

Министерство образования Республики Беларусь  
Учреждение образования «Белорусский государственный университет  
информатики и радиоэлектроники»

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

**ОТЧЕТ**  
к лабораторной работе №2  
на тему:  
**«РАБОТА С DOCKER»**  
БГУИР 6-05-0612-02

Выполнил студент группы 353504  
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(дата, подпись студента)

Проверил  
Жвакина Анна Васильевна

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(дата, подпись преподавателя)

Минск 2024

```

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                                docker:desktop-linux
=> [internal] load build definition from Dockerfile              0.0s
=> => transferring dockerfile: 115B                             0.0s
=> [internal] load metadata for docker.io/library/python:latest 0.1s
=> [internal] load .dockerignore                                0.0s
=> => transferring context: 2B                                    0.0s
=> 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                                0.0s
=> => transferring context: 111B                                  0.0s
=> [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                                           0.6s
=> => exporting layers                                           0.3s
=> => exporting manifest sha256:21ee84ebfd6b8bdb1dc979c9f6bd80d911740de4fb6c63e2afc6d56436d1c178 0.0s
=> => exporting config sha256:fb15cbc4d47cb678b17d9d2c24ad2e9e74975e61fb23f15f76d101afa7427fb7 0.0s
=> => exporting attestation manifest sha256:4d72a263cf9955f6eb6bebb824584e7169c75a6086aclece2421db9e84993a2e 0.1s
=> => exporting manifest list sha256:4c48180e68098d173368292072a8ec6d580d4a84c250fda8646ddcf465a3fe35 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>

```



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```
$ 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

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

$ docker network create my_bridge
d481fe128b6a5fa4f7941ea979479d9e56694b5dd995f813249895d10a828984

Vlad@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-C0VQJJP MINGW64 /c/4sem/1/mean-docker (master)
$ docker run -d --name script2 --network my_bridge script
0d6b1260710c055ac7e1538c68f25f213e7e6a0b8e7dbe1864bfb01de7f52d58

Vlad@DESKTOP-C0VQJJP 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	script2
f46fbf16cd43	mean-docker-nginx	"/docker-entrypoint..."	16 minutes ago	Exited (0)	5 minutes ago	mean_nginx
4d743efa4b9a	mean-docker-express	"docker-entrypoint.s..."	16 minutes ago	Exited (1)	5 minutes ago	mean_express
9f019a29906f	mongo:latest	"docker-entrypoint.s..."	16 minutes ago	Exited (0)	5 minutes ago	mean_mongo
2f979f8f2eb1	mean-docker-angular	"docker-entrypoint.s..."	16 minutes ago	Exited (137)	5 minutes ago	mean angular
af1fd6de0b73	script	"python main.py"	37 hours ago	Exited (0)	37 hours ago	strange_galileo
deeeb67a41c2	docker/getting-started	"/docker-entrypoint..."	3 days ago	Exited (0)	3 days ago	zen_shamir

```
Vlad@DESKTOP-C0VQJJP 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": ""
      },
      "7b1e191214d53da04e7fd9bc284afd96124382e30eb018f676052a915b198b34": {
        "Name": "ubuntu5",
        "EndpointID": "f0d2c95ad7f36d09b87212b3f1275b0169417c73b14eeec041da8df66d729ab1",
        "MacAddress": "02:42:ac:14:00:04",
        "IPv4Address": "172.20.0.4/16",
        "IPv6Address": ""
      },
      "895218029a58f3f1f8e74eb2974054f4732182ff1bae259919f8d647e8a6a508": {
        "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

Vlad@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
  }
]

Vlad@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

```