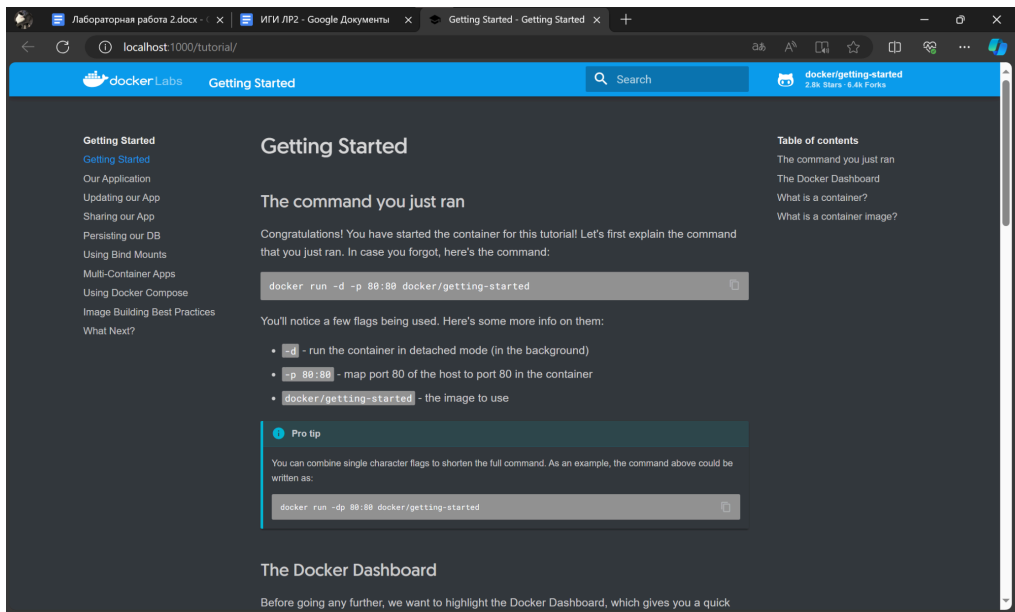


Отчёт по лабораторной работе №2. Избранные главы информатики.
Ястремский Ярослав, гр. 253502.

2. Запуск контейнера

```
C:\Users\yarik>docker run -d -p 1000:80 docker/getting-started
902029b6195fb1b7606e747499e682f0ed004085cd4314b6d90394a37a7c6e6b
```



Вывод на экран списка всех запущенных контейнеров и их размеров

```
C:\Users\yarik>docker ps -s
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
902029b6195f   docker/getting-started "/docker-entrypoint..." About a minute ago Up About a minute 0.0.0.0:1000->80/tcp
clever_gates   1.09kB (virtual 47MB)
```

Вывод всех логов запущенного контейнера

```
C:\Users\yarik>docker logs clever_gates
/docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
/docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
/docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
/docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
/docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
/docker-entrypoint.sh: Configuration complete; ready for start up
2024/03/17 16:23:35 [notice] 1#1: using the "epoll" event method
2024/03/17 16:23:35 [notice] 1#1: nginx/1.23.3
2024/03/17 16:23:35 [notice] 1#1: built by gcc 12.2.1 20220924 (Alpine 12.2.1_git20220924-r4)
2024/03/17 16:23:35 [notice] 1#1: OS: Linux 5.15.146.1-microsoft-standard-WSL2
2024/03/17 16:23:35 [notice] 1#1: getrlimit(RLIMIT_NOFILE): 1048576:1048576
2024/03/17 16:23:35 [notice] 1#1: start worker processes
2024/03/17 16:23:35 [notice] 1#1: start worker process 30
2024/03/17 16:23:35 [notice] 1#1: start worker process 31
2024/03/17 16:23:35 [notice] 1#1: start worker process 32
2024/03/17 16:23:35 [notice] 1#1: start worker process 33
2024/03/17 16:23:35 [notice] 1#1: start worker process 34
2024/03/17 16:23:35 [notice] 1#1: start worker process 35
2024/03/17 16:23:35 [notice] 1#1: start worker process 36
2024/03/17 16:23:35 [notice] 1#1: start worker process 37
```

Остановка контейнера

```
C:\Users\yarik>docker stop clever_gates
clever_gates

C:\Users\yarik>docker ps -a
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
902029b6195f   docker/getting-started  "/docker-entrypoint..."  6 minutes ago  Exited (0) 19 seconds ago           clever_gates
```

Возобновление работы контейнера и пауза

```
C:\Users\yarik>docker start clever_gates
clever_gates

C:\Users\yarik>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
902029b6195f   docker/getting-started  "/docker-entrypoint..."  7 minutes ago  Up 6 seconds  0.0.0.0:1000->80/tcp  clever_gates

C:\Users\yarik>docker pause clever_gates
clever_gates

C:\Users\yarik>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS              PORTS          NAMES
902029b6195f   docker/getting-started  "/docker-entrypoint..."  7 minutes ago  Up 16 seconds (Paused)  0.0.0.0:1000->80/tcp  clever_gates
```

Возобновление процесса работы контейнера

```
C:\Users\yarik>docker unpause clever_gates
clever_gates

C:\Users\yarik>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS              PORTS          NAMES
902029b6195f   docker/getting-started  "/docker-entrypoint..."  8 minutes ago  Up About a minute  0.0.0.0:1000->80/tcp  clever_gates
```

Перезапуск контейнера

```
C:\Users\yarik>docker restart clever_gates
clever_gates

C:\Users\yarik>docker ps
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES
902029b6195f   docker/getting-started  "/docker-entrypoint..."  9 minutes ago  Up 4 seconds  0.0.0.0:1000->80/tcp  clever_gates
```

Удаление контейнера

```
C:\Users\yarik>docker stop clever_gates
clever_gates

C:\Users\yarik>docker rm clever_gates
clever_gates

C:\Users\yarik>docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
--------------	-------	---------	---------	--------	-------	-------

Удаление образа контейнера

```
C:\Users\yarik>docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
docker/getting-started	latest	3e4394f6b72f	15 months ago	47MB

```
C:\Users\yarik>docker image rm 3e4394f6b72f
Untagged: docker/getting-started:latest
Untagged: docker/getting-started@sha256:d79336f4812b6547a53e735480dde67f8f7071b414fbd9297609ffb989abc1
Deleted: sha256:3e4394f6b72fccefa2217067a7f7ff84d5d828afa9623867d68fce4f9d862b6c
Deleted: sha256:cdc6440a971be2985ce94c7e2e0c2df763b58a2ced4ecdb944fcd9b13e7a2aa4
Deleted: sha256:041ac26cd02fa81c8fd73cc616bdeee180de3fd68a649ed1c0339a84cdf7a7c3
Deleted: sha256:376baf7ada4b52ef4c110a023fe7185c4c2c090fa24a5cbd746066333ce3bc46
Deleted: sha256:d254c9b1e23bad05f5cde233b5e91153a0540fa9a797a580d8a360ad12bf63a9
Deleted: sha256:dd5c79fa9b6829fd08ff9943fc1d66bebbba3e04246ba394d57c28827fed95af0
Deleted: sha256:8d812a075abf60a83013c37f49058c220c9cdf390266952126e7e60041b305dc
Deleted: sha256:ff1787ee3dcae843dc7dd1933c49350fc84451cf19ed74f4ea72426e17ee7cd1
Deleted: sha256:85ebd294be1553b207ba9120676f4fd140842348ddf1bb5f7602c7a8401f0a13
Deleted: sha256:ded7a220bb058e28ee3254fbba04ca90b679070424424761a53a043b93b612bf

C:\Users\yarik>docker images
```

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
------------	-----	----------	---------	------

3.Создайте docker image, который запускает скрипт с использованием функций из https://github.com/smartikaorg/geometric_lib.

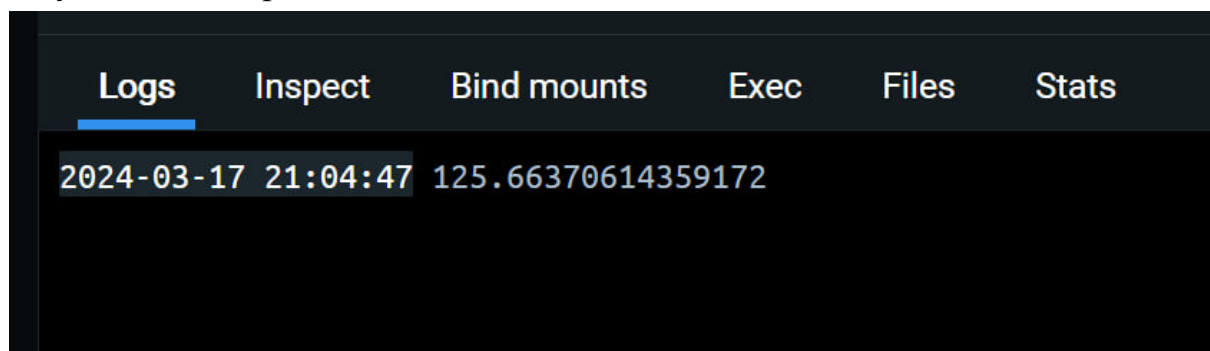
Dockerfile

```
D: > studying > smartiq_lib > geometric_lib > Dockerfile
1 FROM python:3
2
3 WORKDIR /app
4
5 COPY script.py .
6 COPY circle.py .
7
8 ENTRYPOINT ["python", "script.py"]
```

Сборка

```
[+] Building 206.1s (8/8) FINISHED                                docker:default
=> [internal] load build definition from Dockerfile                0.0s
=> => transferring dockerfile: 207B                                0.0s
=> [internal] load metadata for docker.io/library/python:3       2.8s
=> [internal] load .dockerignore                                  0.0s
=> => transferring context: 2B                                       0.0s
=> [1/3] FROM docker.io/library/python:3@sha256:336461f63f4eb1100e178d5acbfea3d1a5b2a53dea88aa0f9b8482d4d02e98 202.4s
=> => resolve docker.io/library/python:3@sha256:336461f63f4eb1100e178d5acbfea3d1a5b2a53dea88aa0f9b8482d4d02e981c 0.0s
=> => sha256:3cb8f9c23302e175d87a827f0a1c376bd59b1f6949bd3bc24ab8da0d669cdfa0 24.05MB / 24.05MB 27.1s
=> => sha256:5f899db30843f8330d5a40d1acb26bb00e93a9f21bfff53f31c20562fa264767 64.14MB / 64.14MB 60.3s
=> => sha256:336461f63f4eb1100e178d5acbfea3d1a5b2a53dea88aa0f9b8482d4d02e981c 2.14kB / 2.14kB 0.0s
=> => sha256:91b4916e08589d8890d85c61c296482d26925dc65f03b5056f41f6d88fa88043 2.01kB / 2.01kB 0.0s
=> => sha256:ae29c48b74297d47dd4a2477690bc534163f76ff154d162cde49fafbb34a37fa 7.11kB / 7.11kB 0.0s
=> => sha256:71215d55680cf0ab2dccc0e1dd65ed76414e3fb0c294249b5b9319a8fa7c398e4 49.55MB / 49.55MB 34.1s
=> => sha256:567db630df8d441ffe43e050ede26996c87e3b33c99f79d4fba0bf6b7ffa0213 211.14MB / 211.14MB 195.1s
=> => extracting sha256:71215d55680cf0ab2dccc0e1dd65ed76414e3fb0c294249b5b9319a8fa7c398e4 2.0s
=> => sha256:d68cd2123173935e339e3feb56980a0aefd7364ad43ca2b9750699e60fbf74c6 6.39MB / 6.39MB 39.7s
=> => extracting sha256:3cb8f9c23302e175d87a827f0a1c376bd59b1f6949bd3bc24ab8da0d669cdfa0 0.7s
=> => sha256:63941d09e5322b88281f3a325eff9ced5bf2ee45b691aaf8ec2f829bafbd8021 22.71MB / 22.71MB 54.2s
=> => sha256:097431623722383300c03bb41fd162d32346bf6a02a053263f51969eb9746e3d 2448 / 2448 55.1s
=> => sha256:09527fa4de8dd73399164c307942cc43652a01fc2bb370e38ae0f806b42b4b18 2.70MB / 2.70MB 58.3s
=> => extracting sha256:5f899db30843f8330d5a40d1acb26bb00e93a9f21bfff53f31c20562fa264767 2.3s
=> => extracting sha256:567db630df8d441ffe43e050ede26996c87e3b33c99f79d4fba0bf6b7ffa0213 5.4s
=> => extracting sha256:d68cd2123173935e339e3feb56980a0aefd7364ad43ca2b9750699e60fbf74c6 0.2s
=> => extracting sha256:63941d09e5322b88281f3a325eff9ced5bf2ee45b691aaf8ec2f829bafbd8021 0.5s
=> => extracting sha256:097431623722383300c03bb41fd162d32346bf6a02a053263f51969eb9746e3d 0.0s
=> => extracting sha256:09527fa4de8dd73399164c307942cc43652a01fc2bb370e38ae0f806b42b4b18 0.2s
=> [internal] load build context                                  0.0s
```

запуск контейнера



4

docker-compose

```
D: > studying > smartiq_lib > task4 > awesome-compose > aspNet-mssql > compose.yaml
1  services:
2    web:
3      build: app/aspnetapp
4      ports:
5        - 80:80
6    db:
7      environment:
8        ACCEPT_EULA: "Y"
9        SA_PASSWORD: example_123
10     image: mcr.microsoft.com/azure-sql-edge:1.0.4
11
12     restart: always
13     healthcheck:
14       test: ["CMD-SHELL", "/opt/mssql-tools/bin/sqlcmd -S localhost -U sa -P example_123 -Q 'SELECT 1' || exit 1"]
15       interval: 10s
16       retries: 10
17       start_period: 10s
18       timeout: 3s
```

docker-compose build

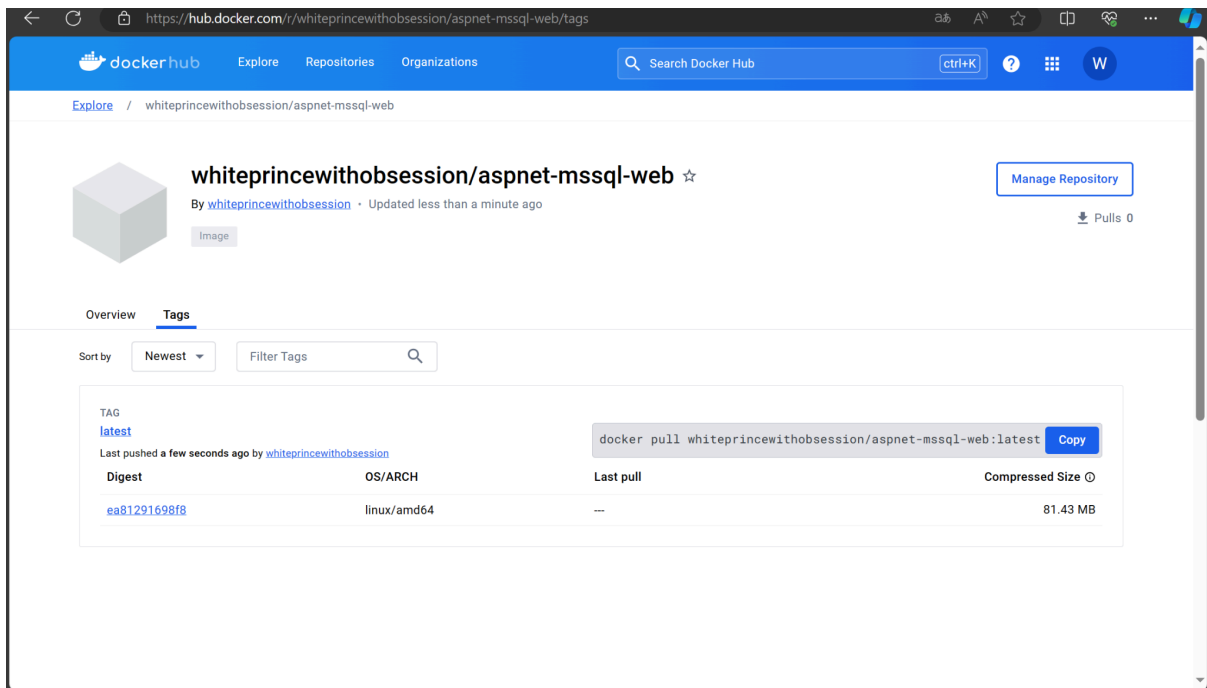
```
D:\studying\smartiq_lib\task4\awesome-compose\aspnet-mssql>docker-compose build
2024/03/17 21:18:39 http2: server: error reading preface from client //.pipe/docker_engine: file has already been closed
[+] Building 235.0s (16/16) FINISHED
=> [web internal] load build definition from Dockerfile
=> => transferring dockerfile: 453B
=> [web internal] load metadata for mcr.microsoft.com/dotnet/sdk:5.0
=> [web internal] load metadata for mcr.microsoft.com/dotnet/aspnet:5.0
=> [web internal] load .dockerignore
=> transferring context: 2B
=> [web internal] load build context
=> transferring context: 2.39MB
=> [web base 1/2] FROM mcr.microsoft.com/dotnet/aspnet:5.0@sha256:1a7d811242f001673d5d25283b3af03da526de1ee8d3bb5aa295f480b7844d44
=> resolve mcr.microsoft.com/dotnet/aspnet:5.0@sha256:1a7d811242f001673d5d25283b3af03da526de1ee8d3bb5aa295f480b7844d44
=> sha256:1a7d811242f001673d5d25283b3af03da526de1ee8d3bb5aa295f480b7844d44 2.17kB / 2.17kB
=> sha256:9e446557b7f4ada7f0e0925783074841c61a196a6e32770596a4983cd67b91a25 1.37kB / 1.37kB
=> sha256:29de19e96ec02d67ee00293b17ec15993f1739b6d8ae7683c2ca2cd01124627 3.26kB / 3.26kB
=> sha256:c1ad9731b2c7bf7fddea67f2f3f553515179a375c489e591e2372700fcaca766 27.14MB / 27.14MB
=> sha256:169ba0027942d5a63c826f18de6c7f110c41cc350c0a405e46a5a2cfff811c9 17.09MB / 17.09MB
=> sha256:c4c86b92f556011b8eadfc6249a74150dac9c5297e74d5070bab30cafd5d8f48 31.79MB / 31.79MB
=> sha256:e76245086e243c3e2e5b8571c00fb5a7911d15bc7665e567b3c50208e24d864a 154B / 154B
=> sha256:0bf07af7e5b699690c933b3de89238fdbc2a4048f214be674353b7e0bd7aa48d 8.65MB / 8.65MB
=> extracting sha256:c1ad9731b2c7bf7fddea67f2f3f553515179a375c489e591e2372700fcaca766 1.4s
=> extracting sha256:169ba0027942d5a63c826f18de6c7f110c41cc350c0a405e46a5a2cfff811c9 0.4s
=> extracting sha256:c4c86b92f556011b8eadfc6249a74150dac9c5297e74d5070bab30cafd5d8f48 0.4s
=> extracting sha256:e76245086e243c3e2e5b8571c00fb5a7911d15bc7665e567b3c50208e24d864a 0.0s
=> extracting sha256:0bf07af7e5b699690c933b3de89238fdbc2a4048f214be674353b7e0bd7aa48d 0.1s
=> [web build 1/5] FROM mcr.microsoft.com/dotnet/sdk:5.0@sha256:3ff465d940de3e2c727794d92fd7bb649c498d4abd91bc9213ea7831ebf01fe
=> resolve mcr.microsoft.com/dotnet/sdk:5.0@sha256:3ff465d940de3e2c727794d92fd7bb649c498d4abd91bc9213ea7831ebf01fe
=> sha256:3ff465d940de3e2c727794d92fd7bb649c498d4abd91bc9213ea7831ebf01fe 2.17kB / 2.17kB
=> sha256:c1ad9731b2c7bf7fddea67f2f3f553515179a375c489e591e2372700fcaca766 27.14MB / 27.14MB
=> sha256:c4c86b92f556011b8eadfc6249a74150dac9c5297e74d5070bab30cafd5d8f48 31.79MB / 31.79MB
=> sha256:183b6254a0e22374497406e1c68782a36dc95acf036194d0b958e69c60be707 2.01kB / 2.01kB
=> sha256:9fec788bd1f9e8be900426262e95f9c68c6739951f5f5ab00b65bec173ed5 7.11kB / 7.11kB
=> sha256:169ba0027942d5a63c826f18de6c7f110c41cc350c0a405e46a5a2cfff811c9 17.09MB / 17.09MB
=> sha256:e76245086e243c3e2e5b8571c00fb5a7911d15bc7665e567b3c50208e24d864a 154B / 154B
=> sha256:0bf07af7e5b699690c933b3de89238fdbc2a4048f214be674353b7e0bd7aa48d 8.65MB / 8.65MB
=> sha256:85081c9db7883a130f7a48165f70df5778cbdae19a9a2eca1df126514409b7b1 27.56MB / 27.56MB
=> extracting sha256:c1ad9731b2c7bf7fddea67f2f3f553515179a375c489e591e2372700fcaca766 199.9s
```

запуск контейнеров

```
[+] Running 3/319 Download complete
[+] Network aspnet-mssql_default Created
[+] Container aspnet-mssql-db-1 Created
[+] Container aspnet-mssql-web-1 Created
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
3e34ce5ebb78	mcr.microsoft.com/azure-sql-edge:1.0.4	"/opt/mssql/bin/perm..."	6 minutes ago	Up 6 minutes (healthy)
1401/tcp,	1433/tcp	aspnet-mssql-db-1		
3ed1ef806fea	aspnet-mssql-web	"dotnet aspnetapp.dll"	6 minutes ago	Up 6 minutes
0.0.0.0:80->	80/tcp	aspnet-mssql-web-1		
88d3463a40df	aspnet-mssql-web:latest	"dotnet aspnetapp.dll"	14 minutes ago	Up 14 minutes
	elegant_pike			

```
[+] Pushing 9/9
[+] db Skipped
[+] Pushing whiteprincewithobsession/aspnet-mssql-web:latest: 05e5c3fbb409 Pushed
[+] Pushing whiteprincewithobsession/aspnet-mssql-web:latest: 5f70bf18a086 Pushed
[+] Pushing whiteprincewithobsession/aspnet-mssql-web:latest: bd27c2d0a806 Pushed
[+] Pushing whiteprincewithobsession/aspnet-mssql-web:latest: c17c60266ba3 Pushed
[+] Pushing whiteprincewithobsession/aspnet-mssql-web:latest: 4bb9d2f55486 Pushed
[+] Pushing whiteprincewithobsession/aspnet-mssql-web:latest: dbcc5783df1a Pushed
[+] Pushing whiteprincewithobsession/aspnet-mssql-web:latest: fe05af3bb097 Pushed
[+] Pushing whiteprincewithobsession/aspnet-mssql-web:latest: 10e6bc6fddee2 Pushed
```



7

Получим сведения о всех сетях

```
NETWORK ID      NAME                DRIVER             SCOPE
756800e4936c    aspnet-mssql_default bridge             local
99906f1cd42f    bridge             bridge             local
2d63ea236286    host               host               local
f2fa4561e88b    none               null               local
```

Получим подробную информацию об одной из сетей

```
D:\studying\smartiqlib\task4\awesome-compose\aspnet-mssql>docker network inspect bridge
[
  {
    "Name": "bridge",
    "Id": "99906f1cd42fd84330254243faf2af3d083166a86c5d8abe42a62a7ed7d5d08e",
    "Created": "2024-03-17T16:21:14.461818096Z",
    "Scope": "local",
    "Driver": "bridge",
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": null,
      "Config": [
        {
          "Subnet": "172.17.0.0/16",
          "Gateway": "172.17.0.1"
        }
      ]
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
```

Создадим свою сеть типа bridge

```
D:\studying\smartiqlib\task4\awesome-compose\aspnet-mssql>docker network create -d bridge aoao
2374d55c3c528b32a58bd891bd6ff773357b1f538702b8e444fb4cacb9d80997
```

```
D:\studying\smartiqlib\task4\awesome-compose\aspnet-mssql>docker network ls
```

NETWORK ID	NAME	DRIVER	SCOPE
2374d55c3c52	aoao	bridge	local
756800e4936c	aspnet-mssql_default	bridge	local
99906f1cd42f	bridge	bridge	local
2d63ea236286	host	host	local
f2fa4561e88b	none	null	local

```
{
  "Name": "aoao",
  "Id": "2374d55c3c528b32a58bd891bd6ff773357b1f538702b8e444fb4cacb9d80997",
  "Created": "2024-03-17T19:17:29.826364482Z",
  "Scope": "local",
  "Driver": "bridge",
  "EnableIPv6": false,
  "IPAM": {
    "Driver": "default",
    "Options": {},
    "Config": [
      {
        "Subnet": "172.19.0.0/16",
        "Gateway": "172.19.0.1"
      }
    ]
  },
  "Internal": false,
  "Attachable": false,
  "Ingress": false,
  "ConfigFrom": {
    "Network": ""
  },
  "ConfigOnly": false,
  "Containers": {},
  "Options": {},
  "Labels": {}
}
```

Подключим контейнер к данной сети

```
MacAddress": "",
"Networks": {
  "aoao": {
    "IPAMConfig": {},
    "Links": null,
    "Aliases": [
      "3ed1ef806fea"
    ],
    "MacAddress": "02:42:ac:13:00:02",
    "NetworkID": "2374d55c3c528b32a58bd891bd6ff773357b1f538702b8e444fb4cacb9d80997",
    "EndpointID": "bd43192a114cf13bf141036bab67f9bb849ab7d26b96bc0bdf7f5215ba93f304",
    "Gateway": "172.19.0.1",
    "IPAddress": "172.19.0.2",
    "IPPrefixLen": 16,
    "IPv6Gateway": "",
    "GlobalIPv6Address": "",
    "GlobalIPv6PrefixLen": 0,
    "DriverOpts": {},
    "DNSNames": [
      "aspnet-mssql-web-1",
      "3ed1ef806fea"
    ]
  },
  "aspnet-mssql_default": {
```


Теперь отключим контейнер от сети

```
aspnet-mssql>docker network disconnect aoao 3ed1ef806fea
```

```
    "Networks": {
      "aspnet-mssql_default": {
        "IPAMConfig": null,
        "Links": null,
        "Aliases": [
          "aspnet-mssql-web-1",
          "web",
          "3ed1ef806fea"
        ],
        "MacAddress": "02:42:ac:12:00:03",
        "NetworkID": "756800e4936cc81777dc76855ccc3062e564a2d019ffa0374cf680f3d14f36",
        "EndpointID": "61b4a2b5bd3be0ae34895d8eeceed8071532ea08d00379076c2d2f8440f84b5a",
        "Gateway": "172.18.0.1",
        "IPAddress": "172.18.0.3",
        "IPPrefixLen": 16,
        "IPv6Gateway": "",
        "GlobalIPv6Address": "",
        "GlobalIPv6PrefixLen": 0,
        "DriverOpts": null,
        "DNSNames": [
          "aspnet-mssql-web-1",
          "web",
          "3ed1ef806fea"
        ]
      }
    }
  },
  "lame": {
    "NetworkID": "756800e4936cc81777dc76855ccc3062e564a2d019ffa0374cf680f3d14f36",
    "EndpointID": "61b4a2b5bd3be0ae34895d8eeceed8071532ea08d00379076c2d2f8440f84b5a",
    "Gateway": "172.18.0.1",
    "IPAddress": "172.18.0.3",
    "IPPrefixLen": 16,
    "IPv6Gateway": "",
    "GlobalIPv6Address": "",
    "GlobalIPv6PrefixLen": 0,
    "DriverOpts": null,
    "DNSNames": [
      "aspnet-mssql-web-1",
      "web",
      "3ed1ef806fea"
    ]
  }
}
```

Создадим новую сеть

```
>docker network create -d bridge lame
```

Подключим к ней все контейнеры

```
>docker network connect lame 3ed1ef806fea
```

```
>docker network connect lame 3e34ce5ebb78
```

```
>docker network connect lame 88d3463a40df
```

```
    "Networks": {
      "aspnet-mssql_default": {
        "IPAMConfig": null,
        "Links": null,
        "Aliases": [
          "aspnet-mssql-web-1",
          "web",
          "3ed1ef806fea"
        ],
        "MacAddress": "02:42:ac:12:00:03",
        "NetworkID": "756800e4936cc81777dc76855ccc3062e564a2d019ffa0374cf680f3d14f36",
        "EndpointID": "61b4a2b5bd3be0ae34895d8eeceed8071532ea08d00379076c2d2f8440f84b5a",
        "Gateway": "172.18.0.1",
        "IPAddress": "172.18.0.3",
        "IPPrefixLen": 16,
        "IPv6Gateway": "",
        "GlobalIPv6Address": "",
        "GlobalIPv6PrefixLen": 0,
        "DriverOpts": null,
        "DNSNames": [
          "aspnet-mssql-web-1",
          "web",
          "3ed1ef806fea"
        ]
      },
      "lame": {
        "IPAMConfig": null,
        "Links": null,
        "Aliases": [
          "aspnet-mssql-web-1",
          "web",
          "3ed1ef806fea"
        ],
        "MacAddress": "02:42:ac:12:00:03",
        "NetworkID": "756800e4936cc81777dc76855ccc3062e564a2d019ffa0374cf680f3d14f36",
        "EndpointID": "61b4a2b5bd3be0ae34895d8eeceed8071532ea08d00379076c2d2f8440f84b5a",
        "Gateway": "172.18.0.1",
        "IPAddress": "172.18.0.3",
        "IPPrefixLen": 16,
        "IPv6Gateway": "",
        "GlobalIPv6Address": "",
        "GlobalIPv6PrefixLen": 0,
        "DriverOpts": null,
        "DNSNames": [
          "aspnet-mssql-web-1",
          "web",
          "3ed1ef806fea"
        ]
      }
    }
  },
  "lame": {
    "NetworkID": "756800e4936cc81777dc76855ccc3062e564a2d019ffa0374cf680f3d14f36",
    "EndpointID": "61b4a2b5bd3be0ae34895d8eeceed8071532ea08d00379076c2d2f8440f84b5a",
    "Gateway": "172.18.0.1",
    "IPAddress": "172.18.0.3",
    "IPPrefixLen": 16,
    "IPv6Gateway": "",
    "GlobalIPv6Address": "",
    "GlobalIPv6PrefixLen": 0,
    "DriverOpts": null,
    "DNSNames": [
      "aspnet-mssql-web-1",
      "web",
      "3ed1ef806fea"
    ]
  }
}
```


Проверим состояние сети

```
},
"ConfigOnly": false,
"Containers": {
  "3e34ce5ebb785fe4f46886392344c051c2b1437d103123b4e310b22cecd3fd2c": {
    "Name": "aspnet-mssql-db-1",
    "EndpointID": "98bbd1dca373972431213e708ae0e8a6fd9cf2fd252fc616b882fe12d49bc4be",
    "MacAddress": "02:42:ac:14:00:03",
    "IPv4Address": "172.20.0.3/16",
    "IPv6Address": ""
  },
  "3ed1ef806fea0cff1ca0d06de33e68497c5064395d476ec9975fe5ab26b0932b": {
    "Name": "aspnet-mssql-web-1",
    "EndpointID": "e663f19dca8340c8b9119e9647204a35e48e5b207643e3f4f6a787a4e944129",
    "MacAddress": "02:42:ac:14:00:02",
    "IPv4Address": "172.20.0.2/16",
    "IPv6Address": ""
  },
  "88d3463a40df85f7383ecd1d96976ab23a54397b29abd38a75c928c3d2add4bb": {
    "Name": "elegant_pike",
    "EndpointID": "955e114b9eea305f605cb40c47114055d98204818bcda44b9149a658a1103d9c",
    "MacAddress": "02:42:ac:14:00:04",
    "IPv4Address": "172.20.0.4/16",
    "IPv6Address": ""
  }
}
```

Создадим overlay сеть

```
D:\studying\smartiq_lib\task4\awesome-compose\aspnet-mssql>docker swarm init
Swarm initialized: current node (r13yrv2lkkewuis477c8iklvq) is now a manager.

To add a worker to this swarm, run the following command:

    docker swarm join --token SWMTKN-1-10yy863f8wy7iqlxsd69j3kjd834vhenstbss7jvldilqkhv3q-1xhkpg9iuz2uhorqyat54rhcj 192.168.65.3:2376

To add a manager to this swarm, run 'docker swarm join-token manager' and follow the instructions.

D:\studying\smartiq_lib\task4\awesome-compose\aspnet-mssql>docker network create -d overlay overnet
t512e8xs496udgfkndil5c2t

D:\studying\smartiq_lib\task4\awesome-compose\aspnet-mssql>docker network inspect overnet
[
  {
    "Name": "overnet",
    "Id": "t512e8xs496udgfkndil5c2t",
    "Created": "2024-03-17T19:29:36.912236816Z",
    "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": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": null,
    "Options": {
      "com.docker.network.driver.overlay.vxlanid_list": "4097"
    },
    "Labels": null
  }
]
```

Создадим еще одну overlay сеть

```
D:\studying\smartiqlib\task4\awesome-compose\aspnet-mssql>docker network create -d overlay overnet2
q0g1w64wvyc97s3h889swflm2

D:\studying\smartiqlib\task4\awesome-compose\aspnet-mssql>docker network inspect overnet2
[
  {
    "Name": "overnet2",
    "Id": "q0g1w64wvyc97s3h889swflm2",
    "Created": "2024-03-17T19:30:20.04018644Z",
    "Scope": "swarm",
    "Driver": "overlay",
    "EnableIPv6": false,
    "IPAM": {
      "Driver": "default",
      "Options": null,
      "Config": [
        {
          "Subnet": "10.0.2.0/24",
          "Gateway": "10.0.2.1"
        }
      ]
    },
    "Internal": false,
    "Attachable": false,
    "Ingress": false,
    "ConfigFrom": {
      "Network": ""
    },
    "ConfigOnly": false,
    "Containers": null,
    "Options": {
      "com.docker.network.driver.overlay.vxlanid_list": "4098"
    },
    "Labels": null
  }
]
```

Удалим созданную сеть

```
D:\studying\smartiqlib\task4\awesome-compose\aspnet-mssql>docker network rm overnet2
overnet2

D:\studying\smartiqlib\task4\awesome-compose\aspnet-mssql>docker network ls
NETWORK ID        NAME                DRIVER             SCOPE
2374d55c3c52      aoao                bridge             local
756800e4936c      aspnet-mssql_default bridge             local
99906f1cd42f      bridge              bridge             local
66f7b8c8e8ad      docker_gwbridge     bridge             local
2d63ea236286      host                host               local
m511kie14bkn      ingress             overlay            swarm
c87cafd9c8c7      lame                bridge             local
f2fa4561e88b      none                null               local
t512e8xs496u      overnet             overlay            swarm
```

Попробуем создать сеть типа “host”

```
D:\studying\smartiqlib\task4\awesome-compose\aspnet-mssql>docker network create -d host new_host
Error response from daemon: only one instance of "host" network is allowed
```

Поскольку только одна сеть с таким типом может существовать, docker отклоняет данный запрос