

Домашна 8 - Kubernetes 3

1. nano index.html

```
GNU nano 8.3 index.html Modified
<!DOCTYPE html>
<html>
<head>
  <title>Student Info</title>
</head>
<body>
  <h1>Marko Ivanovski</h1>
  <p>226089</p>
</body>
</html>
```

2. nano Dockerfile

```
GNU nano 8.3 Dockerfile Modified
FROM nginx:alpine

COPY index.html /usr/share/nginx/html/index.html
```

3. docker build -t markoivanovsk1/kube-homework:1.0 .

```
marko@Marko-PC MINGW64 /D/FINKI/Semester-6/KIII/Domasna-8
$ docker build -t markoivanovsk1/kube-homework:1.0 .
[+] Building 3.0s (8/8) FINISHED                                docker:desktop-linux
=> [internal] load build definition from Dockerfile              0.1s
=> => transferring dockerfile: 105B                             0.0s
=> [internal] load metadata for docker.io/library/nginx:alpine  1.3s
=> [auth] library/nginx:pull token for registry-1.docker.io     0.0s
=> [internal] load .dockerignore                                0.1s
=> => transferring context: 2B                                    0.0s
=> [internal] load build context                                0.2s
=> => transferring context: 179B                                  0.0s
=> CACHED [1/2] FROM docker.io/library/nginx:alpine@sha256:65645c7bb6a0661892a8b03b89d0743208a18dd2f3 0.1s
=> => resolve docker.io/library/nginx:alpine@sha256:65645c7bb6a0661892a8b03b89d0743208a18dd2f3f17a54e 0.1s
=> [2/2] COPY index.html /usr/share/nginx/html/index.html      0.1s
=> exporting to image                                           0.8s
=> => exporting layers                                           0.3s
=> => exporting manifest sha256:10648eeba95d871d818d637e556d6114272c4ba944c97660686e3cb82ad04cb5 0.1s
=> => exporting config sha256:58e68c5d61e3a2e48379de3d7fe9ba8185cd912ba8bbcbf29984abc4f6a256ea 0.0s
=> => exporting attestation manifest sha256:1192f498cf8e756756e7d7f72c32a969017d2537b1ea4476fa6da3944 0.1s
=> => exporting manifest list sha256:15d6c6e34a9324ac259992fbd936ba6a06a0d02d2cb3a0d172d1e0981120912 0.0s
=> => naming to docker.io/markoivanovsk1/kube-homework:1.0     0.0s
=> => unpacking to docker.io/markoivanovsk1/kube-homework:1.0  0.1s
```

4. docker push markoivanovsk1/kube-homework:1.0

```
marko@Marko-PC MINGW64 /D/FINKI/Semester-6/KIII/Domasna-8
$ docker push markoivanovsk1/kube-homework:1.0
The push refers to repository [docker.io/markoivanovsk1/kube-homework]
d7e507024086: Mounted from markoivanovsk1/nginx-static
b464cfdf2a63: Mounted from markoivanovsk1/nginx-static
197eb75867ef: Mounted from markoivanovsk1/nginx-static
34a64644b756: Mounted from markoivanovsk1/nginx-static
00279b445893: Pushed
db7741e93e35: Pushed
61ca4f733c80: Mounted from markoivanovsk1/nginx-static
f18232174bc9: Mounted from markoivanovsk1/nginx-static
81bd8ed7ec67: Mounted from markoivanovsk1/nginx-static
39c2ddfd6010: Mounted from markoivanovsk1/nginx-static
1.0: digest: sha256:15d6c6e34a9324ac259992fbd936ba6a06a0d02d2cb3a0d172d1e0981120912 size: 856
```

5. nano deployment.yaml

```
GNU nano 8.3 deployment.yaml Modified
apiVersion: apps/v1
kind: Deployment
metadata:
  name: kube-homework
spec:
  replicas: 5
  strategy:
    rollingUpdate:
      maxSurge: 2
      maxUnavailable: 1
    type: RollingUpdate
  selector:
    matchLabels:
      app: kube-homework
  template:
    metadata:
      labels:
        app: kube-homework
    spec:
      containers:
        - name: nginx
          image: markoivanovsk1/kube-homework:1.0
          ports:
            - containerPort: 80
```

6. kubectl apply -f deployment.yaml

```
marko@Marko-PC MINGW64 /D/FINKI/Semester-6/KIII/Domasna-8
$ kubectl apply -f deployment.yaml
deployment.apps/kube-homework created
```

7. kubectl get pods

```
marko@Marko-PC MINGW64 /D/FINKI/Semester-6/KIII/Domasna-8
$ kubectl get pods
```

NAME	READY	STATUS	RESTARTS	AGE
kube-homework-755f84b98b-5xhb7	1/1	Running	0	25s
kube-homework-755f84b98b-9hmvv	1/1	Running	0	25s
kube-homework-755f84b98b-jg4rp	1/1	Running	0	25s
kube-homework-755f84b98b-vxv2p	1/1	Running	0	25s
kube-homework-755f84b98b-wf5tp	1/1	Running	0	25s

8. nano index.html

```
GNU nano 8.3 index.html Modified
<!DOCTYPE html>
<html>
<head>
  <title>Student Info</title>
</head>
<body>
  <h1>Marko Ivanovski</h1>
  <p>226089</p>
  <p>Year: 2025</p>
</body>
</html>
```

9. docker build -t markoivanovsk1/kube-homework:2.0 .


```
marko@Marko-PC MINGW64 /D/FINKI/Semester-6/KIII/Domasna-8
$ docker build -t markoivanovsk1/kube-homework:2.0 .
[+] Building 2.5s (8/8) FINISHED                                docker:desktop-linux
=> [internal] load build definition from Dockerfile              0.0s
=> => transferring dockerfile: 105B                             0.0s
=> [internal] load metadata for docker.io/library/nginx:alpine  1.2s
=> [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                                0.1s
=> => transferring context: 201B                                  0.0s
=> CACHED [1/2] FROM docker.io/library/nginx:alpine@sha256:65645c7bb6a0661892a8b03b89d0743208a18dd2f3f17a54ef4b76fb8e 0.1s
=> => resolve docker.io/library/nginx:alpine@sha256:65645c7bb6a0661892a8b03b89d0743208a18dd2f3f17a54ef4b76fb8e2f2a10 0.1s
=> [2/2] COPY index.html /usr/share/nginx/html/index.html      0.1s
=> exporting to image                                           0.6s
=> => exporting layers                                           0.3s
=> => exporting manifest sha256:82012c0ae25b52b566f5dc1ecfea04568bff30187a74b12aeaa1be0b3fe2de2f 0.0s
=> => exporting config sha256:5efd747324018665981dc6c18f898a4aae94fe684cf3aa505cdf36df1ba061a7 0.0s
=> => exporting attestation manifest sha256:8c39a9e33e164321a8932fe88b9cc2e202230e0bf6ede34d9946c38a989d8e4c 0.1s
=> => exporting manifest list sha256:0a2314dbce3532b6e26d410b3cd8ee38cb5ac27230cfd23287beb026a0a32eb 0.0s
=> => naming to docker.io/markoivanovsk1/kube-homework:2.0     0.0s
=> => unpacking to docker.io/markoivanovsk1/kube-homework:2.0  0.1s

View build details: docker-desktop://dashboard/build/desktop-linux/desktop-linux/t0uw9u0ob51xv02fdvlyhdp71
```

10. docker push markoivanovsk1/kube-homework:2.0

```
marko@Marko-PC MINGW64 /D/FINKI/Semester-6/KIII/Domasna-8
$ docker push markoivanovsk1/kube-homework:2.0
The push refers to repository [docker.io/markoivanovsk1/kube-homework]
e201c6b06c16: Pushed
b464cfd2a63: Layer already exists
d7e507024086: Layer already exists
81bd8ed7ec67: Layer already exists
61ca4f733c80: Layer already exists
f0f9c56cdbc: Pushed
197eb75867ef: Layer already exists
84a64644b756: Layer already exists
89c2ddfd6010: Layer already exists
f18232174bc9: Layer already exists
2.0: digest: sha256:0a2314dbce3532b6e26d410b3cd8ee38cb5ac27230cfd23287beb026a0a32eb size: 856
```

11. nano deployment.yaml

```
GNU nano 8.3 deployment.yaml Modified
apiVersion: apps/v1
kind: Deployment
metadata:
  name: kube-homework
spec:
  replicas: 5
  strategy:
    rollingUpdate:
      maxSurge: 2
      maxUnavailable: 1
    type: RollingUpdate
  selector:
    matchLabels:
      app: kube-homework
  template:
    metadata:
      labels:
        app: kube-homework
    spec:
      containers:
        - name: nginx
          image: markoivanovsk1/kube-homework:2.0
          ports:
            - containerPort: 80
```

12. kubectl apply -f deployment.yaml

```
marko@Marko-PC MINGW64 /D/FINKI/Semester-6/KIII/Domasna-8
$ kubectl apply -f deployment.yaml
deployment.apps/kube-homework configured
```

13. kubectl rollout status deployment/kube-homework

```
marko@Marko-PC MINGW64 /D/FINKI/Semester-6/KIII/Domasna-8
$ kubectl rollout status deployment/kube-homework
deployment "kube-homework" successfully rolled out
```

14. kubectl rollout undo deployment/kube-homework

```
marko@Marko-PC MINGW64 /D/FINKI/Semester-6/KIII/Domasna-8
$ kubectl rollout undo deployment/kube-homework
deployment.apps/kube-homework rolled back
```