

Домашняя работа № 3

1. Запустить контейнер с БД mariaDB, используя инструкции на сайте hub.docker.com;
2. Слинковать папку с базой данных с контейнера с mariaDB в папку на хосте (как на семинаре /var/lib/mysql). Заполнить БД данными или добавить запись и проверить, что файлы базы данных появились на хостовой машине:

```
root@1f435852607e: /  
yakddd@yddux:~$ mkdir homework3-DB  
yakddd@yddux:~$ docker run --name homework3 -e MARIADB_ROOT_PASSWORD=pass -v ./homework3-DB:/var/lib/mysql -d mariadb:10.10.2  
1f435852607e9f92891a28f8753d07628b4eb663482e64c9565d3fc6fdde03b3  
yakddd@yddux:~$ docker ps -a  
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES  
1f435852607e   mariadb:10.10.2 "docker-entrypoint.s..." 42 seconds ago Up 41 seconds 3306/tcp       homework3  
4b33835c5baf   ubuntu        "bash"                  28 hours ago   Exited (0) 28 hours ago                       mystifying_chatelet  
yakddd@yddux:~$ docker ps  
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS          NAMES  
1f435852607e   mariadb:10.10.2 "docker-entrypoint.s..." About a minute ago Up About a minute 3306/tcp       homework3  
yakddd@yddux:~$ docker exec -it homework3 bash  
root@1f435852607e:/# ls -l  
total 56  
lrwxrwxrwx 1 root root 7 Jan 26 02:03 bin -> usr/bin  
drwxr-xr-x 2 root root 4096 Apr 18 2022 boot  
drwxr-xr-x 5 root root 340 Jul 12 19:54 dev  
drwxr-xr-x 2 root root 4096 Jan 31 18:42 docker-entrypoint-initdb.d  
drwxr-xr-x 1 root root 4096 Jul 12 19:54 etc  
drwxr-xr-x 2 root root 4096 Apr 18 2022 home  
lrwxrwxrwx 1 root root 7 Jan 26 02:03 lib -> usr/lib  
lrwxrwxrwx 1 root root 9 Jan 26 02:03 lib32 -> usr/lib32  
lrwxrwxrwx 1 root root 9 Jan 26 02:03 lib64 -> usr/lib64  
lrwxrwxrwx 1 root root 10 Jan 26 02:03 libx32 -> usr/libx32  
drwxr-xr-x 2 root root 4096 Jan 26 02:03 media  
drwxr-xr-x 2 root root 4096 Jan 26 02:03 mnt  
drwxr-xr-x 2 root root 4096 Jan 26 02:03 opt  
dr-xr-xr-x 284 root root 0 Jul 12 19:54 proc  
drwx----- 1 root root 4096 Jan 31 18:42 root  
drwxr-xr-x 1 root root 4096 Jan 31 18:43 run  
lrwxrwxrwx 1 root root 8 Jan 26 02:03/sbin -> usr/sbin  
drwxr-xr-x 2 root root 4096 Jan 26 02:03 srv  
dr-xr-xr-x 13 root root 0 Jul 12 19:54 sys  
drwxrwxrwt 1 root root 4096 Jul 12 19:54 tmp  
drwxr-xr-x 1 root root 4096 Jan 26 02:03 usr  
drwxr-xr-x 1 root root 4096 Jan 26 02:06 var  
root@1f435852607e:/#
```

```
root@1f435852607e: /  
root@1f435852607e:/# mysql -u root -p  
Enter password:  
Welcome to the MariaDB monitor. Commands end with ; or \g.  
Your MariaDB connection id is 3  
Server version: 10.10.2-MariaDB-1:10.10.2+maria-ubu2204 mariadb.org binary distribution  
  
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.  
  
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.  
  
MariaDB [(none)]> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
+-----+  
4 rows in set (0.006 sec)  
  
MariaDB [(none)]> CREATE DATABASE task2;  
Query OK, 1 row affected (0.002 sec)  
  
MariaDB [(none)]> show databases;  
+-----+  
| Database |  
+-----+  
| information_schema |  
| mysql |  
| performance_schema |  
| sys |  
| task2 |  
+-----+  
5 rows in set (0.001 sec)  
  
MariaDB [(none)]>
```

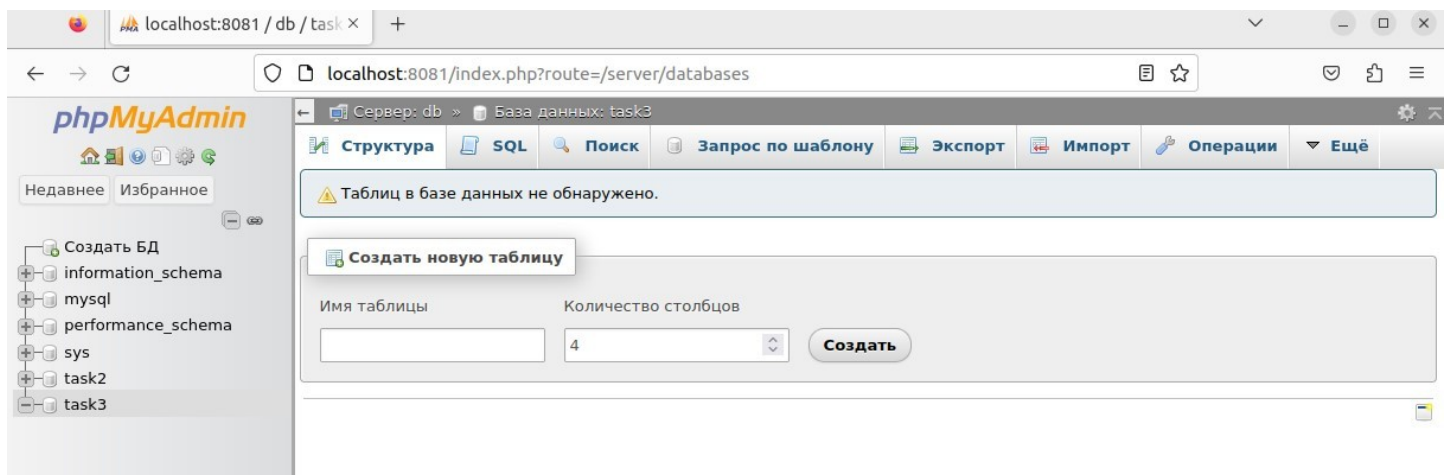
```
root@yddux: /home/yakdd/homework3-DB/task2
root@1f435852607e: /
root@yddux: /home/yakdd/homework3-DB/task2

yakdd@yddux:~$ cd homework3-DB/
yakdd@yddux:~/homework3-DB$ ls -l
итого 139376
-rw-rw---- 1 vboxadd vboxsf 16842752 июл 12 22:54 aria_log.00000001
-rw-rw---- 1 vboxadd vboxsf 52 июл 12 22:54 aria_log_control
-rw-rw---- 1 vboxadd vboxsf 9 июл 12 22:54 ddl_recovery.log
-rw-rw---- 1 vboxadd vboxsf 868 июл 12 22:54 ib_buffer_pool
-rw-rw---- 1 vboxadd vboxsf 12582912 июл 12 22:54 ibdata1
-rw-rw---- 1 vboxadd vboxsf 100663296 июл 12 22:56 ib_logfile0
-rw-rw---- 1 vboxadd vboxsf 12582912 июл 12 22:54 ibtmp1
-rw-rw---- 1 vboxadd vboxsf 0 июл 12 22:54 multi-master.info
drwx----- 2 vboxadd vboxsf 4096 июл 12 22:54 mysql
-rw-r--r-- 1 vboxadd vboxsf 15 июл 12 22:54 mysql_upgrade_info
drwx----- 2 vboxadd vboxsf 4096 июл 12 22:54 performance_schema
drwx----- 2 vboxadd vboxsf 12288 июл 12 22:54 sys
drwx----- 2 vboxadd vboxsf 4096 июл 12 22:58 task2
yakdd@yddux:~/homework3-DB$ sudo su
root@yddux:/home/yakdd/homework3-DB# cd task2/
root@yddux:/home/yakdd/homework3-DB/task2# ls -l
итого 4
-rw-rw---- 1 vboxadd vboxsf 67 июл 12 22:58 db.opt
root@yddux:/home/yakdd/homework3-DB/task2#
```

3. Запустить phpmyadmin (в контейнере) и через веб проверить, что все введенные данные доступны. <http://localhost:8081>:

```
yakdd@yddux: ~/homework3-DB
root@1f435852607e: /
yakdd@yddux: ~/homework3-DB

yakdd@yddux:~/homework3-DB$ docker run --name task3-phpadmin -d --link homework3:db -p 8081:80 phpmyadmin/phpmyadmin
Unable to find image 'phpmyadmin/phpmyadmin:latest' locally
latest: Pulling from phpmyadmin/phpmyadmin
f1f26f570256: Pull complete
ee0a4e40ccac: Pull complete
5ca9fb408faa: Pull complete
5baa808a48ff: Pull complete
6e8d74e4d8ee: Pull complete
fac8e70fcf67: Pull complete
b3b7906fb177: Pull complete
cb4935bbeb83: Pull complete
c9e00ef337e3: Pull complete
cfe495c8d695: Pull complete
dcc3fd107f0c: Pull complete
fe3c587d1f07: Pull complete
677f27d94442: Pull complete
4d778a8cb653: Pull complete
5f0f7b557ecd: Pull complete
6ad259d60f7c: Pull complete
41acd705cbc4: Pull complete
912204d5a7e6: Pull complete
Digest: sha256:ed87921184b59f7d8fc85c6a5f041c22758a4d4419c0ee3bac38eb7e133eae3
Status: Downloaded newer image for phpmyadmin/phpmyadmin:latest
941fbe9cd371c56b3da4d2882e77aa407529c3d827c3da5a87e8c0acfcdae4e4
yakdd@yddux:~/homework3-DB$ docker ps
CONTAINER ID   IMAGE                COMMAND                  CREATED        STATUS        PORTS
NAMES
941fbe9cd371   phpmyadmin/phpmyadmin "/docker-entrypoint..." 33 seconds ago Up 20 seconds 0.0.0.0:8081->80/tcp, :::8081->80/tcp
p_task3-phpadmin
1f435852607e   mariadb:10.10.2     "docker-entrypoint.s..." 50 minutes ago Up 50 minutes 3306/tcp
homework3
yakdd@yddux:~/homework3-DB$
```




```
root@yddux: /home/yakdd/homework3-DB/task3
root@1f435852607e: /
root@yddux: /home/yakdd/homework3-DB/task3

yakdd@yddux:~/homework3-DB$ ls -l
итого 139380
-rw-rw---- 1 vboxadd vboxsf 16842752 июл 12 22:54 aria_log.00000001
-rw-rw---- 1 vboxadd vboxsf 52 июл 12 22:54 aria_log_control
-rw-rw---- 1 vboxadd vboxsf 9 июл 12 22:54 ddl_recovery.log
-rw-rw---- 1 vboxadd vboxsf 868 июл 12 22:54 ib_buffer_pool
-rw-rw---- 1 vboxadd vboxsf 12582912 июл 12 22:54 ibdata1
-rw-rw---- 1 vboxadd vboxsf 100663296 июл 12 22:56 ib_logfile0
-rw-rw---- 1 vboxadd vboxsf 12582912 июл 12 22:54 ibtmp1
-rw-rw---- 1 vboxadd vboxsf 0 июл 12 22:54 multi-master.info
drwx----- 2 vboxadd vboxsf 4096 июл 12 22:54 mysql
-rw-r--r-- 1 vboxadd vboxsf 15 июл 12 22:54 mysql_upgrade_info
drwx----- 2 vboxadd vboxsf 4096 июл 12 22:54 performance_schema
drwx----- 2 vboxadd vboxsf 12288 июл 12 22:54 sys
drwx----- 2 vboxadd vboxsf 4096 июл 12 22:58 task2
drwx----- 2 vboxadd vboxsf 4096 июл 12 23:48 task3
```

4. Запустить контейнер с postgresSQL и подсоединить к этому контейнеру adminer (графическое управление базой данных):

```
yakdd@yddux: ~
yakdd@yddux:~$ mkdir hw3-postgre
yakdd@yddux:~$ docker run --name task4-postgres -e POSTGRES_PASSWORD=pass -d postgres
Unable to find image 'postgres:latest' locally
latest: Pulling from library/postgres
faef57eae888: Pull complete
a33c10a72186: Pull complete
d662a43776d2: Pull complete
a3ba86413420: Pull complete
a627f37e9916: Pull complete
424bade69494: Pull complete
dd8d4fcd466b: Pull complete
03d0efeea592: Pull complete
4f27e1518a67: Pull complete
0c8ac8b8eb90: Pull complete
c08e79653ad2: Pull complete
d5724e8c22af: Pull complete
3db4aa0d2013: Pull complete
Digest: sha256:362a63cb1e864195ea2bc29b5066bdb222bc9a4461bfaff2418f63a06e56bce0
Status: Downloaded newer image for postgres:latest
4bd0d60b99788e3ea2015d7ee66047f7e42dfb09d6f3cbf9c5c6777025919be8
yakdd@yddux:~$ docker ps
CONTAINER ID   IMAGE                COMMAND                  CREATED        STATUS        PORTS
NAMES
4bd0d60b9978   postgres            "docker-entrypoint.s..." 54 seconds ago Up 36 seconds 5432/tcp
task4-postgres
941f1be9cd371   phpmyadmin/phpmyadmin "/docker-entrypoint..." 46 minutes ago Up 46 minutes 0.0.0.0:8081->80/tcp, :::8081->80/tcp
task3-phpadmin
1f435852607e   mariadb:10.10.2     "docker-entrypoint.s..." 2 hours ago   Up 2 hours    3306/tcp
homework3
yakdd@yddux:~$
```

```
yakdd@yddux: ~
yakdd@yddux:~$ docker run --link task4-postgres:db -p 8080:8080 adminer
Unable to find image 'adminer:latest' locally
latest: Pulling from library/adminer
34df401c391c: Pull complete
942860e9b081: Pull complete
f571177b537e: Pull complete
78d7a59571f8: Pull complete
530e7e02f755: Pull complete
03ee8734c62c: Pull complete
ed7a0cc37cf2: Pull complete
Digest: sha256:3751b49306d8fd25567ed222d4f1fc55415badbb827956d38e8ca3e7167a5d8
Status: Downloaded newer image for adminer:latest
```

```
yakdd@yddux: ~  
yakdd@yddux: ~  
yakdd@yddux: $ docker ps  
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                               NAMES  
d9bd817f8e23   adminer   "entrypoint.sh php -..." 34 minutes ago Up 33 minutes 0.0.0.0:8080->8080/tcp, :::8080->8080/tcp   inspiring_jepsen  
4bd0d60b9978   postgres "docker-entrypoint.s..." 43 minutes ago Up 42 minutes 5432/tcp                               task4-postgres  
yakdd@yddux: $ docker ps -a  
CONTAINER ID   IMAGE     COMMAND                  CREATED        STATUS        PORTS                               NAMES  
d9bd817f8e23   adminer   "entrypoint.sh php -..." 34 minutes ago Up 33 minutes 0.0.0.0:8080->8080/tcp, :::8080->8080/tcp   inspiring_jepsen  
4bd0d60b9978   postgres "docker-entrypoint.s..." 43 minutes ago Up 42 minutes 5432/tcp                               task4-postgres  
941f8e9cd371   phpmyadmin/phpmyadmin "docker-entrypoint.s..." About an hour ago Exited (0) 29 seconds ago task3-phpadmin  
1f435852607e   mariadb:10.10.2 "docker-entrypoint.s..." 2 hours ago Exited (0) 10 seconds ago homework3  
4b33835c5baf   ubuntu   "bash"                  31 hours ago Exited (0) 31 hours ago mystifying_chate  
let  
yakdd@yddux: $ docker exec -it task4-postgres bash  
root@4bd0d60b9978:/# ls -l  
total 56  
lrwxrwxrwx 1 root root 7 Jul 3 00:00 bin -> usr/bin  
drwxr-xr-x 2 root root 4096 Mar 2 13:55 boot  
drwxr-xr-x 5 root root 340 Jul 12 21:29 dev  
drwxr-xr-x 2 root root 4096 Jul 4 02:06 docker-entrypoint-initdb.d  
drwxr-xr-x 1 root root 4096 Jul 12 21:29 etc  
drwxr-xr-x 2 root root 4096 Mar 2 13:55 home  
lrwxrwxrwx 1 root root 7 Jul 3 00:00 lib -> usr/lib  
lrwxrwxrwx 1 root root 9 Jul 3 00:00 lib32 -> usr/lib32  
lrwxrwxrwx 1 root root 9 Jul 3 00:00 lib64 -> usr/lib64  
lrwxrwxrwx 1 root root 10 Jul 3 00:00 libx32 -> usr/libx32  
drwxr-xr-x 2 root root 4096 Jul 3 00:00 media  
drwxr-xr-x 2 root root 4096 Jul 3 00:00 mnt  
drwxr-xr-x 2 root root 4096 Jul 3 00:00 opt  
dr-xr-xr-x 305 root root 0 Jul 12 21:29 proc  
drwx----- 1 root root 4096 Jul 4 02:06 root  
drwxr-xr-x 1 root root 4096 Jul 4 02:14 run  
lrwxrwxrwx 1 root root 8 Jul 3 00:00 sbin -> usr/sbin  
drwxr-xr-x 2 root root 4096 Jul 3 00:00 srv  
dr-xr-xr-x 13 root root 0 Jul 12 21:29 sys  
drwxrwxrwt 1 root root 4096 Jul 4 02:14 tmp  
drwxr-xr-x 1 root root 4096 Jul 3 00:00 usr  
drwxr-xr-x 1 root root 4096 Jul 3 00:00 var  
root@4bd0d60b9978:/#
```

Схема: task4 - db - Adminer

localhost:8080/?pgsql=db&username=postgres&db=postgres&ns=task4

Язык: Русский

PostgreSQL » db » postgres » Схема: task4

Выйти

Adminer 4.8.1

DB: postgres

Схема: task4

information_schema

pg_catalog

pg_toast

public

task4

Создана новая схема. 22:31:40 SQL-запрос

Изменить схему

Схема базы данных

Таблицы и представления

В базе данных нет таблиц.

Создать таблицу

Создать представление

Хранимые процедуры и функции

Создать функцию

«Последовательности»

Создать «последовательность»

Типы пользователей

Создать тип