

Лабораторна робота 4.2

Тема: Робота з системою Docker.

Мета: Оволодіти базовими навичками по роботі з сучасними системами керування контейнерами.

Хід роботи

1. Ознайомився з теоретичними відомостями.
2. Скачав та встановив Docker.
3. Зареєструвався на сайті Docker.
4. Перевірів наявність Docker в консолі.
5. Перевірів версію Docker.

```
cmd Командний рядок
C:\Users\maksu>docker version
Client:
Cloud integration: v1.0.29
Version: 20.10.21
API version: 1.41
Go version: go1.18.7
Git commit: baeda1f
Built: Tue Oct 25 18:08:16 2022
OS/Arch: windows/amd64
Context: default
Experimental: true

Server: Docker Desktop 4.14.1 (91661)
Engine:
Version: 20.10.21
API version: 1.41 (minimum version 1.12)
Go version: go1.18.7
Git commit: 3056208
Built: Tue Oct 25 18:00:19 2022
OS/Arch: linux/amd64
Experimental: false
containerd:
Version: 1.6.9
GitCommit: 1c90a442489720eec95342e1789ee8a5e1b9536f
runc:
Version: 1.1.4
GitCommit: v1.1.4-0-g5fd4c4d
docker-init:
Version: 0.19.0
GitCommit: de40ad0
```

6. Перевірів чи немає запущених контейнерів

```
cmd Командний рядок
To get more help with docker, check out our guides at https://docs.docker.com/go/guides/

C:\Users\maksu>docker run hello-world
Unable to find image 'hello-world:latest' locally
latest: Pulling from library/hello-world
2db29710123e: Pull complete
Digest: sha256:faa03e786c97f07ef34423fccceec2398ec8a5759259f94d99078f264e9d7af
Status: Downloaded newer image for hello-world:latest

Hello from Docker!
This message shows that your installation appears to be working correctly.

To generate this message, Docker took the following steps:
1. The Docker client contacted the Docker daemon.
2. The Docker daemon pulled the "hello-world" image from the Docker Hub.
   (amd64)
3. The Docker daemon created a new container from that image which runs the
   executable that produces the output you are currently reading.
4. The Docker daemon streamed that output to the Docker client, which sent it
   to your terminal.

To try something more ambitious, you can run an Ubuntu container with:
$ docker run -it ubuntu bash

Share images, automate workflows, and more with a free Docker ID:
https://hub.docker.com/

For more examples and ideas, visit:
https://docs.docker.com/get-started/
```

7. Скачай та встановив контейнер операційної системи

2,9,16,23,30 centos

httpd

mariadb

Python

Images

[Give feedback](#)

An image is a read-only template with instructions for creating a Docker container. [Learn more](#)

LOCAL REMOTE REPOSITORIES

13.25 KB / 13.25 KB in use 2 images

☐ NAME

☐ hello-world
feb5d9fea6a5

☐ centos
5d0da3dc9764

Командний рядок

```
Microsoft Windows [Version 10.0.19044.2251]
(c) Корпорація Майкрософт. Усі права захищені.

C:\Users\maksu>docker pull centos
Using default tag: latest
latest: Pulling from library/centos
a1d0c7532777: Pull complete
Digest: sha256:a27fd8080b517143cbbbab9dfb7c8571c40d67d534bbdee55bd6c473f432b177
Status: Downloaded newer image for centos:latest
docker.io/library/centos:latest

C:\Users\maksu>
```

Командний рядок

```
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Using default tag: latest
latest: Pulling from library/centos
a1d0c7532777: Pull complete
Digest: sha256:a27fd8080b517143cbbbab9dfb7c8571c40d67d534bbdee55bd6c473f432b177
Status: Downloaded newer image for centos:latest
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C:\Users\maksu>docker run hello-world
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(amd64)
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Командный рядок

(amd64)

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```
C:\Users\maksu>docker ps -a
```

docker: 'ps-a' is not a docker command.

See 'docker --help'

```
C:\Users\maksu>docker ps -a
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
09bf9a8029ba	hello-world	"/hello"	44 seconds ago	Exited (0) 43 seconds ago		goofy_zhukov
8e0e52508b42	centos:latest	"/bin/bash"	About a minute ago	Exited (0) About a minute ago		agitated_jac
b9d965603c29	hello-world	"/hello"	12 minutes ago	Exited (0) 7 minutes ago		affectionate

```
C:\Users\maksu>
```

Командный рядок

For more examples and ideas, visit:

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8e0e52508b42	centos:latest	"/bin/bash"	About a minute ago	Exited (0) About a minute ago		agitated_jac
b9d965603c29	hello-world	"/hello"	12 minutes ago	Exited (0) 7 minutes ago		affectionate

```
C:\Users\maksu>docker pull httpd
```

Using default tag: latest

latest: Pulling from library/httpd

a603fa5e3b41: Pull complete

4691bd33efec: Pull complete

ff7b0b8c417a: Pull complete

9df1012343c7: Pull complete

b1c114085b25: Pull complete

Digest: sha256:f2e89def4c032b02c83e162c1819ccfcb4ea6bdbc5ff784bbc68cba940a9046

Status: Downloaded newer image for httpd:latest

docker.io/library/httpd:latest

```
C:\Users\maksu>
```

Командный рядок

brattain

```
C:\Users\maksu>docker pull httpd
Using default tag: latest
latest: Pulling from library/httpd
a603fa5e3b41: Pull complete
4691bd33efec: Pull complete
ff7b0b8c417a: Pull complete
9df1012343c7: Pull complete
b1c114085b25: Pull complete
Digest: sha256:f2e89def4c032b02c83e162c1819ccfcbd4ea6bdbbc5ff784bbc68cba940a9046
Status: Downloaded newer image for httpd:latest
docker.io/library/httpd:latest
```

```
C:\Users\maksu>docker pull mariadb
Using default tag: latest
latest: Pulling from library/mariadb
e96e057aae67: Pull complete
13360dd5ccba: Pull complete
dd5c4b73b925: Pull complete
7f870965a3fa: Pull complete
fd3f1ea3ff32: Pull complete
a57a6862e470: Pull complete
039ecd174df7: Pull complete
f9e5f484f6bc: Pull complete
Digest: sha256:940985c1cf37812ffb3bb6c7b34b4e40233e0907fc786ec7d63c49553d7d1454
Status: Downloaded newer image for mariadb:latest
docker.io/library/mariadb:latest
```

C:\Users\maksu>

Командный рядок

```
dd5c4b73b925: Pull complete
7f870965a3fa: Pull complete
fd3f1ea3ff32: Pull complete
a57a6862e470: Pull complete
039ecd174df7: Pull complete
f9e5f484f6bc: Pull complete
Digest: sha256:940985c1cf37812ffb3bb6c7b34b4e40233e0907fc786ec7d63c49553d7d1454
Status: Downloaded newer image for mariadb:latest
docker.io/library/mariadb:latest
```

```
C:\Users\maksu>docker pull Python
invalid reference format: repository name must be lowercase
```

```
C:\Users\maksu>docker pull python
Using default tag: latest
latest: Pulling from library/python
a8ca11554fce: Pull complete
e4e46864aba2: Pull complete
c85a0be79bfb: Pull complete
195ea6a58ca8: Pull complete
157f16ed0a0c: Pull complete
884b144bec28: Pull complete
1c469643b609: Pull complete
4c0ac982aa89: Pull complete
049db2c7eb8a: Pull complete
Digest: sha256:10fc14aa6ae69f69e4c953cfff9b0964843d8c163950491d2138af891377bc1d
Status: Downloaded newer image for python:latest
docker.io/library/python:latest
```

C:\Users\maksu>

```
Administrator: Командний рядок
Microsoft Windows [Version 10.0.19044.2251]
(c) Корпорація Майкрософт. Усі права захищені.

C:\Windows\system32>mkdir holovniak

C:\Windows\system32>cd holovniak

C:\Windows\System32\holovniak>mkdir public_html

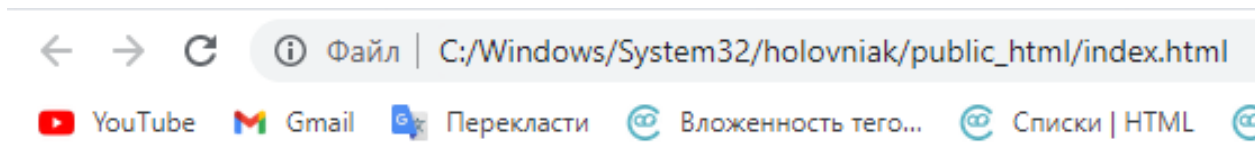
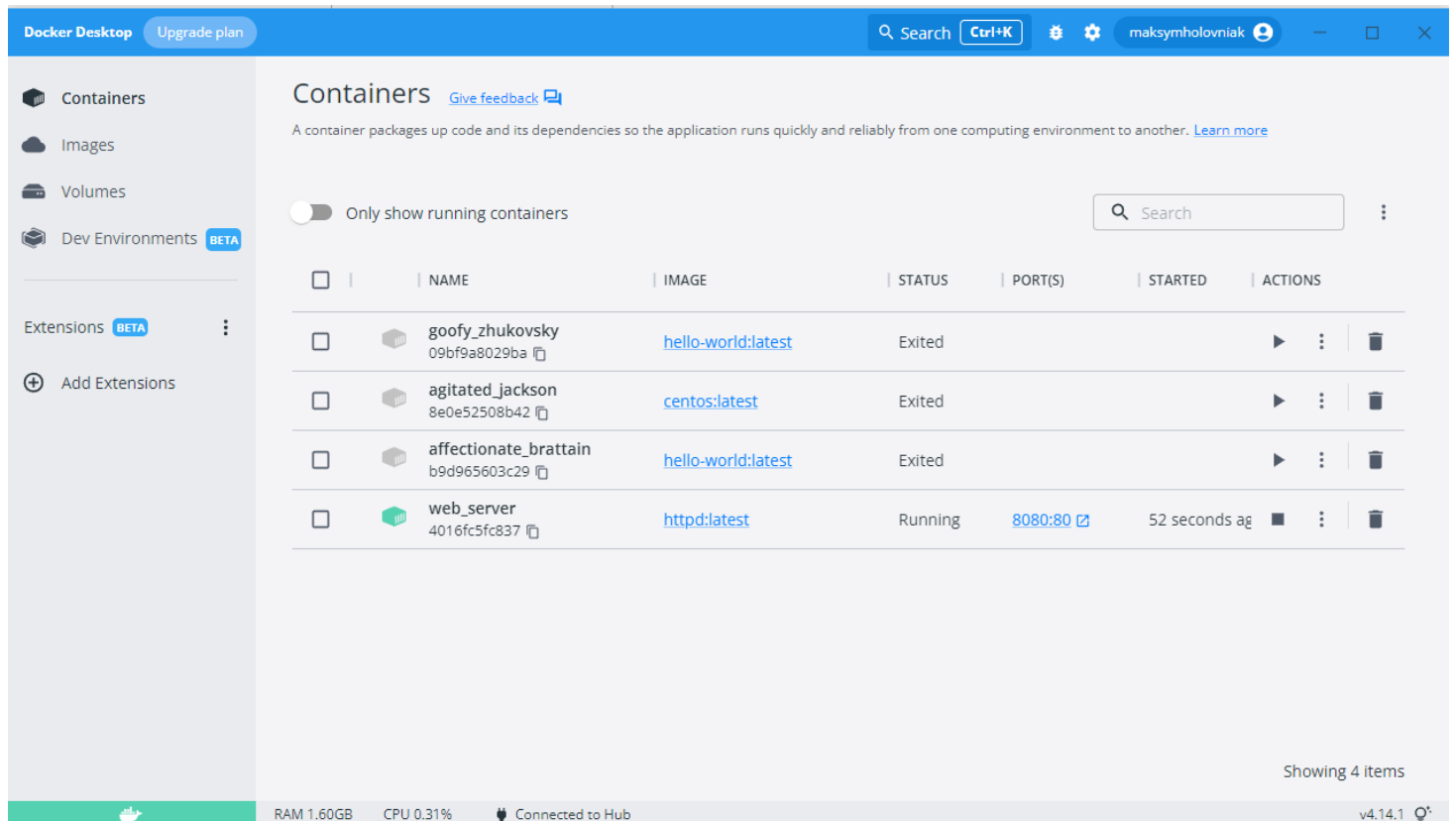
C:\Windows\System32\holovniak>echo "Testing Docker Volumes Holovniak Maksym" > public_html/index.html

C:\Windows\System32\holovniak>_
```

```
Administrator: Командний рядок
Microsoft Windows [Version 10.0.19044.2251]
(c) Корпорація Майкрософт. Усі права захищені.

:\Windows\system32>docker run --name web_server -d -p 8080:80 -v holovniak/public_html/html httpd
016fc5fc83791f16a771b4abc72e298ac1170f2fc52ad7cedb9d0de0f25d3c9

:\Windows\system32>_
```



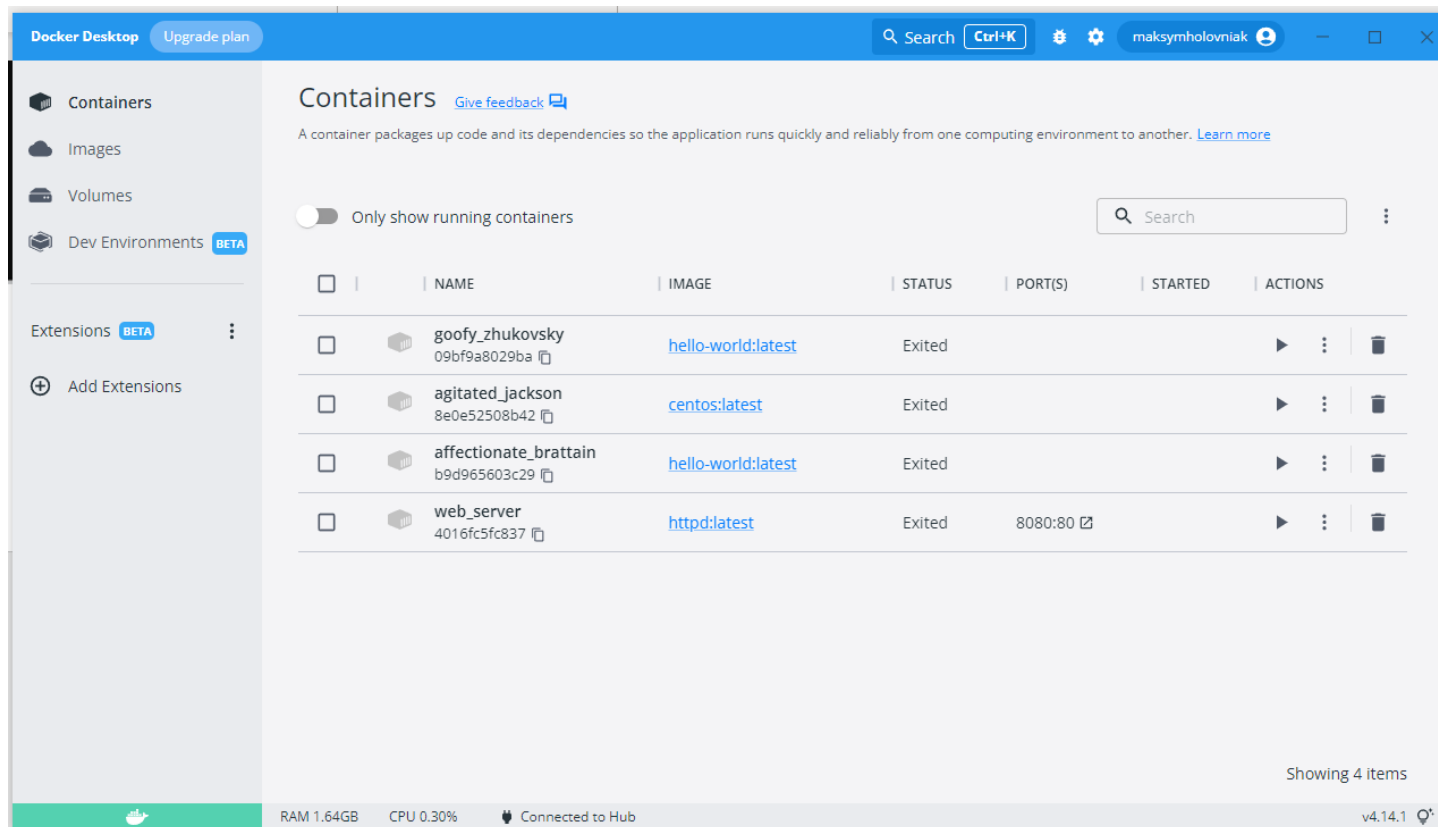
"Testing Docker Volumes Holovniak Maksym"

```
Administrator: Командний рядок
Microsoft Windows [Version 10.0.19044.2251]
(c) Корпорація Майкрософт. Усі права захищені.

C:\Windows\system32>docker run --name web_server -d -p 8080:80 -v holovniak/public_html/html httpd
4016fc5fc83791f16a771b4abc72e298ac1170f2fc52ad7cedb9d0de0f25d3c9

C:\Windows\system32>docker stop 4016fc5fc83791f16a771b4abc72e298ac1170f2fc52ad7cedb9d0de0f25d3c9
4016fc5fc83791f16a771b4abc72e298ac1170f2fc52ad7cedb9d0de0f25d3c9

C:\Windows\system32>
```



Висновок: Я оволодіти базовими навичками по роботі з сучасними системами керування контейнерами.