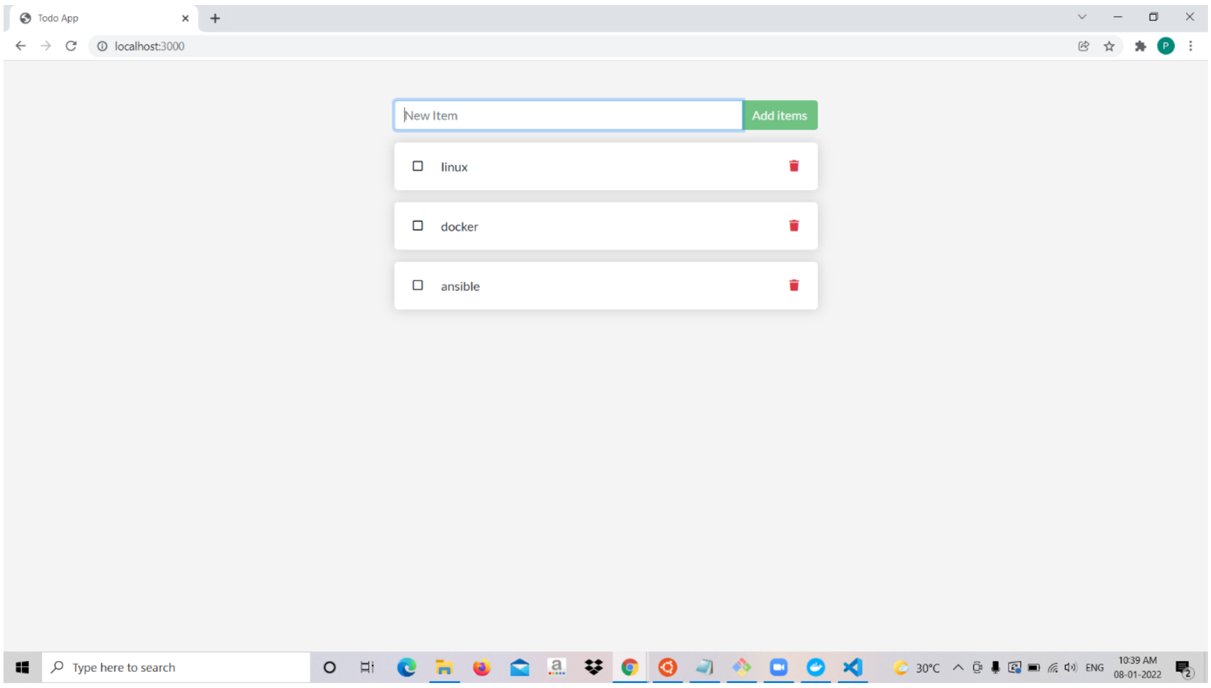
```
 https://aka.ms/PowerShell-Release?tag=v7.2.1

PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master> cd app
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker build -t getting-started .
[+] Building 2.0s (2/3)
 => [internal] load build definition from Dockerfile                                                   0
.1s
 => => transferring dockerfile: 32B                                                                    0
.0s
[+] Building 15.9s (15/15) FINISHED
 => [internal] load build definition from Dockerfile                                                0.1s
 => => transferring dockerfile: 32B                                                                 0.0s0
 => [internal] load .dockerignore                                                                   0.1s
 => => transferring context: 2B                                                                     0.0s1
 => resolve image config for docker.io/docker/dockerfile:1                                          7.5s
 => [auth] docker/dockerfile:pull token for registry-1.docker.io                                    0.0s
 => CACHED docker-image://docker.io/docker/dockerfile:1@sha256:42399d4635eddd7a9b8a24be879d2f9a930d0ed040a61324cfdf59ef1357b3b2  0.0s
 => [internal] load .dockerignore                                                                   0.0s
 => [internal] load build definition from Dockerfile                                                0.0s
 => [internal] load metadata for docker.io/library/node:12-alpine                                   0.0s
 => [internal] load build context                                                                   6.3s
 => => transferring context: 596.51kB                                                               5.9s
 => [1/5] FROM docker.io/library/node:12-alpine                                                     0.0s
 => CACHED [2/5] RUN apk add --no-cache python2 g++ make                                            0.0s
 => CACHED [3/5] WORKDIR /app                                                                       0.0s
 => CACHED [4/5] COPY . .                                                                           0.0s
 => CACHED [5/5] RUN yarn install --production                                                      0.0s
 => exporting to image                                                                              0.1s
 => => exporting layers                                                                             0.0s
 => => writing image sha256:b69f8fb4dbd51a433ff7d48bcd769ce7a9e9964ccac0497633f430c2b6e80f32        0.0s
 => => naming to docker.io/library/getting-started                                                  0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -dp 3000:3000 getting-started
8dfa262ce06b51cddf4cd8978c948b53d39c73d6ef427126477191a502233bd8
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app>
```

The to-do app in browser.

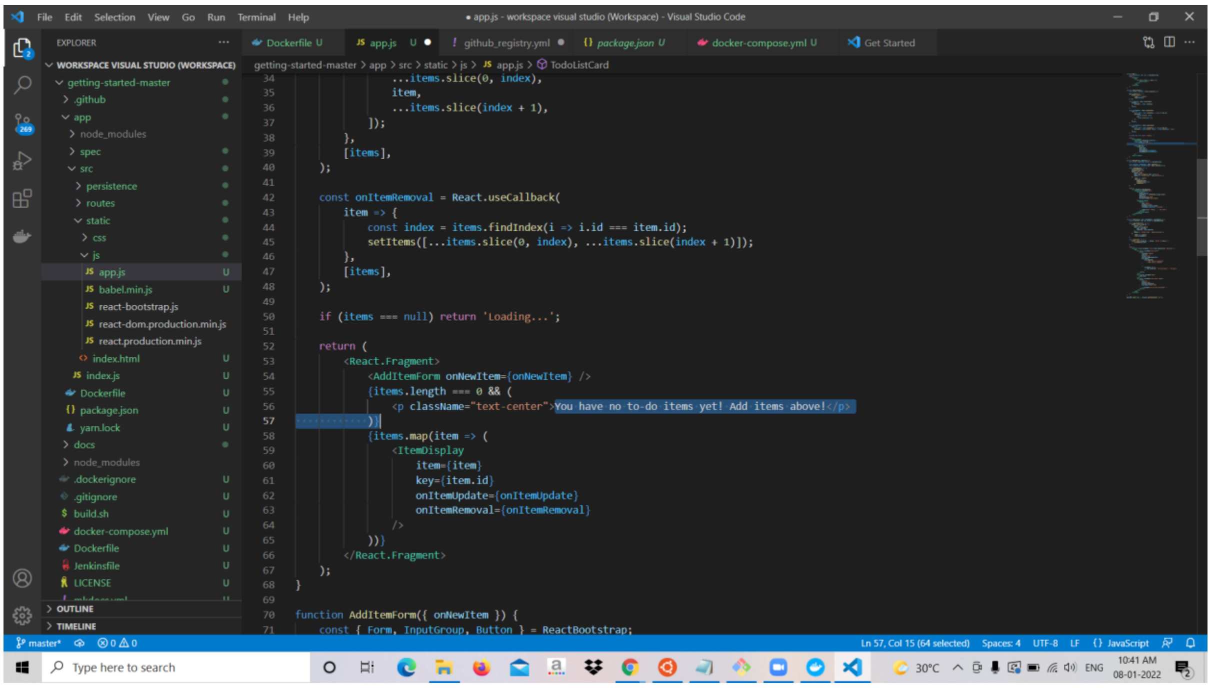


You have no to-do items yet! Add your items above!

Adding items to the app.

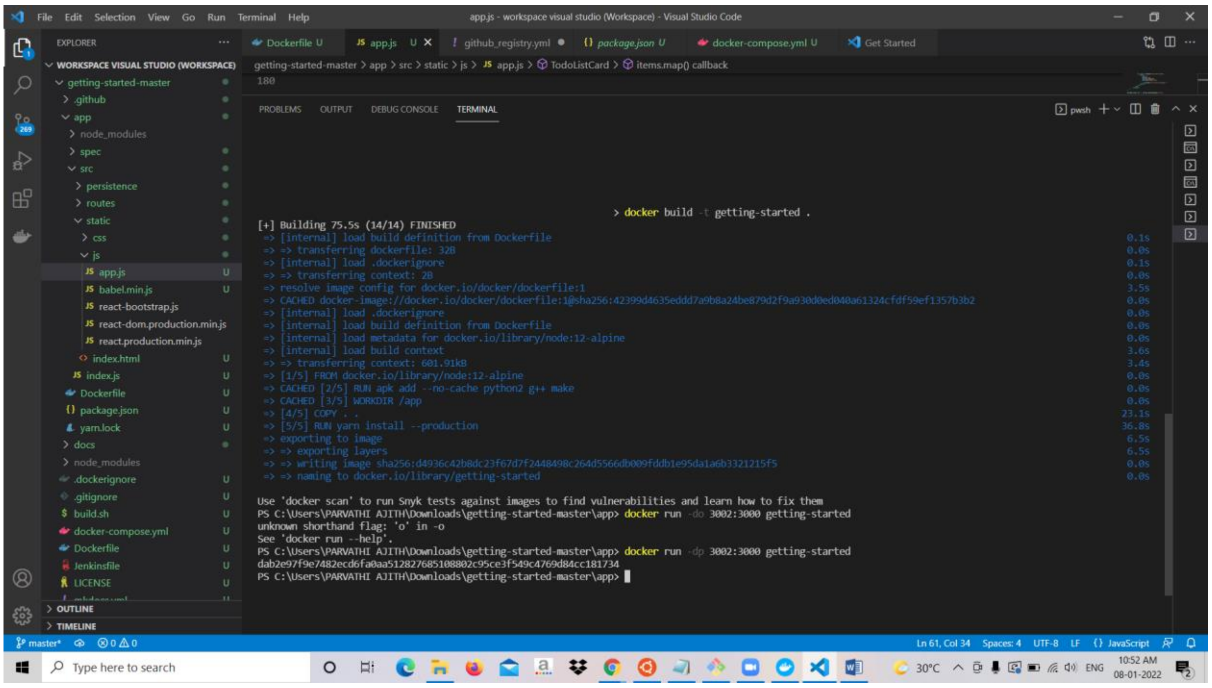


Changing the app wordings.


• app.js - workspace visual studio (Workspace) - Visual Studio Code
getting-started-master > app > src > static > js > app.js > TodoListCard

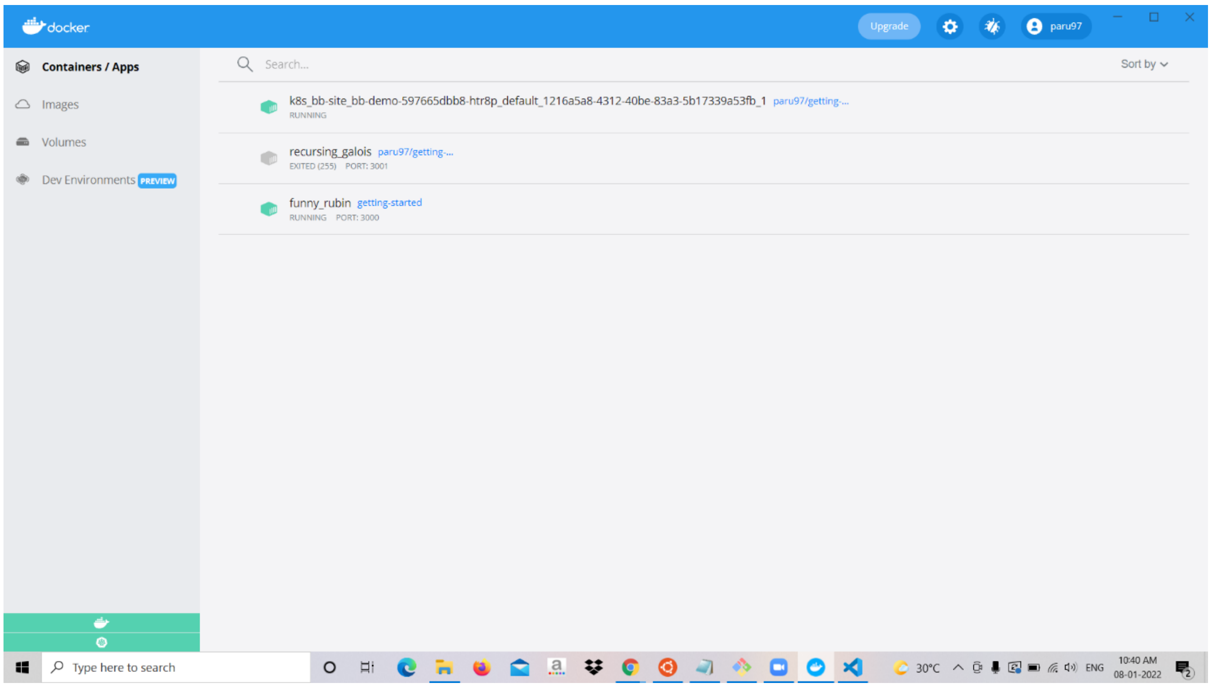
```
                    ...items.slice(0, index),
                    item,
                    ...items.slice(index + 1),
                ]);
            },
            [items],
        );

        const onItemRemoval = React.useCallback(
            item => {
                const index = items.findIndex(i => i.id === item.id);
                setItems([...items.slice(0, index), ...items.slice(index + 1)]);
            },
            [items],
        );

        if (items === null) return 'Loading...';

        return (
            <React.Fragment>
                <AddItemForm onNewItem={onNewItem} />
                {items.length === 0 && (
                    <p className="text-center">You have no to-do items yet! Add items above!</p>
                )}
                {items.map(item => (
                    <ItemDisplay
                        item={item}
                        key={item.id}
                        onItemUpdate={onItemUpdate}
                        onItemRemoval={onItemRemoval}
                    />
                ))}
            </React.Fragment>
        );
    }

    function AddItemForm({ onNewItem }) {
        const { Form, InputGroup, Button } = ReactBootstrap;
```

Building and running the container again with a diff port number.



```
                                                    > docker build -t getting-started .
[+] Building 75.5s (14/14) FINISHED
 => [internal] load build definition from Dockerfile                                                                          0.1s
 => => transferring dockerfile: 32B                                                                                           0.0s
 => [internal] load .dockerignore                                                                                             0.1s
 => => transferring context: 2B                                                                                               0.0s
 => resolve image config for docker.io/docker/dockerfile:1                                                                    3.5s
 => CACHED docker-image://docker.io/docker/dockerfile:1@sha256:42399d4635eddd7a9b8a24be879d2f9a930d0ed040a61324cfdf59ef1357b3b2  0.0s
 => [internal] load .dockerignore                                                                                             0.0s
 => [internal] load build definition from Dockerfile                                                                          0.0s
 => [internal] load metadata for docker.io/library/node:12-alpine                                                             0.0s
 => [internal] load build context                                                                                             3.6s
 => => transferring context: 601.91kB                                                                                         3.4s
 => [1/5] FROM docker.io/library/node:12-alpine                                                                               0.0s
 => CACHED [2/5] RUN apk add --no-cache python2 g++ make                                                                      0.0s
 => CACHED [3/5] WORKDIR /app                                                                                                 0.0s
 => [4/5] COPY . .                                                                                                           23.1s
 => [5/5] RUN yarn install --production                                                                                      36.8s
 => exporting to image                                                                                                        6.5s
 => => exporting layers                                                                                                       6.5s
 => => writing image sha256:d4936c42b8dc23f67d7f2448498c264d5566db009fddb1e95da1a6b3321215f5                                  0.0s
 => => naming to docker.io/library/getting-started                                                                            0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -do 3002:3000 getting-started
unknown shorthand flag: 'o' in -o
See 'docker run --help'.
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -dp 3002:3000 getting-started
dab2e97f9e7482ecd6fa0aa512827685108802c95ce3f549c4769d84cc181734
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app>
```

Docker desktop with containers running.



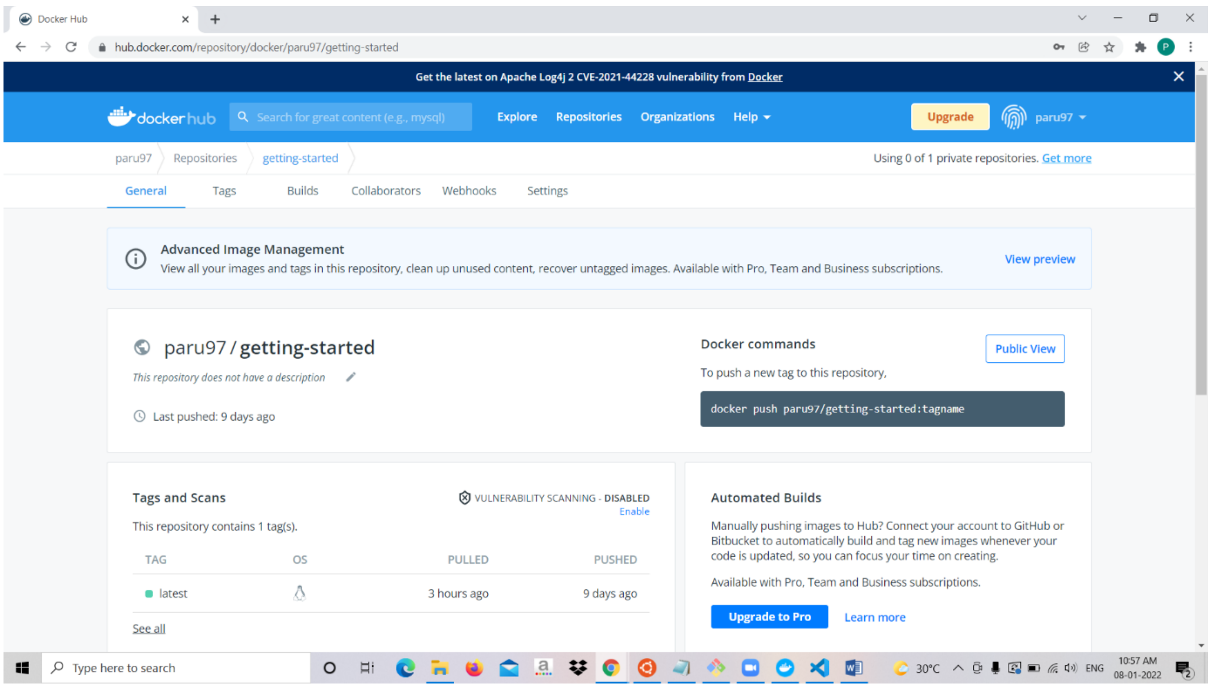
k8s_bb-site_bb-demo-597665dbb8-htr8p_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1 paru97/getting-...
RUNNING

recursing_galois paru97/getting-...
EXITED (255) PORT: 3001

funny_rubin getting-started
RUNNING PORT: 3000

Pushed the image to the Docker hub after creating a getting-started repository there and then using the command < docker push dockerid/getting-started > command.

(To push the image to the dockerhub, the build and run commands should also have the dockerid along with image name)



Get the latest on Apache Log4j 2 CVE-2021-44228 vulnerability from Docker

paru97 / Repositories / getting-started

Using 0 of 1 private repositories. Get more

Advanced Image Management
View all your images and tags in this repository, clean up unused content, recover untagged images. Available with Pro, Team and Business subscriptions.

paru97 / getting-started

This repository does not have a description

Last pushed: 9 days ago

Docker commands

To push a new tag to this repository,

```
docker push paru97/getting-started:tagname
```

Tags and Scans

VULNERABILITY SCANNING - DISABLED

This repository contains 1 tag(s).

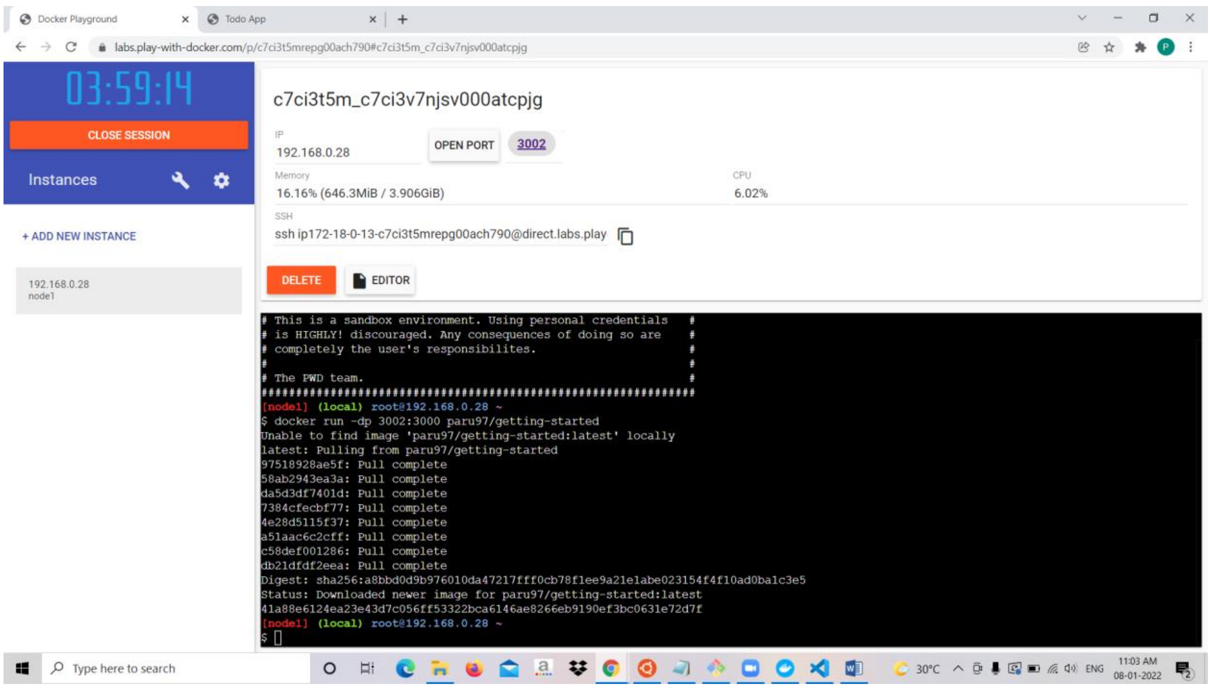
TAG	OS	PULLED	PUSHED
latest		3 hours ago	9 days ago

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.

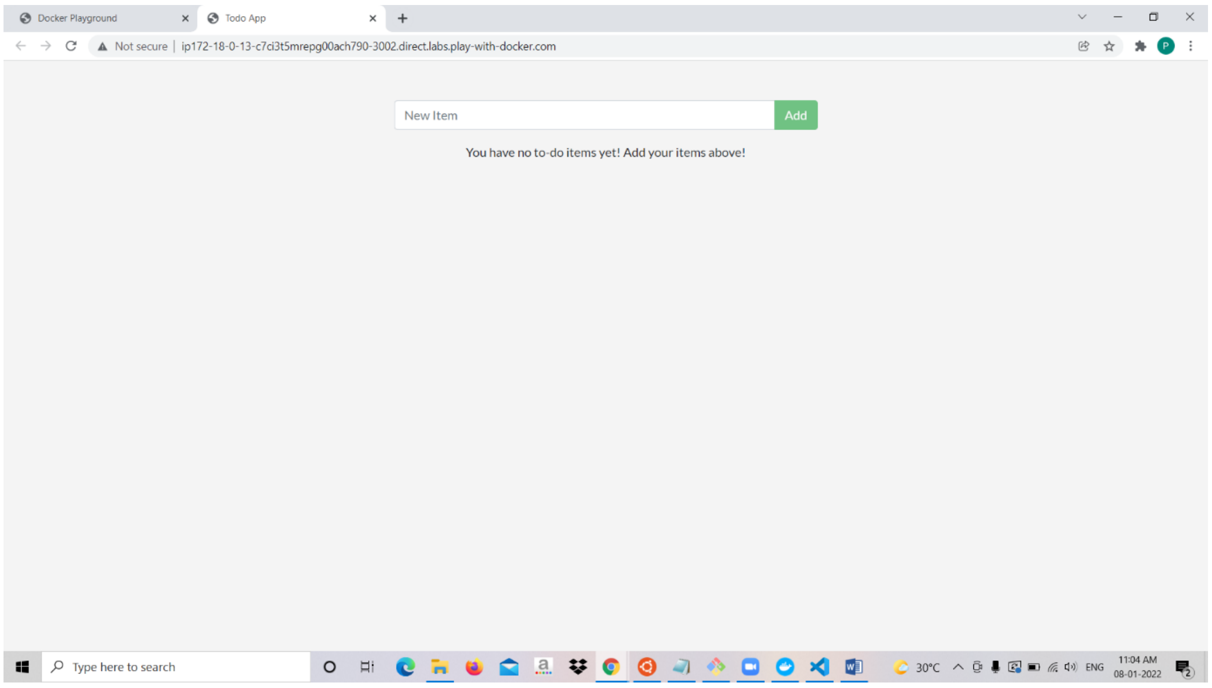
Available with Pro, Team and Business subscriptions.

Running the app in labs.play-with-docker environment.

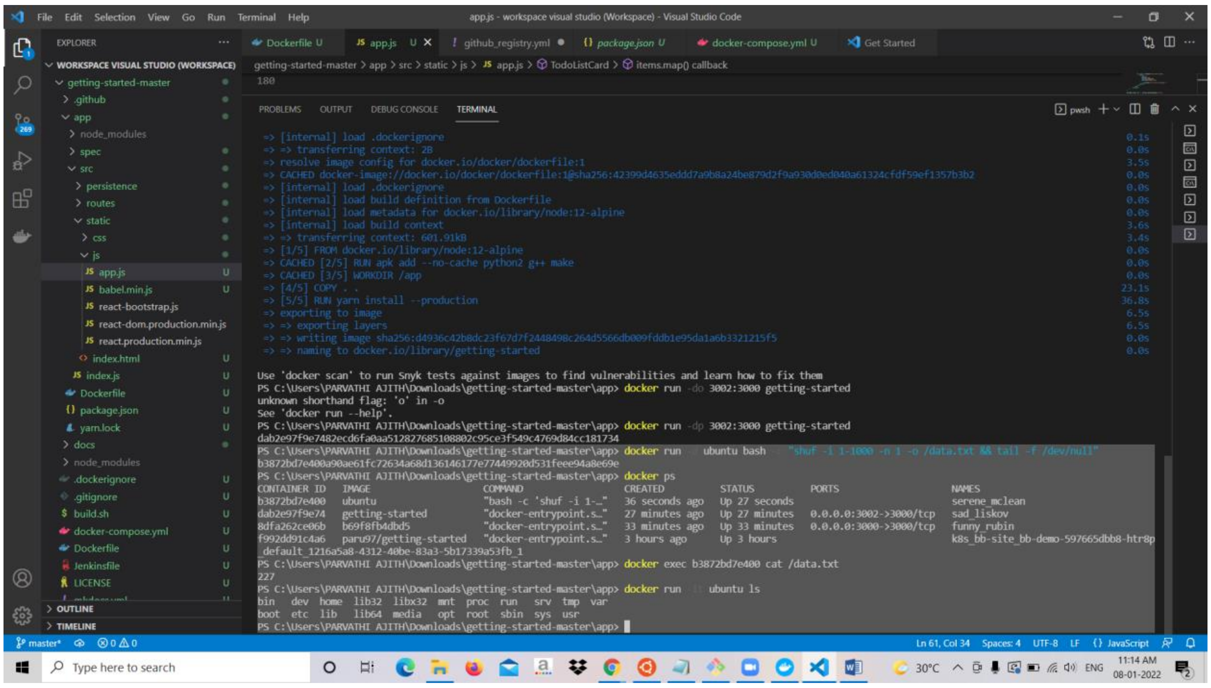

Docker Playground
Todo App
labs.play-with-docker.com/p/c7ci3t5mrepg00ach790#c7ci3t5m_c7ci3v7njsv000atcpjg
03:59:14
CLOSE SESSION
Instances
+ ADD NEW INSTANCE
192.168.0.28
node1
c7ci3t5m_c7ci3v7njsv000atcpjg
IP
192.168.0.28
OPEN PORT
3002
Memory
16.16% (646.3MiB / 3.906GiB)
CPU
6.02%
SSH
ssh ip172-18-0-13-c7ci3t5mrepg00ach790@direct.labs.play
DELETE
EDITOR
Type here to search
30°C
ENG
11:03 AM
08-01-2022

```
# This is a sandbox environment. Using personal credentials   #
# is HIGHLY! discouraged. Any consequences of doing so are    #
# completely the user's responsibilites.                      #
#                                                             #
# The PWD team.                                               #
###############################################################
[node1] (local) root@192.168.0.28 ~
$ docker run -dp 3002:3000 paru97/getting-started
Unable to find image 'paru97/getting-started:latest' locally
latest: Pulling from paru97/getting-started
97518928ae5f: Pull complete
58ab2943ea3a: Pull complete
da5d3df7401d: Pull complete
7384cfecbf77: Pull complete
4e28d5115f37: Pull complete
a51aac6c2cff: Pull complete
c58def001286: Pull complete
db21dfdf2eea: Pull complete
Digest: sha256:a8bbd0d9b976010da47217fff0cb78f1ee9a21e1abe023154f4f10ad0ba1c3e5
Status: Downloaded newer image for paru97/getting-started:latest
41a88e6124ea23e43d7c056ff53322bca6146ae8266eb9190ef3bc0631e72d7f
[node1] (local) root@192.168.0.28 ~
$ 
```

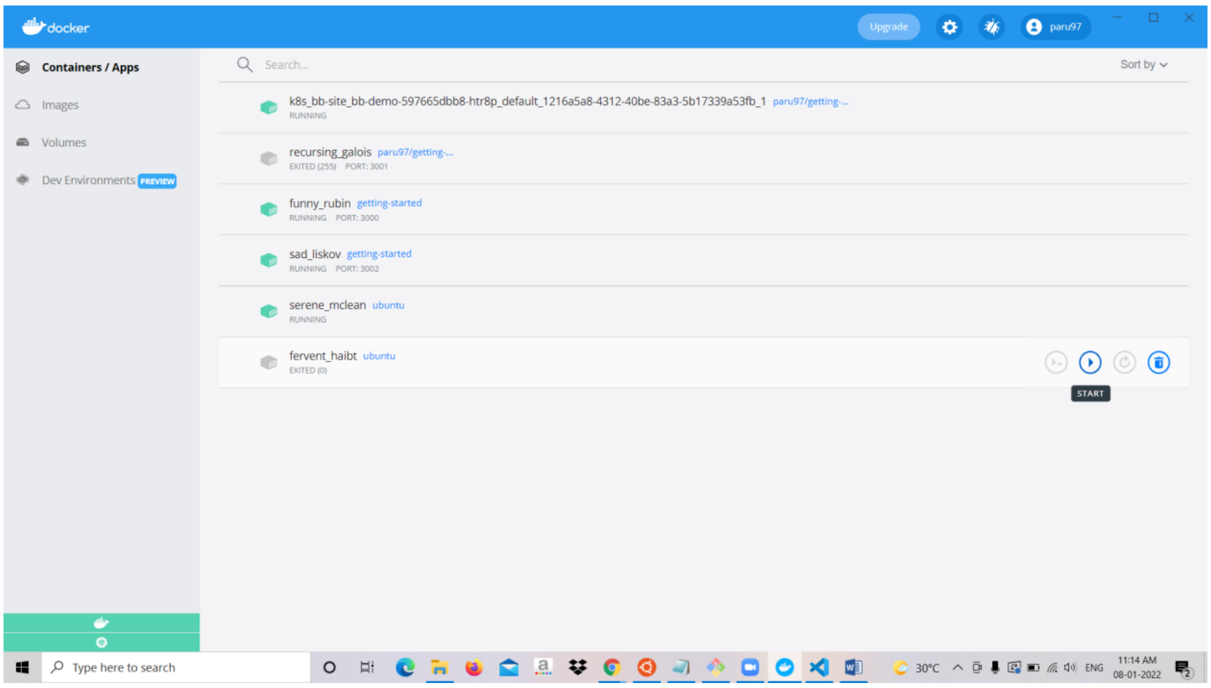
Opening the to-do app from there.


Docker Playground
Todo App
Not secure | ip172-18-0-13-c7ci3t5mrepg00ach790-3002.direct.labs.play-with-docker.com
New Item
Add
You have no to-do items yet! Add your items above!
Type here to search
30°C
ENG
11:04 AM
08-01-2022

Showing each container is independent of each other by running the same image in two different containers.

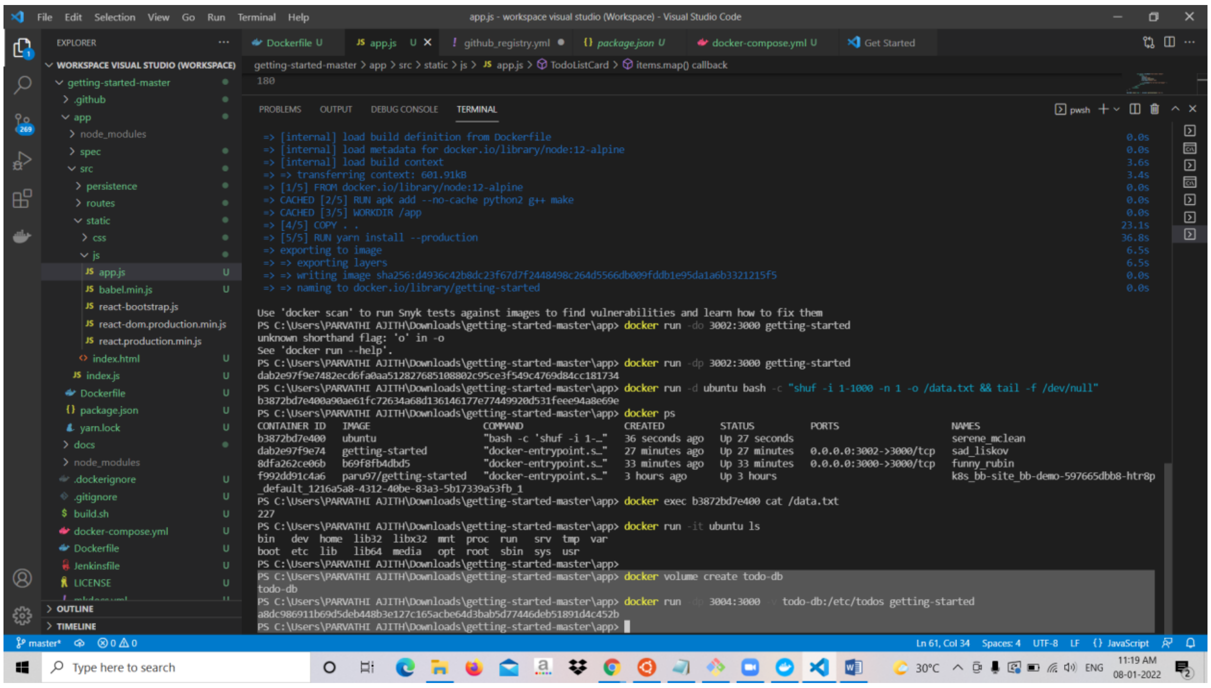


```
 => [internal] load .dockerignore                                                                            0.1s
 => => transferring context: 2B                                                                              0.0s
 => resolve image config for docker.io/docker/dockerfile:1                                                   3.5s
 => CACHED docker-image://docker.io/docker/dockerfile:1@sha256:42399d4635eddd7a9b8a24be879d2f9a930d0ed040a61324cfdf59ef1357b3b2  0.0s
 => [internal] load .dockerignore                                                                            0.0s
 => [internal] load build definition from Dockerfile                                                         0.0s
 => [internal] load metadata for docker.io/library/node:12-alpine                                            0.0s
 => [internal] load build context                                                                            3.6s
 => => transferring context: 601.91kB                                                                        3.4s
 => [1/5] FROM docker.io/library/node:12-alpine                                                              0.0s
 => CACHED [2/5] RUN apk add --no-cache python2 g++ make                                                     0.0s
 => CACHED [3/5] WORKDIR /app                                                                                0.0s
 => [4/5] COPY . .                                                                                          23.1s
 => [5/5] RUN yarn install --production                                                                     36.8s
 => exporting to image                                                                                       6.5s
 => => exporting layers                                                                                      6.5s
 => => writing image sha256:d4936c42b8dc23f67d7f2448498c264d5566db009fddb1e95da1a6b3321215f5                 0.0s
 => => naming to docker.io/library/getting-started                                                           0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -do 3002:3000 getting-started
unknown shorthand flag: 'o' in -o
See 'docker run --help'.
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -dp 3002:3000 getting-started
dab2e97f9e7482ecd6fa0aa512827685108802c95ce3f549c4769d84cc181734
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -d ubuntu bash -c "shuf -i 1-1000 -n 1 -o /data.txt && tail -f /dev/null"
b3872bd7e400a90ae61fc72634a68d136146177e77449920d531feee94a8e69e
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker ps
CONTAINER ID   IMAGE                  COMMAND                  CREATED          STATUS          PORTS                    NAMES
b3872bd7e400   ubuntu                 "bash -c 'shuf -i 1-…"   36 seconds ago   Up 27 seconds                            serene_mclean
dab2e97f9e74   getting-started        "docker-entrypoint.s…"   27 minutes ago   Up 27 minutes   0.0.0.0:3002->3000/tcp   sad_liskov
8dfa262ce06b   b69f8fb4dbd5           "docker-entrypoint.s…"   33 minutes ago   Up 33 minutes   0.0.0.0:3000->3000/tcp   funny_rubin
f992dd91c4a6   paru97/getting-started "docker-entrypoint.s…"   3 hours ago      Up 3 hours                               k8s_bb-site_bb-demo-597665dbb8-htr8p
_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker exec b3872bd7e400 cat /data.txt
227
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -it ubuntu ls
bin   dev  home  lib32  libx32  mnt   proc  run   srv  tmp  var
boot  etc  lib   lib64  media   opt   root  sbin  sys  usr
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app>
```

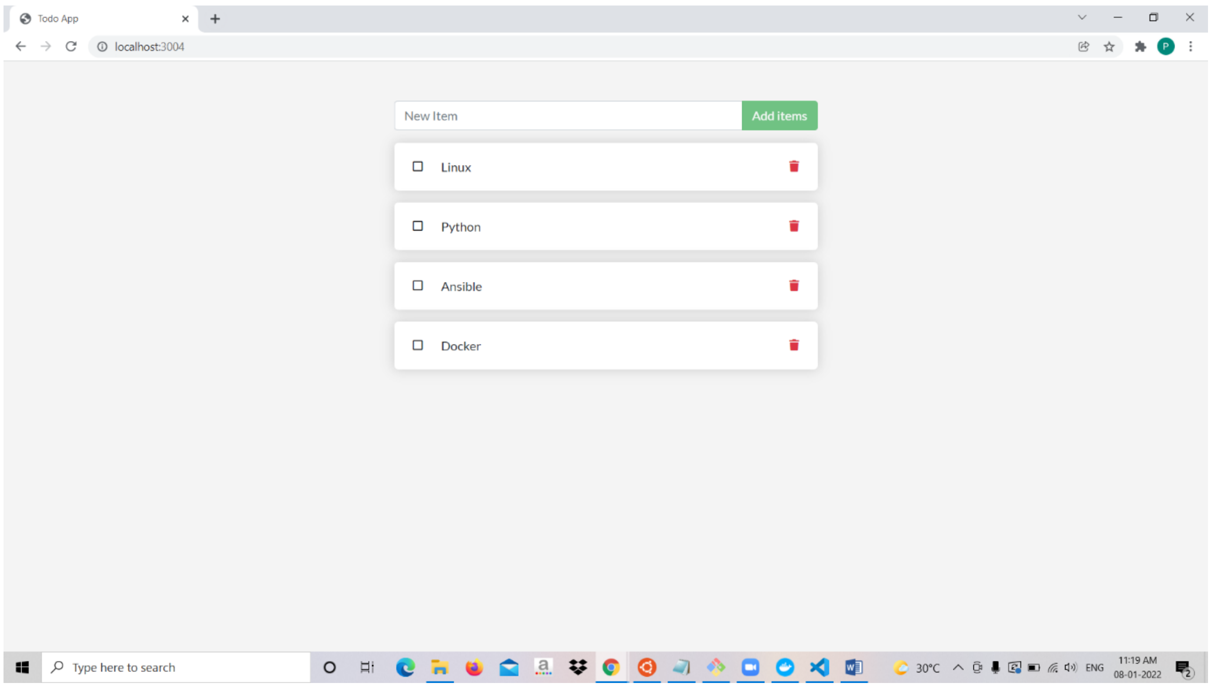


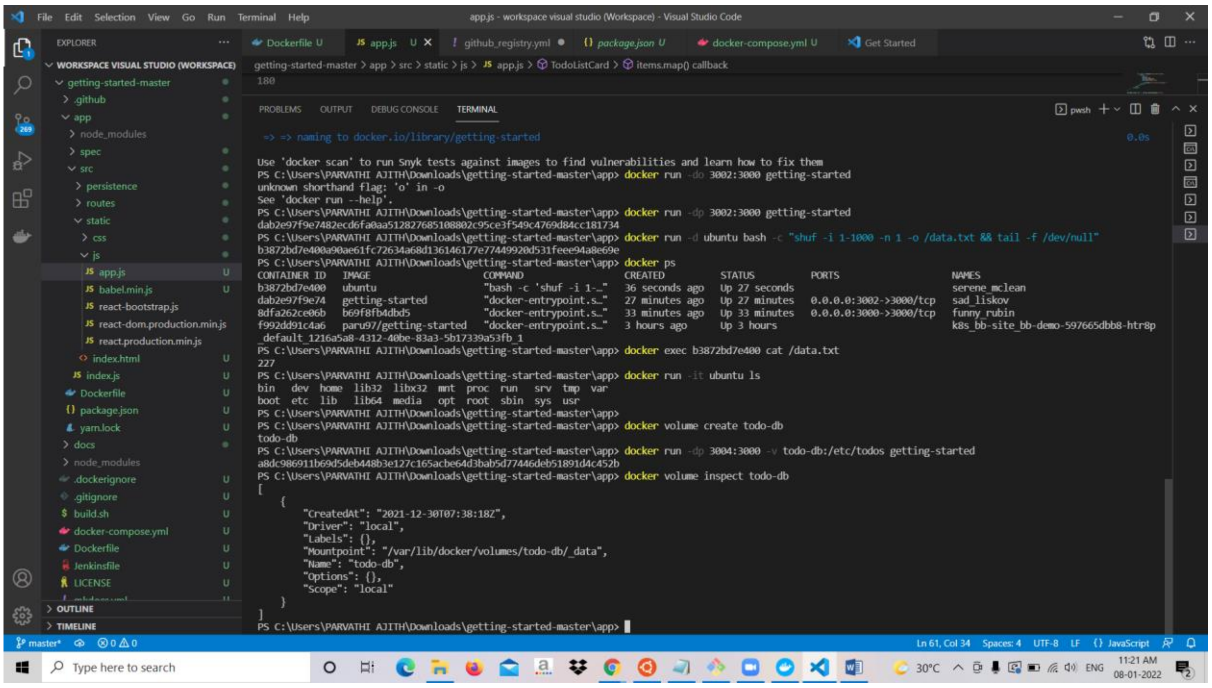
```
Containers / Apps

k8s_bb-site_bb-demo-597665dbb8-htr8p_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1   paru97/getting-...
RUNNING

recursing_galois   paru97/getting-...
EXITED (255)   PORT: 3001

funny_rubin   getting-started
RUNNING   PORT: 3000

sad_liskov   getting-started
RUNNING   PORT: 3002

serene_mclean   ubuntu
RUNNING

fervent_haibt   ubuntu
EXITED (0)
```

Creating volume for persisting the database.

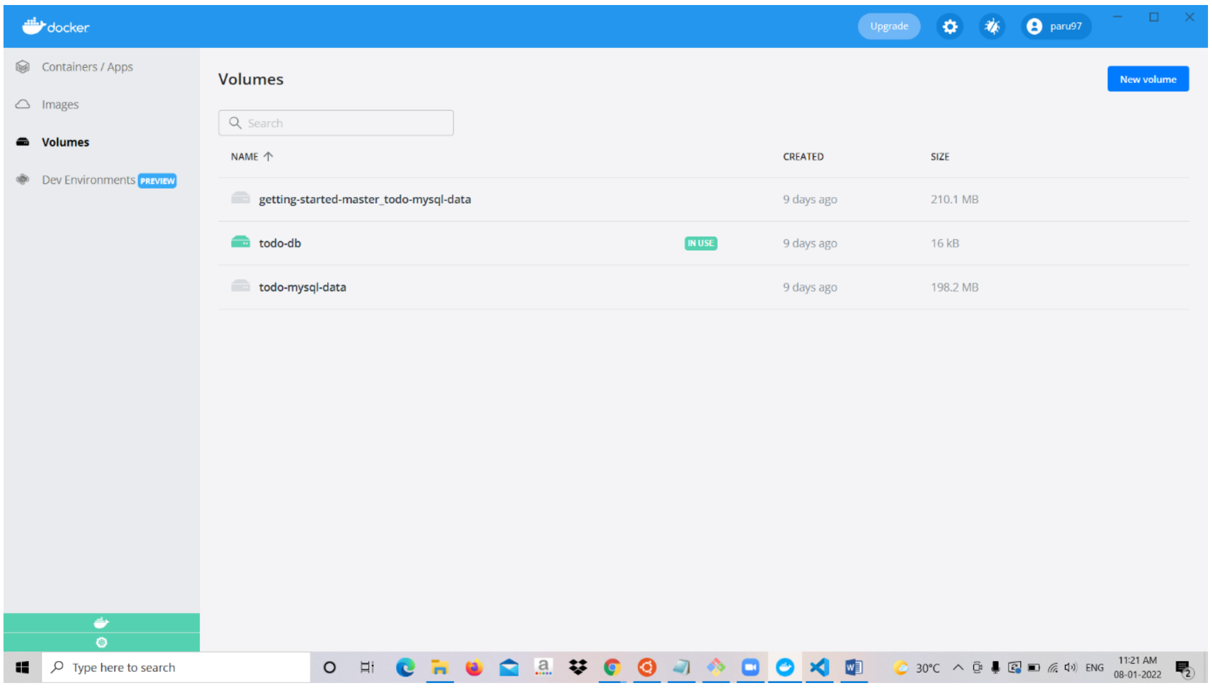


```
 => [internal] load build definition from Dockerfile                                   0.0s
 => [internal] load metadata for docker.io/library/node:12-alpine                      0.0s
 => [internal] load build context                                                      3.6s
 => => transferring context: 601.91kB                                                  3.4s
 => [1/5] FROM docker.io/library/node:12-alpine                                        0.0s
 => CACHED [2/5] RUN apk add --no-cache python2 g++ make                               0.0s
 => CACHED [3/5] WORKDIR /app                                                          0.0s
 => [4/5] COPY . .                                                                    23.1s
 => [5/5] RUN yarn install --production                                               36.8s
 => exporting to image                                                                 6.5s
 => => exporting layers                                                                6.5s
 => => writing image sha256:d4936c42b8dc23f67d7f2448498c264d5566db009fddb1e95da1a6b3321215f5  0.0s
 => => naming to docker.io/library/getting-started                                     0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -do 3002:3000 getting-started
unknown shorthand flag: 'o' in -o
See 'docker run --help'.
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -dp 3002:3000 getting-started
dab2e97f9e7482ecd6fa0aa512827685108802c95ce3f549c4769d84cc181734
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -d ubuntu bash -c "shuf -i 1-1000 -n 1 -o /data.txt && tail -f /dev/null"
b3872bd7e400a90ae61fc72634a68d136146177e77449920d531feee94a8e69e
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker ps
CONTAINER ID   IMAGE                   COMMAND                  CREATED          STATUS          PORTS                    NAMES
b3872bd7e400   ubuntu                  "bash -c 'shuf -i 1-…"   36 seconds ago   Up 27 seconds                            serene_mclean
dab2e97f9e74   getting-started         "docker-entrypoint.s…"   27 minutes ago   Up 27 minutes   0.0.0.0:3002->3000/tcp   sad_liskov
8dfa262ce06b   b69f8fb4dbd5            "docker-entrypoint.s…"   33 minutes ago   Up 33 minutes   0.0.0.0:3000->3000/tcp   funny_rubin
f992dd91c4a6   paru97/getting-started  "docker-entrypoint.s…"   3 hours ago      Up 3 hours                               k8s_bb-site_bb-demo-597665dbb8-htr8p
_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker exec b3872bd7e400 cat /data.txt
227
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -it ubuntu ls
bin   dev  home  lib32  libx32  mnt  proc  run   srv  tmp  var
boot  etc  lib   lib64  media   opt  root  sbin  sys  usr
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app>
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker volume create todo-db
todo-db
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -dp 3004:3000 -v todo-db:/etc/todos getting-started
a8dc986911b69d5deb448b3e127c165acbe64d3bab5d77446deb51891d4c452b
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app>
```





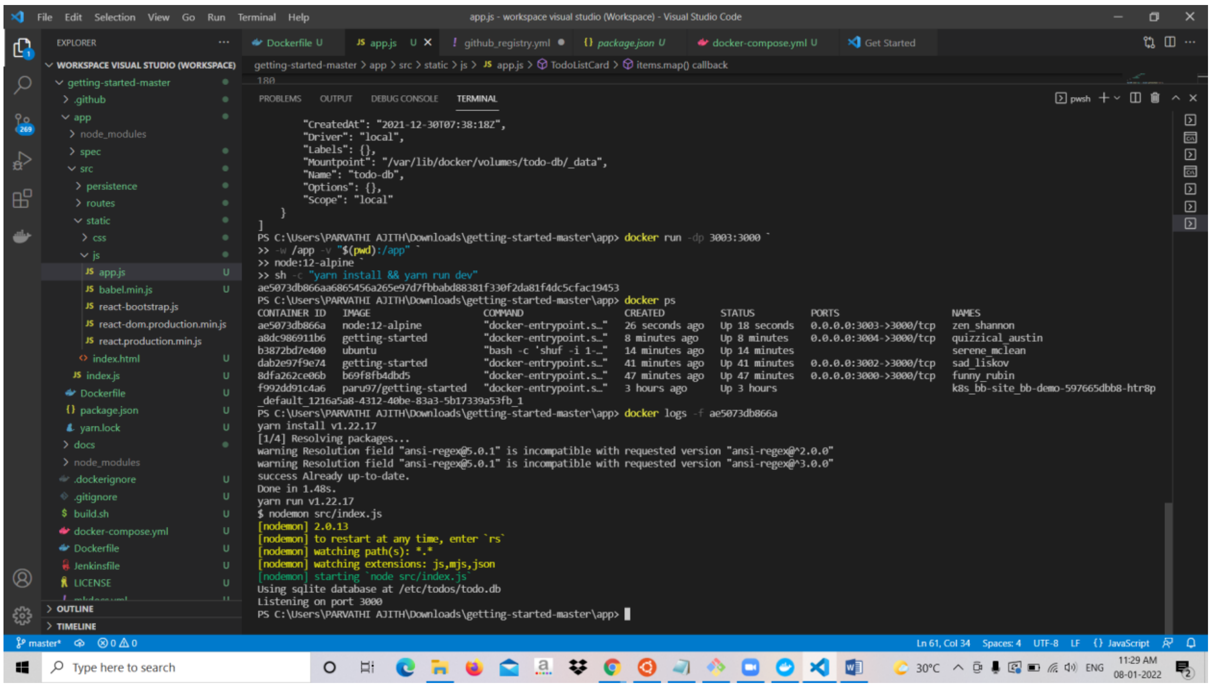
```
=> => naming to docker.io/library/getting-started                                                      0.0s

Use 'docker scan' to run Snyk tests against images to find vulnerabilities and learn how to fix them
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -do 3002:3000 getting-started
unknown shorthand flag: 'o' in -o
See 'docker run --help'.
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -dp 3002:3000 getting-started
dab2e97f9e7482ecd6fa0aa512827685108802c95ce3f549c4769d84cc181734
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -d ubuntu bash -c "shuf -i 1-1000 -n 1 -o /data.txt && tail -f /dev/null"
b3872bd7e400a90ae61fc72634a68d136146177e77449920d531feee94a8e69e
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker ps
CONTAINER ID   IMAGE                     COMMAND                  CREATED          STATUS          PORTS                    NAMES
b3872bd7e400   ubuntu                    "bash -c 'shuf -i 1-…"   36 seconds ago   Up 27 seconds                            serene_mclean
dab2e97f9e74   getting-started           "docker-entrypoint.s…"   27 minutes ago   Up 27 minutes   0.0.0.0:3002->3000/tcp   sad_liskov
8dfa262ce06b   b69f8fb4dbd5              "docker-entrypoint.s…"   33 minutes ago   Up 33 minutes   0.0.0.0:3000->3000/tcp   funny_rubin
f992dd91c4a6   paru97/getting-started    "docker-entrypoint.s…"   3 hours ago      Up 3 hours                               k8s_bb-site_bb-demo-597665dbb8-htr8p
_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker exec b3872bd7e400 cat /data.txt
227
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -it ubuntu ls
bin   dev  home  lib32  libx32  mnt  proc  run   srv  tmp  var
boot  etc  lib   lib64  media   opt  root  sbin  sys  usr
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app>
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker volume create todo-db
todo-db
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -dp 3004:3000 -v todo-db:/etc/todos getting-started
a8dc986911b69d5deb448b3e127c165acbe64d3bab5d77446deb51891d4c452b
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker volume inspect todo-db
[
    {
        "CreatedAt": "2021-12-30T07:38:18Z",
        "Driver": "local",
        "Labels": {},
        "Mountpoint": "/var/lib/docker/volumes/todo-db/_data",
        "Name": "todo-db",
        "Options": {},
        "Scope": "local"
    }
]
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app>
```



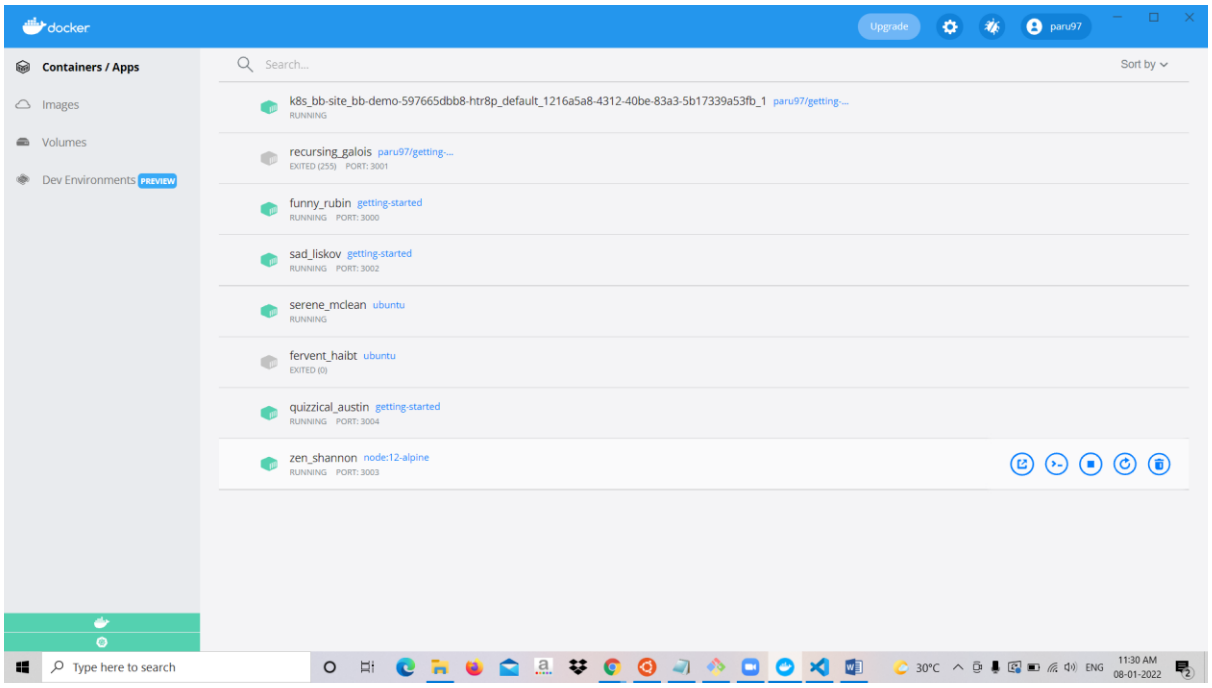
Volumes

NAME		CREATED	SIZE
getting-started-master_todo-mysql-data		9 days ago	210.1 MB
todo-db	IN USE	9 days ago	16 kB
todo-mysql-data		9 days ago	198.2 MB

Starting a dev-mode container.



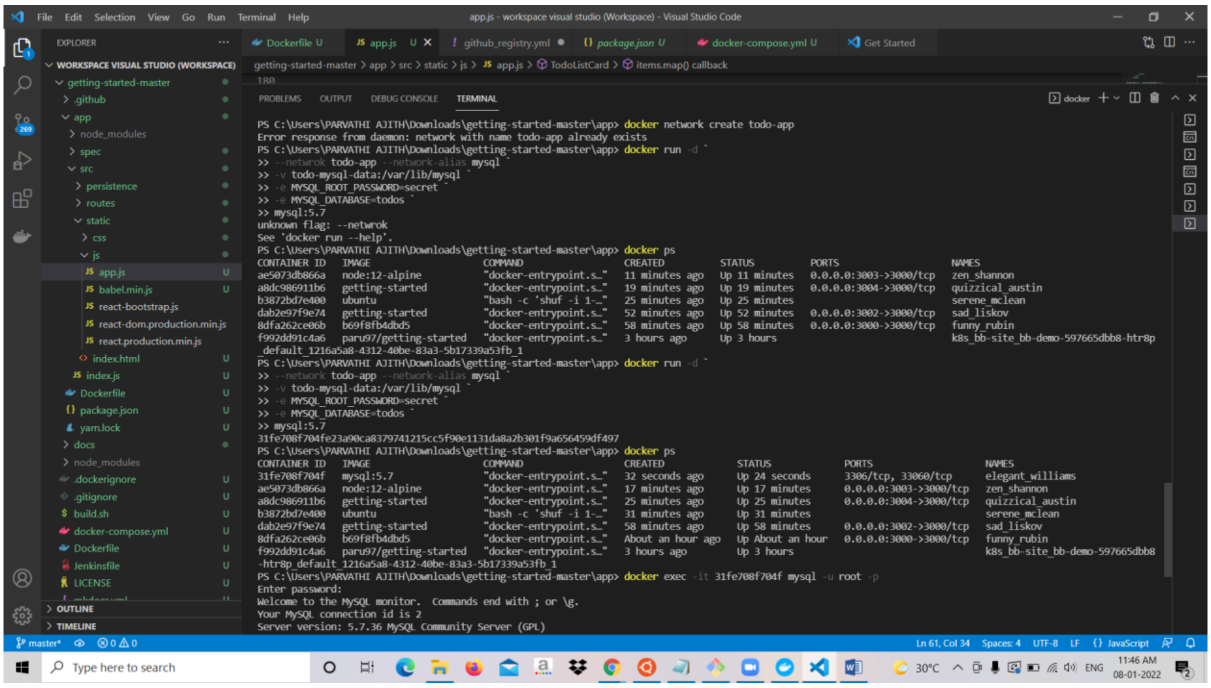
```
        "CreatedAt": "2021-12-30T07:38:18Z",
        "Driver": "local",
        "Labels": {},
        "Mountpoint": "/var/lib/docker/volumes/todo-db/_data",
        "Name": "todo-db",
        "Options": {},
        "Scope": "local"
    }
]
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -dp 3003:3000 `
>> -w /app -v "$(pwd):/app" `
>> node:12-alpine `
>> sh -c "yarn install && yarn run dev"
ae5073db866aa6865456a265e97d7fbbabd88381f330f2da81f4dc5cfac19453
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker ps
CONTAINER ID   IMAGE                  COMMAND                  CREATED          STATUS          PORTS                    NAMES
ae5073db866a   node:12-alpine         "docker-entrypoint.s…"   26 seconds ago   Up 18 seconds   0.0.0.0:3003->3000/tcp   zen_shannon
a8dc986911b6   getting-started        "docker-entrypoint.s…"   8 minutes ago    Up 8 minutes    0.0.0.0:3004->3000/tcp   quizzical_austin
b3872bd7e400   ubuntu                 "bash -c 'shuf -i 1-…"   14 minutes ago   Up 14 minutes                            serene_mclean
dab2e97f9e74   getting-started        "docker-entrypoint.s…"   41 minutes ago   Up 41 minutes   0.0.0.0:3002->3000/tcp   sad_liskov
8dfa262ce06b   b69f8fb4dbd5           "docker-entrypoint.s…"   47 minutes ago   Up 47 minutes   0.0.0.0:3000->3000/tcp   funny_rubin
f992dd91c4a6   paru97/getting-started "docker-entrypoint.s…"   3 hours ago      Up 3 hours                               k8s_bb-site_bb-demo-597665dbb8-htr8p
_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker logs -f ae5073db866a
yarn install v1.22.17
[1/4] Resolving packages...
warning Resolution field "ansi-regex@5.0.1" is incompatible with requested version "ansi-regex@^2.0.0"
warning Resolution field "ansi-regex@5.0.1" is incompatible with requested version "ansi-regex@^3.0.0"
success Already up-to-date.
Done in 1.48s.
yarn run v1.22.17
$ nodemon src/index.js
[nodemon] 2.0.13
[nodemon] to restart at any time, enter `rs`
[nodemon] watching path(s): *.*
[nodemon] watching extensions: js,mjs,json
[nodemon] starting `node src/index.js`
Using sqlite database at /etc/todos/todo.db
Listening on port 3000
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app>
```

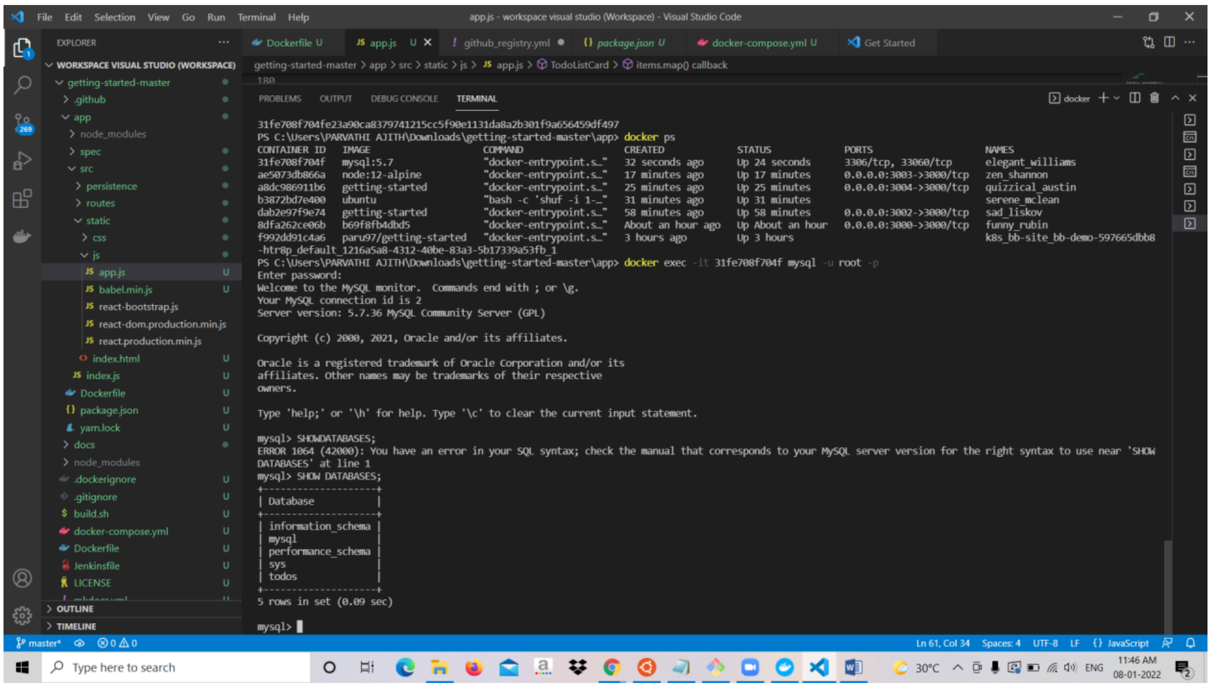


```
Containers / Apps

k8s_bb-site_bb-demo-597665dbb8-htr8p_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1  paru97/getting-...
RUNNING
recursing_galois  paru97/getting-...
EXITED (255)  PORT: 3001
funny_rubin  getting-started
RUNNING  PORT: 3000
sad_liskov  getting-started
RUNNING  PORT: 3002
serene_mclean  ubuntu
RUNNING
fervent_haibt  ubuntu
EXITED (0)
quizzical_austin  getting-started
RUNNING  PORT: 3004
zen_shannon  node:12-alpine
RUNNING  PORT: 3003
```

Running multi-container apps using container networking.

Start MYSQL container


```
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker network create todo-app
Error response from daemon: network with name todo-app already exists
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -d `
>> --netwrok todo-app --network-alias mysql `
>> -v todo-mysql-data:/var/lib/mysql `
>> -e MYSQL_ROOT_PASSWORD=secret `
>> -e MYSQL_DATABASE=todos `
>> mysql:5.7
unknown flag: --netwrok
See 'docker run --help'.
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker ps
CONTAINER ID   IMAGE                  COMMAND                  CREATED          STATUS          PORTS                    NAMES
ae5073db866a   node:12-alpine         "docker-entrypoint.s…"   11 minutes ago   Up 11 minutes   0.0.0.0:3003->3000/tcp   zen_shannon
a8dc986911b6   getting-started        "docker-entrypoint.s…"   19 minutes ago   Up 19 minutes   0.0.0.0:3004->3000/tcp   quizzical_austin
b3872bd7e400   ubuntu                 "bash -c 'shuf -i 1-…"   25 minutes ago   Up 25 minutes                            serene_mclean
dab2e97f9e74   getting-started        "docker-entrypoint.s…"   52 minutes ago   Up 52 minutes   0.0.0.0:3002->3000/tcp   sad_liskov
8dfa262ce06b   b69f8fb4dbd5           "docker-entrypoint.s…"   58 minutes ago   Up 58 minutes   0.0.0.0:3000->3000/tcp   funny_rubin
f992dd91c4a6   paru97/getting-started "docker-entrypoint.s…"   3 hours ago      Up 3 hours                               k8s_bb-site_bb-demo-597665dbb8-htr8p
_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -d `
>> --network todo-app --network-alias mysql `
>> -v todo-mysql-data:/var/lib/mysql `
>> -e MYSQL_ROOT_PASSWORD=secret `
>> -e MYSQL_DATABASE=todos `
>> mysql:5.7
31fe708f704fe23a90ca8379741215cc5f90e1131da8a2b301f9a656459df497
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker ps
CONTAINER ID   IMAGE                  COMMAND                  CREATED             STATUS             PORTS                    NAMES
31fe708f704f   mysql:5.7              "docker-entrypoint.s…"   32 seconds ago      Up 24 seconds      3306/tcp, 33060/tcp      elegant_williams
ae5073db866a   node:12-alpine         "docker-entrypoint.s…"   17 minutes ago      Up 17 minutes      0.0.0.0:3003->3000/tcp   zen_shannon
a8dc986911b6   getting-started        "docker-entrypoint.s…"   25 minutes ago      Up 25 minutes      0.0.0.0:3004->3000/tcp   quizzical_austin
b3872bd7e400   ubuntu                 "bash -c 'shuf -i 1-…"   31 minutes ago      Up 31 minutes                               serene_mclean
dab2e97f9e74   getting-started        "docker-entrypoint.s…"   58 minutes ago      Up 58 minutes      0.0.0.0:3002->3000/tcp   sad_liskov
8dfa262ce06b   b69f8fb4dbd5           "docker-entrypoint.s…"   About an hour ago   Up About an hour   0.0.0.0:3000->3000/tcp   funny_rubin
f992dd91c4a6   paru97/getting-started "docker-entrypoint.s…"   3 hours ago         Up 3 hours                                  k8s_bb-site_bb-demo-597665dbb8
-htr8p_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker exec -it 31fe708f704f mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.36 MySQL Community Server (GPL)
```


```
31fe708f704fe23a90ca8379741215cc5f90e1131da8a2b301f9a656459df497
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker ps
CONTAINER ID   IMAGE                  COMMAND                  CREATED             STATUS             PORTS                    NAMES
31fe708f704f   mysql:5.7              "docker-entrypoint.s…"   32 seconds ago      Up 24 seconds      3306/tcp, 33060/tcp      elegant_williams
ae5073db866a   node:12-alpine         "docker-entrypoint.s…"   17 minutes ago      Up 17 minutes      0.0.0.0:3003->3000/tcp   zen_shannon
a8dc986911b6   getting-started        "docker-entrypoint.s…"   25 minutes ago      Up 25 minutes      0.0.0.0:3004->3000/tcp   quizzical_austin
b3872bd7e400   ubuntu                 "bash -c 'shuf -i 1-…"   31 minutes ago      Up 31 minutes                               serene_mclean
dab2e97f9e74   getting-started        "docker-entrypoint.s…"   58 minutes ago      Up 58 minutes      0.0.0.0:3002->3000/tcp   sad_liskov
8dfa262ce06b   b69f8fb4dbd5           "docker-entrypoint.s…"   About an hour ago   Up About an hour   0.0.0.0:3000->3000/tcp   funny_rubin
f992dd91c4a6   paru97/getting-started "docker-entrypoint.s…"   3 hours ago         Up 3 hours                                  k8s_bb-site_bb-demo-597665dbb8
-htr8p_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker exec -it 31fe708f704f mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 2
Server version: 5.7.36 MySQL Community Server (GPL)

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> SHOWDATABASES;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'SHOW
DATABASES' at line 1
mysql> SHOW DATABASES;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
| todos              |
+--------------------+
5 rows in set (0.09 sec)

mysql> 
```
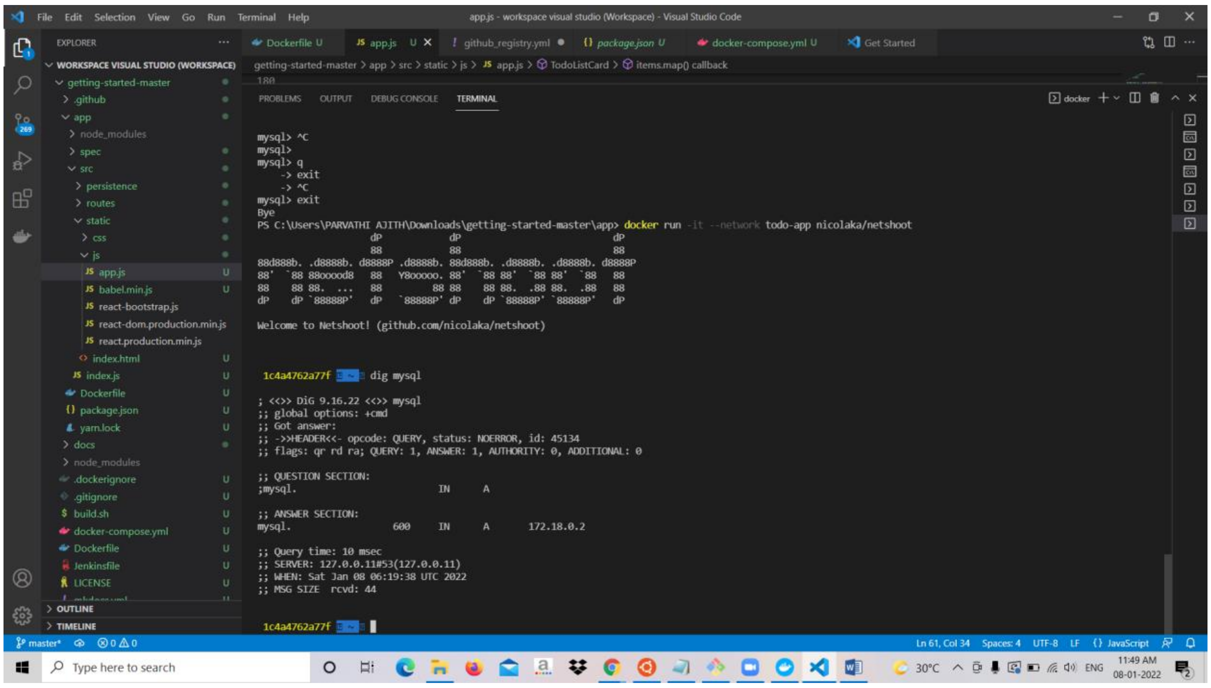
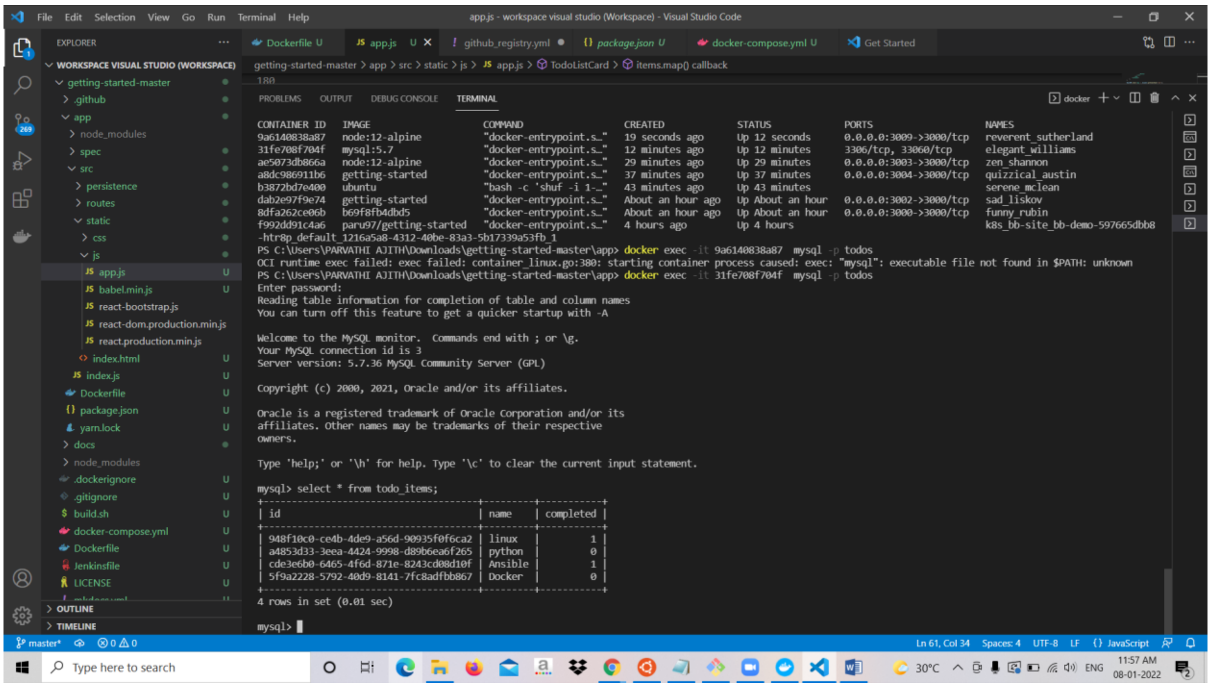

Connect to MySQL



```
mysql> ^C
mysql>
mysql> q
    -> exit
    -> ^C
mysql> exit
Bye
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker run -it --network todo-app nicolaka/netshoot
                    dP            dP                           dP
                    88            88                           88
88d888b. .d8888b. d8888P .d8888b. 88d888b. .d8888b. .d8888b. d8888P
88'  `88 88ooood8   88   Y8ooooo. 88'  `88 88'  `88 88'  `88   88
88    88 88.  ...   88         88 88    88 88.  .88 88.  .88   88
dP    dP `88888P'   dP   `88888P' dP    dP `88888P' `88888P'   dP

Welcome to Netshoot! (github.com/nicolaka/netshoot)



 1c4a4762a77f  ~  dig mysql

; <<>> DiG 9.16.22 <<>> mysql
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 45134
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 0

;; QUESTION SECTION:
;mysql.                         IN      A

;; ANSWER SECTION:
mysql.                  600     IN      A       172.18.0.2

;; Query time: 10 msec
;; SERVER: 127.0.0.11#53(127.0.0.11)
;; WHEN: Sat Jan 08 06:19:38 UTC 2022
;; MSG SIZE  rcvd: 44


 1c4a4762a77f  ~ 
```

Setting connection settings via Env vars



```
CONTAINER ID   IMAGE                     COMMAND                  CREATED             STATUS             PORTS                      NAMES
9a6140838a87   node:12-alpine            "docker-entrypoint.s…"   19 seconds ago      Up 12 seconds      0.0.0.0:3009->3000/tcp     reverent_sutherland
31fe708f704f   mysql:5.7                 "docker-entrypoint.s…"   12 minutes ago      Up 12 minutes      3306/tcp, 33060/tcp        elegant_williams
ae5073db866a   node:12-alpine            "docker-entrypoint.s…"   29 minutes ago      Up 29 minutes      0.0.0.0:3003->3000/tcp     zen_shannon
a8dc986911b6   getting-started           "docker-entrypoint.s…"   37 minutes ago      Up 37 minutes      0.0.0.0:3004->3000/tcp     quizzical_austin
b3872bd7e400   ubuntu                    "bash -c 'shuf -i 1-…"   43 minutes ago      Up 43 minutes                                 serene_mclean
dab2e97f9e74   getting-started           "docker-entrypoint.s…"   About an hour ago   Up About an hour   0.0.0.0:3002->3000/tcp     sad_liskov
8dfa262ce06b   b69f8fb4dbd5              "docker-entrypoint.s…"   About an hour ago   Up About an hour   0.0.0.0:3000->3000/tcp     funny_rubin
f992dd91c4a6   paru97/getting-started    "docker-entrypoint.s…"   4 hours ago         Up 4 hours                                    k8s_bb-site_bb-demo-597665dbb8
-htr8p_default_1216a5a8-4312-40be-83a3-5b17339a53fb_1
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker exec -it 9a6140838a87  mysql -p todos
OCI runtime exec failed: exec failed: container_linux.go:380: starting container process caused: exec: "mysql": executable file not found in $PATH: unknown
PS C:\Users\PARVATHI AJITH\Downloads\getting-started-master\app> docker exec -it 31fe708f704f  mysql -p todos
Enter password:
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 3
Server version: 5.7.36 MySQL Community Server (GPL)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> select * from todo_items;
+--------------------------------------+---------+-----------+
| id                                   | name    | completed |
+--------------------------------------+---------+-----------+
| 948f10c0-ce4b-4de9-a56d-90935f0f6ca2 | linux   |         1 |
| a4853d33-3eea-4424-9998-d89b6ea6f265 | python  |         0 |
| cde3e6b0-6465-4f6d-871e-8243cd08d10f | Ansible |         1 |
| 5f9a2228-5792-40d9-8141-7fc8adfbb867 | Docker  |         0 |
+--------------------------------------+---------+-----------+
4 rows in set (0.01 sec)

mysql> 
```
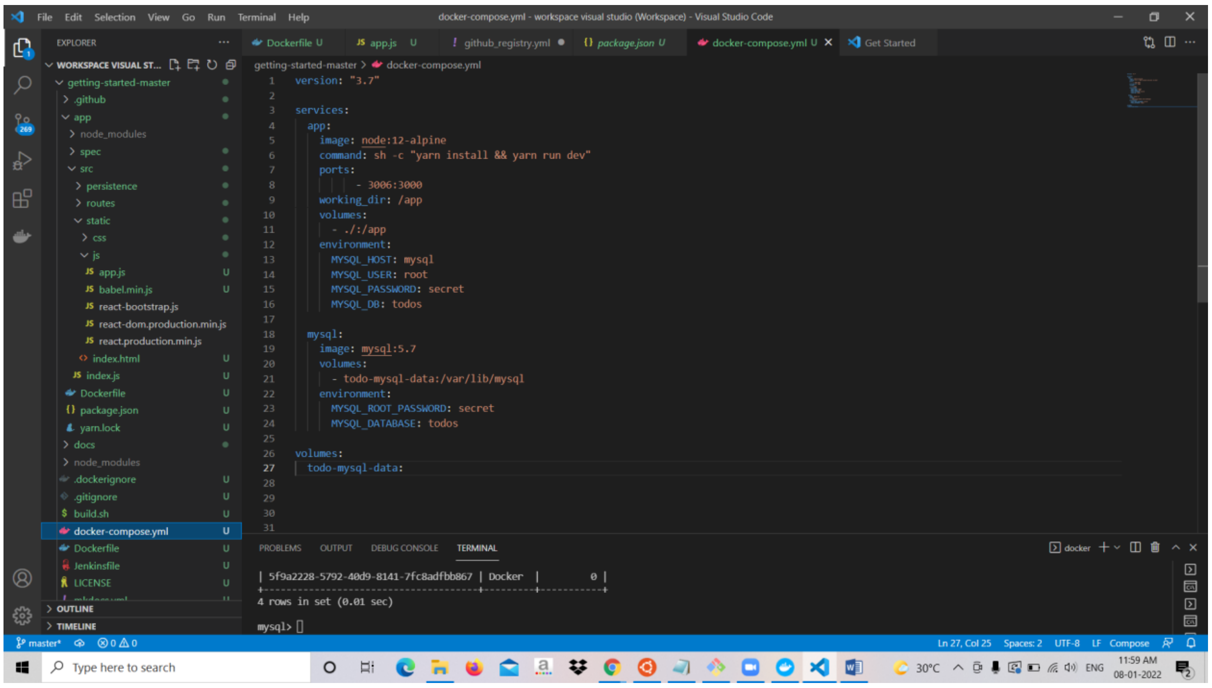
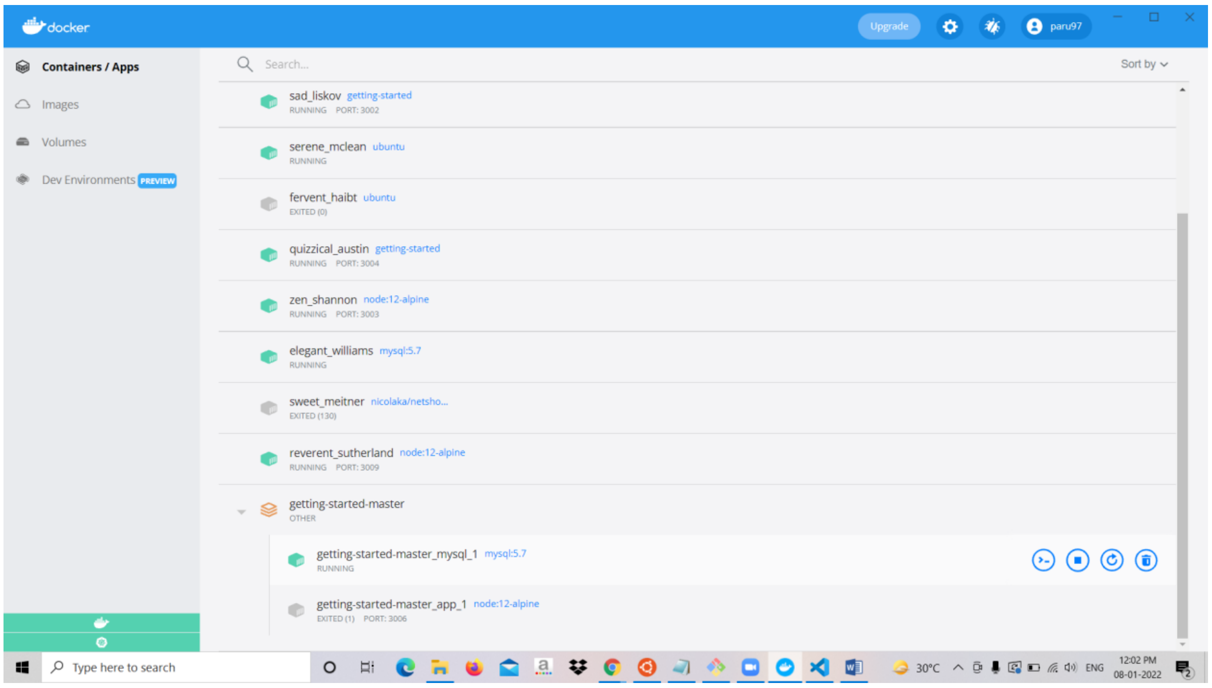

Docker compose



```yaml
version: "3.7"

services:
  app:
    image: node:12-alpine
    command: sh -c "yarn install && yarn run dev"
    ports:
          - 3006:3000
    working_dir: /app
    volumes:
      - ./:/app
    environment:
      MYSQL_HOST: mysql
      MYSQL_USER: root
      MYSQL_PASSWORD: secret
      MYSQL_DB: todos

  mysql:
    image: mysql:5.7
    volumes:
      - todo-mysql-data:/var/lib/mysql
    environment:
      MYSQL_ROOT_PASSWORD: secret
      MYSQL_DATABASE: todos

volumes:
  todo-mysql-data:
```

```
| 5f9a2228-5792-40d9-8141-7fc8adfbb867 | Docker   |          0 |
+--------------------------------------+----------+------------+
4 rows in set (0.01 sec)

mysql> 
```

docker-compose up –d



```
sad_liskov  getting-started
RUNNING   PORT: 3002
serene_mclean  ubuntu
RUNNING
fervent_haibt  ubuntu
EXITED (0)
quizzical_austin  getting-started
RUNNING   PORT: 3004
zen_shannon  node:12-alpine
RUNNING   PORT: 3003
elegant_williams  mysql:5.7
RUNNING
sweet_meitner  nicolaka/netsho...
EXITED (130)
reverent_sutherland  node:12-alpine
RUNNING   PORT: 3009
getting-started-master
OTHER
    getting-started-master_mysql_1  mysql:5.7
    RUNNING
    getting-started-master_app_1  node:12-alpine
    EXITED (1)   PORT: 3006
```