

Module 10 - Task 2

1. Creating Dockerfile for the nestjs-rest-api application.

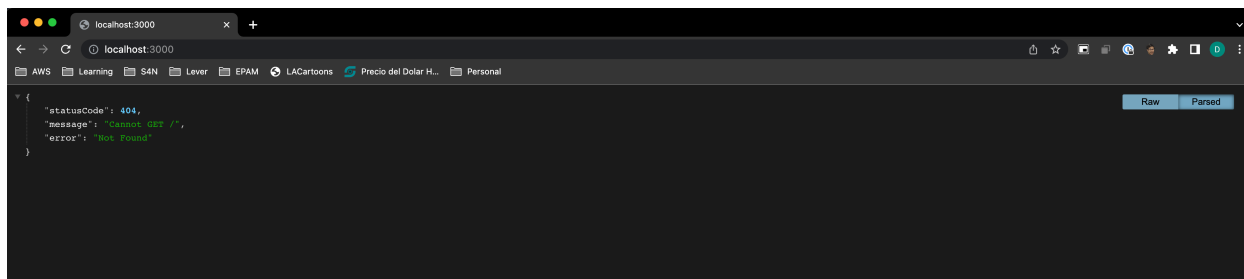
```
Dockerfile
1 FROM node:12.19.0-alpine3.9 AS development
2
3 WORKDIR /usr/src/app
4
5 COPY package*.json ./
6
7 RUN npm install glob rimraf
8
9 RUN npm install
10
11 COPY . .
12
13 RUN npm run build
14
15 FROM node:12.19.0-alpine3.9 as production
16
17 ARG NODE_ENV=production
18 ENV NODE_ENV=${NODE_ENV}
19
20 WORKDIR /usr/src/app
21
22 COPY package*.json ./
23
24 RUN npm install --only=production
25
26 COPY . .
27
28 COPY --from=development /usr/src/app/dist ./dist
29
30 CMD ["node", "dist/main"]
```

2. Creating docker-compose.yml

```
docker-compose.yml
1 version: '3.8'
2
3 services:
4   dev:
5     container_name: nestjs_api_dev
6     image: nestjs-api-dev:1.0.0
7     build:
8       context: .
9       target: development
10      dockerfile: ./Dockerfile
11      command: npm run start:dev
12      ports:
13        - 3000:3000
14        - 9229:9229
15      networks:
16        - nesjs-network
17      volumes:
18        - ./usr/src/app
19        - /usr/src/app/node_modules
20      restart: unless-stopped
21   prod:
22     container_name: nestjs_api_prod
23     image: nestjs-api-prod:1.0.0
24     build:
25       context: .
26       target: production
27       dockerfile: ./Dockerfile
28     command: npm run start:prod
29     ports:
30       - 3000:3000
31       - 9229:9229
32     networks:
33       - nesjs-network
34     volumes:
35       - ./usr/src/app
36       - /usr/src/app/node_modules
37     restart: unless-stopped
38
39 networks:
40   nesjs-network:
```

3. Runing the container with *docker-compose*.

```
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker compose -f docker-compose.yml up dev -d
[+] Running 1/1
! Container nestjs-api-dev Started
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                               NAMES
2ac45ce547db   5e5e5262e031   "docker-entrypoint.s..." 4 seconds ago   Up 3 seconds   0.0.0.0:3000->3000/tcp, :::3000->3000/tcp, 0.0.0.0:9229->9229/tcp, :::9229->9229/tcp   nestjs_api_dev
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 >
```



Publishing image in private registry (locally)

1. Running the Docker registry image

```
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker run -d -p 5001:5000 --name registry registry:2
Unable to find image 'registry:2' locally
Pulling from library/registry
a49fdb3b6a5: Already exists
8116db8bf569: Already exists
cb4a93be51c: Already exists
bdeff65a266: Already exists
b102b34ed3d: Already exists
Digest: sha256:20d084723c951e377e1a2a5b3df316173a845e300d57ccdd8ae3ab2da3439746
Status: Downloaded newer image for registry:2
209d488e7f0baea1d675918f3622c82c992f61a7725eaaddf1a89a6055968bd
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                               NAMES
209d488e7f0b   registry:2   "/entrypoint.sh /etc..." 6 seconds ago   Up 5 seconds   0.0.0.0:5001->5000/tcp, :::5001->5000/tcp   registry
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker run -d -p 5001:5001 registry:latest
77240a148726b01972e361dbcd4aad03210693932825e110633682c8c90ad7d9
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                               NAMES
77240a148726   registry:latest   "/entrypoint.sh /etc..." 4 seconds ago   Up 3 seconds   5000/tcp, 0.0.0.0:5001->5001/tcp, :::5001->5001/tcp   lucid_wu
2ac45ce547db   5e5e5262e031   "docker-entrypoint.s..." 7 minutes ago   Up 7 minutes   0.0.0.0:3000->3000/tcp, :::3000->3000/tcp, 0.0.0.0:9229->9229/tcp, :::9229->9229/tcp   nestjs_api_dev
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 >
```

2. Pushing image to the registry

```
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker image tag nestjs-api-prod:1.0.0 localhost:5001/daniel-nestjs-api-prod
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker images
REPOSITORY          TAG   IMAGE ID      CREATED      SIZE
nestjs-api-prod     1.0.0  7fdf504e68e9  14 minutes ago  253MB
localhost:5001/daniel-nestjs-api-prod
nestjs-api-dev      1.0.0  5e5e5262e031  27 minutes ago  499MB
registry            2     65f3b3441f04  2 weeks ago    24MB
node                18    acb969b80f38  3 weeks ago    996MB
ubuntu             latest 3b418d7b466a  4 weeks ago    77.8MB
mongo              4.4.20 91e41c9383b1  5 weeks ago    432MB
825817529107.dkr.ecr.us-west-2.amazonaws.com/lever/admin-api latest da9026940e41 2 months ago  1.93GB
825817529107.dkr.ecr.us-west-2.amazonaws.com/lever/admin-api <none> a68b08e05eb8 4 months ago  1.8GB
node              14     a80e3a4aceaf  8 months ago    914MB
docker101tutorial latest 6e9714fd6f6f 2 years ago     28MB
nginx             latest ec16dfd6a604 2 years ago    133MB
alpine/git        latest b8f176fa3f0d 2 years ago     25.1MB
redis             6.0.13 da52b14a37f8 2 years ago    104MB
mongo            4.2.13 d22ab6a7ff35 2 years ago    388MB
docker.elastic.co/elasticsearch/elasticsearch 6.8.10 2b07d342ae63 2 years ago    877MB
node             10.16.3 a3c4003ddca4 3 years ago    904MB
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker push localhost:5001/daniel-nestjs-api-prod
Using default tag: latest
The push refers to repository [localhost:5001/daniel-nestjs-api-prod]
caf67ff074c5: Pushed
51b814e72e30: Pushed
9638bb2bbebe: Pushed
a3b992566cfb: Pushed
231109d1ccd2: Pushed
32e4c844a43d: Pushed
bcea0fc482dd: Pushed
3a23f33f4952: Pushed
89ae5c4ee501: Pushed
latest: digest: sha256:35ba8e3c930839f3d9bc34cd92cc57bb71c27a0ce23cdeecdb9363362bcb1bde size: 2203
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > curl -X GET http://localhost:5001/v2/_catalog
{"repositories":["daniel-nestjs-api-prod"]}
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 >
```

3. Pulling image from the registry and running it

```
~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                               NAMES
d209d488e7f0   registry:2                          "/entrypoint.sh /etc..." 4 minutes ago  Up 4 minutes  0.0.0.0:5001->5000/tcp, :::5001->5000/tcp  registry

~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker pull localhost:5001/daniel-nestjs-api-prod
Using default tag: latest
latest: Pulling from daniel-nestjs-api-prod
Digest: sha256:35ba8e3c930839f3d9bc34c9d2cc57bb71c27a0ce23cdeecdb9363362bcb1bde
Status: Image is up to date for localhost:5001/daniel-nestjs-api-prod:latest
localhost:5001/daniel-nestjs-api-prod:latest

~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker run -d -p 3000:3000 localhost:5001/daniel-nestjs-api-prod
3ce89996ec33532f190456672e8707f195725279ed787a561d31f39ac2ffc60c

~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74 > docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS                               NAMES
3ce89996ec33   localhost:5001/daniel-nestjs-api-prod "docker-entrypoint.s..." 2 seconds ago  Up 1 second  0.0.0.0:3000->3000/tcp, :::3000->3000/tcp  vigilant_bhaskara
d209d488e7f0   registry:2                          "/entrypoint.sh /etc..." 6 minutes ago  Up 6 minutes  0.0.0.0:5001->5000/tcp, :::5001->5000/tcp  registry

~/Desktop/Learning/devops-fundamentals-course/tasks/module_10/nestjs-rest-api > main 74
```