29.4 Docker overview: Homework (Basic)

1. Pull image “bash” and get the id of the image from metadata.
2. Start the container from the “bash” image with name <your_username>_hw_1, run the command “ls” inside it (pass it as an argument without detaching) and show the output.
3. Check the metadata of the “nginx” image and get:
   - version of nginx application (check the environment section)
   - e-mail address of its maintainer
4. Create <your_username>_index.html with random content and mount it to /usr/share/nginx/html/index.html inside a new container based on nginx image (name it <your_username>_hw_2). Then show the output of «curl -v localhost» executed inside this container.

1. Pull image “bash” and get the id of the image from metadata.

Pulled “bash”:

```
$ docker pull bash
Using default tag: latest
latest: Pulling from library/bash
4abcf2066143: Pull complete
9202680e8b04: Pull complete
9348d69e180f: Pull complete
Digest: sha256:8e45c8ffe44db8784197f7c849a22292b446d76895f65646717b5a2152114d6e
Status: Downloaded newer image for bash:latest
docker.io/library/bash:latest
```

Checked that image “bash” is downloaded:

```
$ docker images
REPOSITORY   TAG      IMAGE ID      CREATED      SIZE
bash         latest   b6281a9c2552  6 weeks ago  14MB
```

id of the image from metadata: b6281a9c2552

2. Start the container from the “bash” image with name <your_username>_hw_1, run the command “ls” inside it (pass it as an argument without detaching) and show the output.

```
$ docker run --name nkhaytovich1_hw_1 -d bash | ls -a
.           .gitconfig  .profile    .vimrc
..          .inputrc    .ssh
```

3. **Check the metadata of the “nginx” image and get:**
   - version of nginx application (check the environment section)
   - e-mail address of its maintainer

   Pulled “nginx”:
   $ docker pull nginx
   Using default tag: latest
   latest: Pulling from library/nginx
   e1caac4eb9d2: Pull complete
   88f6f236f401: Pull complete
   c3ea3344e711: Pull complete
   cc1bb4345a3a: Pull complete
   da8fa4352481: Pull complete
   c7f80e9cdab2: Pull complete
   18a869624cb6: Pull complete
   Digest:
   sha256:c26ae7472d624ba1fafd296e73cecc4f93f853088e6a9c13c0d52f6ca5865107
   Status: Downloaded newer image for nginx:latest
   docker.io/library/nginx:latest

   Checked metadata:
   $ docker images
   REPOSITORY TAG IMAGE ID CREATED SIZE
   nginx latest e4720093a3c1 13 days ago 187MB

   $ docker ps
   CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS
   NAMES
   743515dd0957 nginx "/docker-entrypoint.…" 51 minutes ago Up 51 minutes
   80/tcp nkhaytovich_hw_1

   $ docker exec 743515dd0957 nginx -v
   nginx version: nginx/1.25.4
   Version of nginx application: 1.25.4.

   e-mail address of its maintainer: docker-maint@nginx.com
   $ docker inspect --format='{{index .Config.Labels "maintainer"}}' e4720093a3c1
   NGINX Docker Maintainers <docker-maint@nginx.com>

4. **Create <your_username>_index.html with random content and mount it to /usr/share/nginx/html/index.html inside a new container based on nginx image (name it <your_username>_hw_2). Then show the output of «curl -v localhost» executed inside this container.**

   Created .html:

echo "Hello, This is my first Docker Homework and it's hard for me" > /tmp/nkhaytovich_index.html

Runed it:
$ sudo docker run --name nkhaytovich_hw_2 -v /tmp/nkhaytovich_index.html:/usr/share/nginx/html/index.html -d nginx
Result:
d2e94e05d32b7b5d97faa988e35b76a1a4dbea22e0e41a097a99eb2c8330dba0

Checked containers:

```
$ docker ps -a
CONTAINER ID   IMAGE     COMMAND                  CREATED          STATUS                      PORTS     NAMES
d2e94e05d32b   nginx     "/docker-entrypoint.…"   5 minutes ago    Up 5 minutes                80/tcp    nkhaytovich_hw_2
023a89d7560a   bash      "docker-entrypoint.s…"   16 minutes ago   Exited (0) 16 minutes ago             nkhaytovich1_hw_1
8128701fb490   bash      "docker-entrypoint.s…"   19 minutes ago   Exited (0) 19 minutes ago             nkhaytovich_hw_1
```

```
$ docker exec -it d2e94e05d32b bash
root@d2e94e05d32b:/# curl -v localhost
*   Trying 127.0.0.1:80...
* Connected to localhost (127.0.0.1) port 80 (#0)
> GET / HTTP/1.1
> Host: localhost
> User-Agent: curl/7.88.1
> Accept: */*
>
< HTTP/1.1 200 OK
< Server: nginx/1.25.4
< Date: Thu, 29 Feb 2024 07:08:26 GMT
< Content-Type: text/html
< Content-Length: 61
< Last-Modified: Thu, 29 Feb 2024 06:50:15 GMT
< Connection: keep-alive
< ETag: "65e02927-3d"
< Accept-Ranges: bytes
<
Hello, This is my first Docker Homework and it's hard for me
* Connection #0 to host localhost left intact
root@d2e94e05d32b:/#
```