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Факультет компьютерных систем и сетей
Кафедра Информатики
Дисциплина «Избранные главы информатики»

ОТЧЕТ
к лабораторной работе №2
на тему:
«РАБОТА С DOCKER»
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```
C:\Users\Vlad>docker run -d -p 80:80 docker/getting-started
Unable to find image 'docker/getting-started:latest' locally
latest: Pulling from docker/getting-started
4f7e34c2de10: Download complete
c158987b0551: Download complete
9b6f639ec6ea: Download complete
ee68d3549ec8: Download complete
1e35f6679fab: Download complete
f1d1c9928c82: Download complete
b6334b6ace34: Download complete
33e0cbbb4673: Download complete
cb9626c74200: Download complete
Digest: sha256:d79336f4812b6547a53e735480dde67f8f8f7071b414fbd9297609ffb989abc1
Status: Downloaded newer image for docker/getting-started:latest
deeeb67a41c21625e72fc7e5e902d899204b7b212ae7bc87c766e567bc388ac8
```

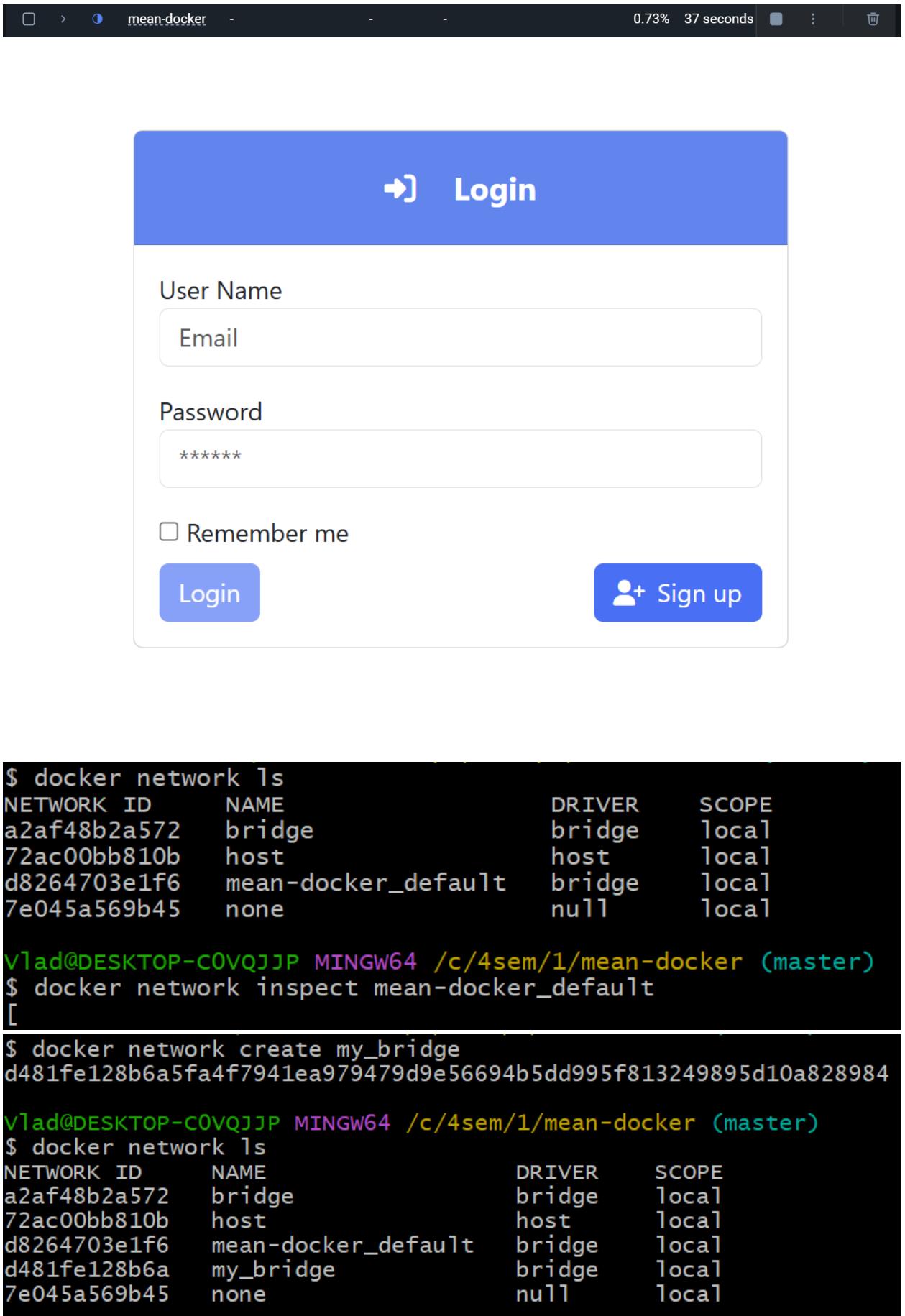
```
PS C:\4sem\353504_GORDASHUK_07\IGI\LR2\prj> docker build -t script .
[+] Building 2.7s (9/9) FINISHED
=> [internal] load build definition from Dockerfile
=> => transferring dockerfile: 115B
=> [internal] load metadata for docker.io/library/python:latest
=> [internal] load .dockerignore
=> => transferring context: 2B
=> CACHED [1/3] FROM docker.io/library/python:latest@sha256:385ccb8304f6330738a6d9e6fa0bd7608e006da7e15bc52b33b0 1.5s
=> => resolve docker.io/library/python:latest@sha256:385ccb8304f6330738a6d9e6fa0bd7608e006da7e15bc52b33b0398e1ba 1.5s
=> [internal] load build context
=> => transferring context: 111B
=> [auth] library/python:pull token for registry-1.docker.io 0.0s
=> [2/3] WORKDIR /app 0.1s
=> [3/3] COPY . /app 0.1s
=> exporting to image 0.0s
=> => exporting layers 0.3s
=> => exporting manifest sha256:21ee84ebfd6b8bdb1dc979c9f6bd80d911740de4fb6c63e2afc6d56436d1c178 0.0s
=> => exporting config sha256:fb15cbc4d47cb678b17d9d2c24ad2e9e74975e61fb23f15f76d101afa7427fb7 0.0s
=> => exporting attestation manifest sha256:4d72a263cf9955f6eb6beb824584e7169c75a6086ac1ece2421db9e84993a2e 0.1s
=> => exporting manifest list sha256:4c48180e68098d173368292072a8ec6d580d4a84c250fd8646ddcf465a3fe35 0.0s
=> => naming to docker.io/library/script:latest 0.0s
=> => unpacking to docker.io/library/script:latest 0.1s
```

```
PS C:\4sem\353504_GORDASHUK_07\IGI\LR2\prj> docker run -it script
Input radius of circle: 10
Perimetr - 62.83185307179586
Area - 314.1592653589793
Input side length of square: 10
Perimetr - 40
Area - 100
PS C:\4sem\353504_GORDASHUK_07\IGI\LR2\prj>
```

```

$ git clone https://github.com/nitin27may/mean-docker.git
  cd mean-docker
  docker-compose -f 'docker-compose.nginx.yml' up
cloning into 'mean-docker'...
remote: Enumerating objects: 565, done.
remote: Counting objects: 100% (237/237), done.
remote: Compressing objects: 100% (175/175), done.
Receiving objects: 100% (565/565), 7.38 MiB | 1.52 MiB/s, done.
remote: Total 565 (delta 115), reused 69 (delta 62), pack-reused 328 (from 2)
Resolving deltas: 100% (193/193), done.
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"SECRET\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_USERNAME\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_PASSWORD\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_HOST\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_PORT\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_PORTV\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_DATABASE\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_DATABASEV\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_USERNAMEV\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_PASSWORDV\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_USERNAME\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_PASSWORD\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_DATABASE\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"MONGO_DB_DATABASEV\" variable is not set. Defaulting to a blank string."
time="2025-03-13T12:41:49+03:00" level=warning msg="The \"C:\\\\4sem\\\\1\\\\mean-docker\\\\docker-compose.nginx.yml: the attribute 'version' is not set.""
[+] Building 248.6s (35/35) FINISHED
=> [express internal] Load build definition from Dockerfile
=> => transferring dockerfile: 642B
=> [angular internal] Load build definition from Dockerfile
=> => transferring dockerfile: 877B
=> WARN: FromAsCasing: 'as' and 'FROM' keywords' casing do not match (line 2)
=> [express internal] Load metadata for docker.io/library/node:21-alpine
=> [angular internal] Load metadata for docker.io/library/node:22-alpine
=> [express internal] Load .dockerignore
=> => transferring context: 548
=> [angular internal] Load .dockerignore
=> => transferring context: 1638
=> [express 1/6] FROM docker.io/library/node:21-alpine@sha256:78c45726ea205bbe2f23889470f03b46ac988d14b6d813d095e2e9909f586f93
=> => resolve docker.io/library/node:21-alpine@sha256:78c45726ea205bbe2f23889470f03b46ac988d14b6d813d095e2e9909f586f93

```



The screenshot shows a web browser window with the title bar "mean-docker". The main content is a login form with a blue header containing a right-pointing arrow icon and the word "Login". The form includes fields for "User Name" (empty), "Email" (empty), "Password" (containing six asterisks), and a "Remember me" checkbox (unchecked). Below the form are two buttons: "Login" on the left and "Sign up" on the right, each enclosed in a blue rounded rectangle.

```
$ docker network ls
NETWORK ID      NAME          DRIVER      SCOPE
a2af48b2a572    bridge        bridge      local
72ac00bb810b    host          host       local
d8264703e1f6    mean-docker_default  bridge      local
7e045a569b45    none          null       local

v1ad@DESKTOP-C0VQJJP MINGW64 /c/4sem/1/mean-docker (master)
$ docker network inspect mean-docker_default
[

$ docker network create my_bridge
d481fe128b6a5fa4f7941ea979479d9e56694b5dd995f813249895d10a828984

v1ad@DESKTOP-C0VQJJP MINGW64 /c/4sem/1/mean-docker (master)
$ docker network ls
NETWORK ID      NAME          DRIVER      SCOPE
a2af48b2a572    bridge        bridge      local
72ac00bb810b    host          host       local
d8264703e1f6    mean-docker_default  bridge      local
d481fe128b6a    my_bridge     bridge      local
7e045a569b45    none          null       local
```

```

Vlad@DESKTOP-COVQJJP MINGW64 /c/4sem/1/mean-docker (master)
$ docker run -d --name script2 --network my_bridge script
0d6b1260710c055ac7e1538c68f25f213e7e6a0b8e7dbe1864bfb01de7f52d58

Vlad@DESKTOP-COVQJJP MINGW64 /c/4sem/1/mean-docker (master)
$ docker container ls -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
0d6b1260710c script "python main.py" 7 seconds ago Exited (1) 6 seconds ago
f46fbf16cd43 mean-docker-nginx "/docker-entrypoint..." 16 minutes ago Exited (0) 5 minutes ago
4d743efa4b9a mean-docker-express "docker-entrypoint.s..." 16 minutes ago Exited (1) 5 minutes ago
9f019a29906f mongo:latest "docker-entrypoint.s..." 16 minutes ago Exited (0) 5 minutes ago
2f97978f2eb1 mean-docker-angular "docker-entrypoint.s..." 16 minutes ago Exited (137) 5 minutes ago
af1fd6de0b73 script "python main.py" 37 hours ago Exited (0) 37 hours ago
dee6b67a41c2 docker/getting-started "/docker-entrypoint..." 3 days ago Exited (0) 3 days ago
                                                 
Vlad@DESKTOP-COVQJJP MINGW64 /c/4sem/1/mean-docker (master)
$ docker inspect bridge2
[
  {
    "Name": "bridge2",
    "Id": "5f0c202bb02edd08cfec0a9185e4083a02c4faee558af35025cab8d13f6bb066",
    "Created": "2025-03-13T10:22:30.562892032Z",
    "Scope": "local",
    "Driver": "bridge",
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": {},
      "Config": [
        {
          "Subnet": "172.20.0.0/16",
          "Gateway": "172.20.0.1"
        }
      ]
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": {
      "0ac14685a6e362d992f8051e10cc59e574357b26b014b7acd153f09f18d94d28": {
        "Name": "ubuntu3",
        "EndpointID": "beb77581bba117c97a4422394419d740c5c571093633141f01123d2889eb999c",
        "MacAddress": "02:42:ac:14:00:02",
        "IPv4Address": "172.20.0.2/16",
        "IPv6Address": ""
      },
      "7b1e191214d53da04e7fdfbc284af96124382e30eb018f676052a915b198b34": {
        "Name": "ubuntu5",
        "EndpointID": "f0d2c95ad7f36d09b87212b3f1275b0169417c73b14eeec041da8df66d729ab1",
        "MacAddress": "02:42:ac:14:00:04",
        "IPv4Address": "172.20.0.4/16",
        "IPv6Address": ""
      },
      "895218029a58f3f1fbe74eb2974054f4732182ff1bae259919f8d647e8a6a508": {
        "Name": "ubuntu4",
        "EndpointID": "d046ca0cdd39d1725f10989f16921f9ab4d497f9e8071b9b524be89bde06dd2d",
        "MacAddress": "02:42:ac:14:00:03",
        "IPv4Address": "172.20.0.3/16",
        "IPv6Address": ""
      }
    },
    "Options": {},
    "Labels": {}
  }
]
root@0ac14685a6e3:/# ping ubuntu4
PING ubuntu4 (172.20.0.3) 56(84) bytes of data.
64 bytes from ubuntu4.bridge2 (172.20.0.3): icmp_seq=1 ttl=64 time=0.175 ms
64 bytes from ubuntu4.bridge2 (172.20.0.3): icmp_seq=2 ttl=64 time=0.090 ms
64 bytes from ubuntu4.bridge2 (172.20.0.3): icmp_seq=3 ttl=64 time=0.103 ms

```

```
$ docker network create -d overlay --attachable my_overlay
w1t6hsqwqz61us0axx3klqaid

v1ad@DESKTOP-C0VQJJP MINGW64 /c/4sem/1/mean-docker (master)
$ docker network inspect my_overlay
[
    {
        "Name": "my_overlay",
        "Id": "w1t6hsqwqz61us0axx3klqaid",
        "Created": "2025-03-13T10:33:14.080617537Z",
        "Scope": "swarm",
        "Driver": "overlay",
        "EnableIPv6": false,
        "IPAM": {
            "Driver": "default",
            "Options": null,
            "Config": [
                {
                    "Subnet": "10.0.1.0/24",
                    "Gateway": "10.0.1.1"
                }
            ]
        },
        "Internal": false,
        "Attachable": true,
        "Ingress": false,
        "ConfigFrom": {
            "Network": ""
        },
        "Configonly": false,
        "Containers": null,
        "Options": {
            "com.docker.network.driver.overlay.vxlanid_list": "4097"
        },
        "Labels": null
    }
]

v1ad@DESKTOP-C0VQJJP MINGW64 /c/4sem/1/mean-docker (master)
$ docker network create -d host --attachable my_overla2
Error response from daemon: only one instance of "host" network is allowed
```