

MySQL

Część II - Workbench

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1. Instalacja serwera MySQL

```
pp@custom-server:~$ sudo apt install mysql-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  linux-headers-5.4.0-91 linux-headers-5.4.0-91-generic linux-image-5.4.0-91-generic
  linux-modules-5.4.0-91-generic linux-modules-extra-5.4.0-91-generic
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  libcgi-fast-perl libcgi-pm-perl libevent-core-2.1-7 libevent-pthreads-2.1-7 libfcgi-perl
  libhtml-template-perl libmecab2 mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0
  mysql-client-core-8.0 mysql-server-8.0 mysql-server-core-8.0
Suggested packages:
  libipc-sharedcache-perl mailx tinyca
The following NEW packages will be installed:
  libcgi-fast-perl libcgi-pm-perl libevent-core-2.1-7 libevent-pthreads-2.1-7 libfcgi-perl
  libhtml-template-perl libmecab2 mecab-ipadic mecab-ipadic-utf8 mecab-utils mysql-client-8.0
  mysql-client-core-8.0 mysql-server mysql-server-8.0 mysql-server-core-8.0
0 upgraded, 15 newly installed, 0 to remove and 0 not upgraded.
Need to get 31.1 MB of archives.
After this operation, 261 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
```

```
pp@custom-server:~$ sudo mysql_secure_installation

Securing the MySQL server deployment.

Connecting to MySQL using a blank password.

VALIDATE PASSWORD COMPONENT can be used to test passwords
and improve security. It checks the strength of password
and allows the users to set only those passwords which are
secure enough. Would you like to setup VALIDATE PASSWORD component?

Press y|Y for Yes, any other key for No: y

There are three levels of password validation policy:

LOW      Length ≥ 8
MEDIUM  Length ≥ 8, numeric, mixed case, and special characters
STRONG Length ≥ 8, numeric, mixed case, special characters and dictionary

Please enter 0 = LOW, 1 = MEDIUM and 2 = STRONG: 2
Please set the password for root here.

New password:

Re-enter new password:
```

```
pp@custom-server: ~  
Estimated strength of the password: 100  
Do you wish to continue with the password provided?(Press y|Y for Yes, any other key for No) : y  
By default, a MySQL installation has an anonymous user,  
allowing anyone to log into MySQL without having to have  
a user account created for them. This is intended only for  
testing, and to make the installation go a bit smoother.  
You should remove them before moving into a production  
environment.  
  
Remove anonymous users? (Press y|Y for Yes, any other key for No) : y  
Success.  
  
Normally, root should only be allowed to connect from  
'localhost'. This ensures that someone cannot guess at  
the root password from the network.  
  
Disallow root login remotely? (Press y|Y for Yes, any other key for No) : n  
  
... skipping.  
By default, MySQL comes with a database named 'test' that  
anyone can access. This is also intended only for testing,  
and should be removed before moving into a production  
environment.
```

```
pp@custom-server: ~  
Success.  
  
Normally, root should only be allowed to connect from  
'localhost'. This ensures that someone cannot guess at  
the root password from the network.  
  
Disallow root login remotely? (Press y|Y for Yes, any other key for No) : n  
  
... skipping.  
By default, MySQL comes with a database named 'test' that  
anyone can access. This is also intended only for testing,  
and should be removed before moving into a production  
environment.  
  
Remove test database and access to it? (Press y|Y for Yes, any other key for No) : n  
  
... skipping.  
Reloading the privilege tables will ensure that all changes  
made so far will take effect immediately.  
  
Reload privilege tables now? (Press y|Y for Yes, any other key for No) : y  
Success.  
  
All done!  
pp@custom-server:~$ |
```

- Zmiana ustawień zapory

```
pp@custom-server: ~$ sudo ufw allow mysql
Rules updated
Rules updated (v6)
pp@custom-server: ~$
```

- Zmiana hasła dla danego użytkownika

```
pp@custom-server: ~$ sudo mysql -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 24
Server version: 8.0.28-0ubuntu0.20.04.3 (Ubuntu)

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

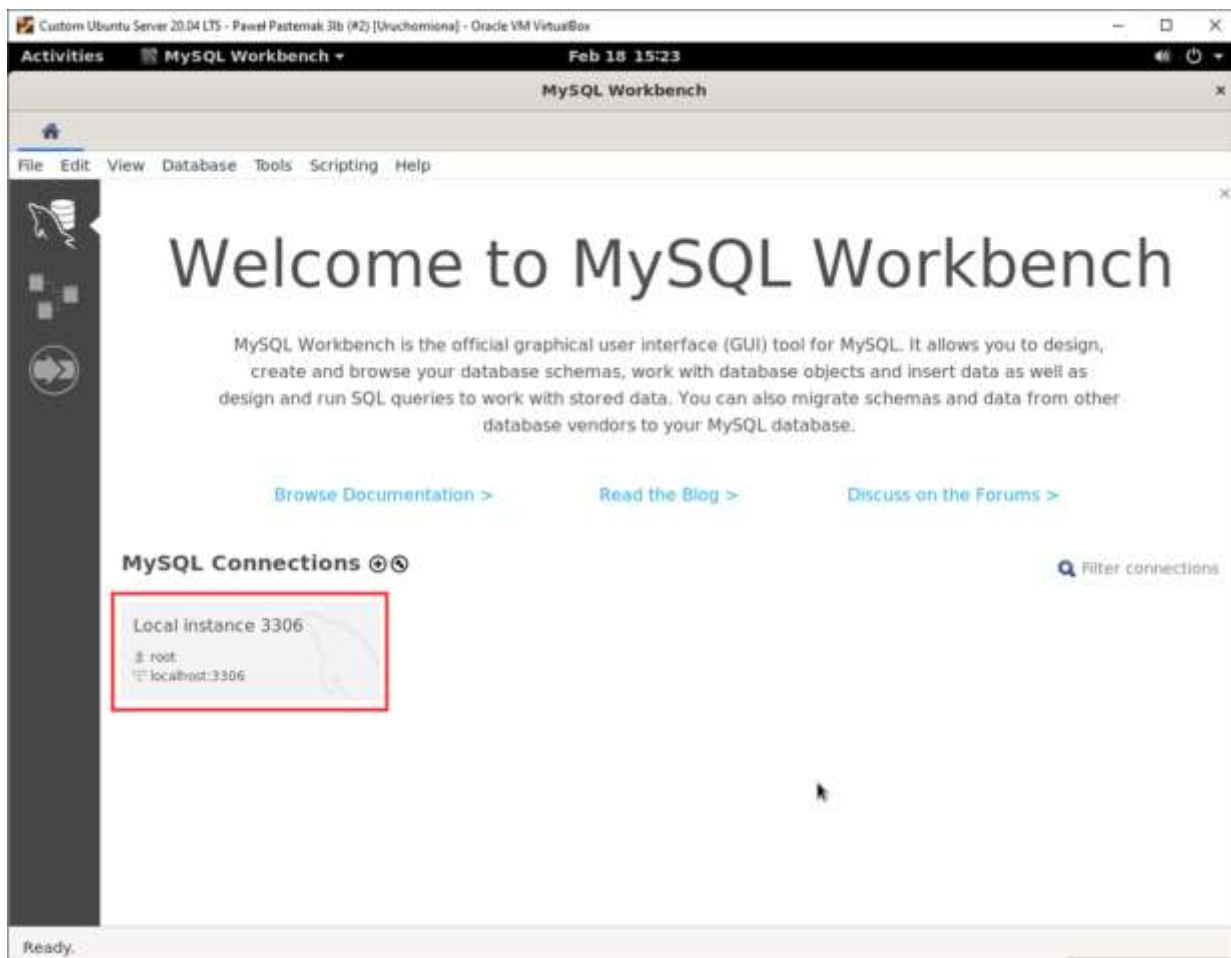
mysql> ALTER USER 'root'@'localhost' IDENTIFIED BY 'ZAQ!2wsx'; Nowe hasło
Query OK, 0 rows affected (0.00 sec)

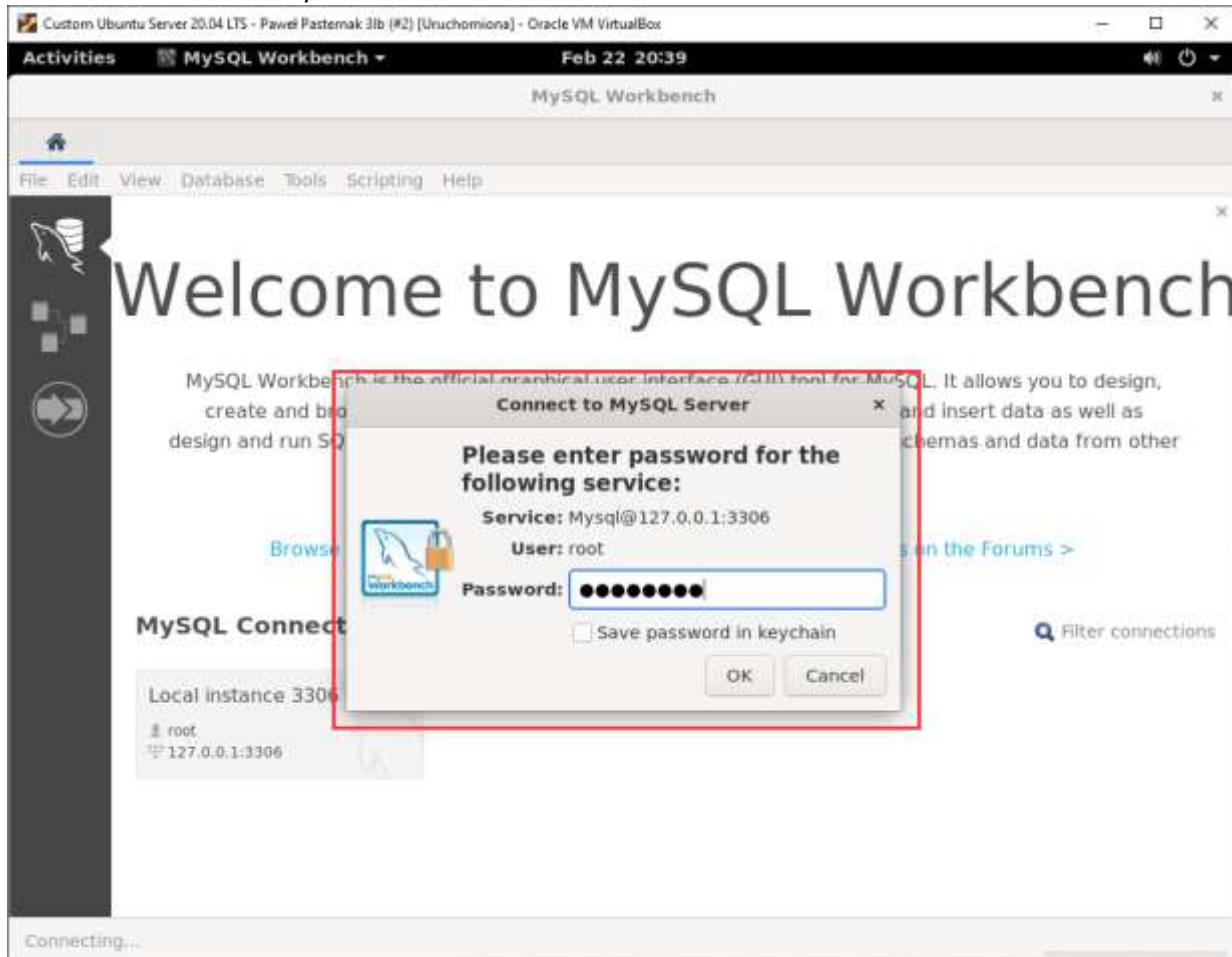
mysql> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.00 sec)

mysql>
```

2. Instalacja MySQL Workbench i pierwsze logowanie

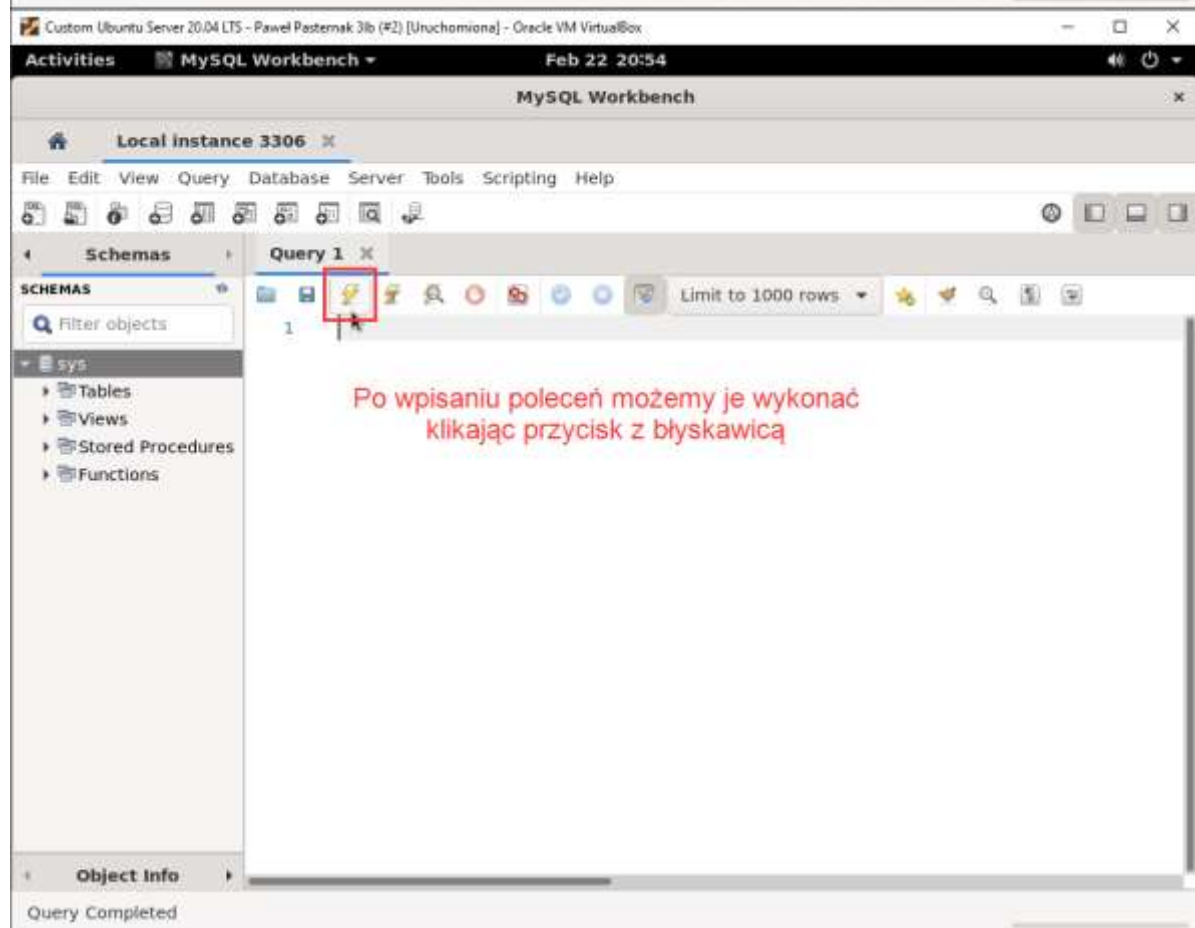
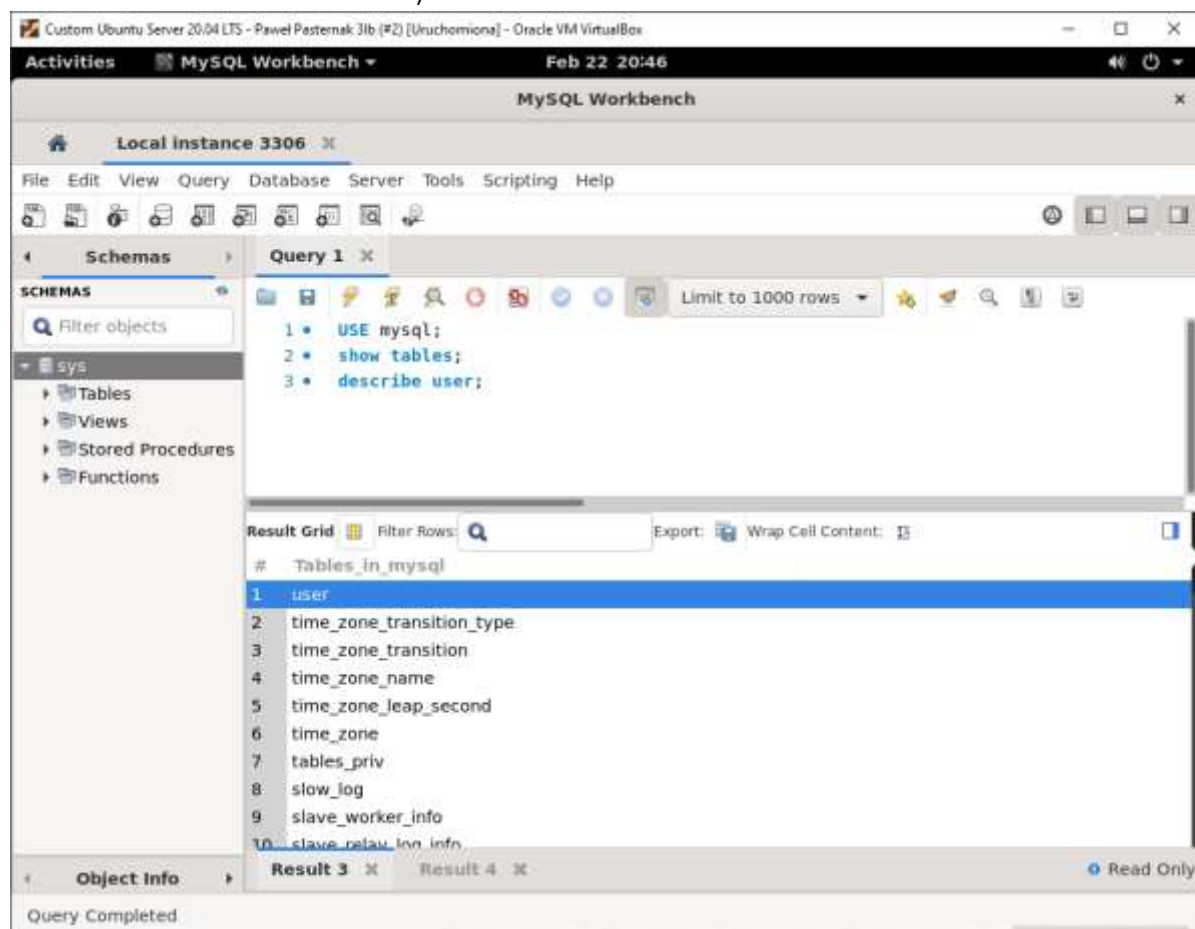
```
pp@custom-server:~$ sudo snap install mysql-workbench-community
snap "mysql-workbench-community" is already installed, see 'snap help refresh'
pp@custom-server:~$ sudo snap connect mysql-workbench-community:password-manager-service
pp@custom-server:~$ sudo snap connect mysql-workbench-community:ssh-keys
pp@custom-server:~$ sudo snap connect mysql-workbench-community:cups-control
pp@custom-server:~$ |
```





3. Wyświetlenie informacji za pomocą kwerend:

- tabele w bazie danych



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- opcje użytkownika

The screenshot shows the MySQL Workbench interface. The 'Query 1' tab is active, displaying the following SQL query:

```
1 • USE mysql;
2 • show tables;
3 • describe user;
```

The 'Result Grid' shows the output of the 'describe user;' query, listing the privileges for the 'user' table in the 'mysql' database. The table has 16 columns: #, Field, Type, Null, Key, Default, and Extra. The rows show various privileges like Create_priv, Drop_priv, Reload_priv, etc.

#	Field	Type	Null	Key	Default	Extra
7	Create_priv	enum('N','Y')	NO		N	
8	Drop_priv	enum('N','Y')	NO		N	
9	Reload_priv	enum('N','Y')	NO		N	
10	Shutdown_priv	enum('N','Y')	NO		N	
11	Process_priv	enum('N','Y')	NO		N	
12	File_priv	enum('N','Y')	NO		N	
13	Grant_priv	enum('N','Y')	NO		N	
14	References_priv	enum('N','Y')	NO		N	
15	Index_priv	enum('N','Y')	NO		N	
16	Alter_priv	enum('N','Y')	NO		N	

- lista użytkowników

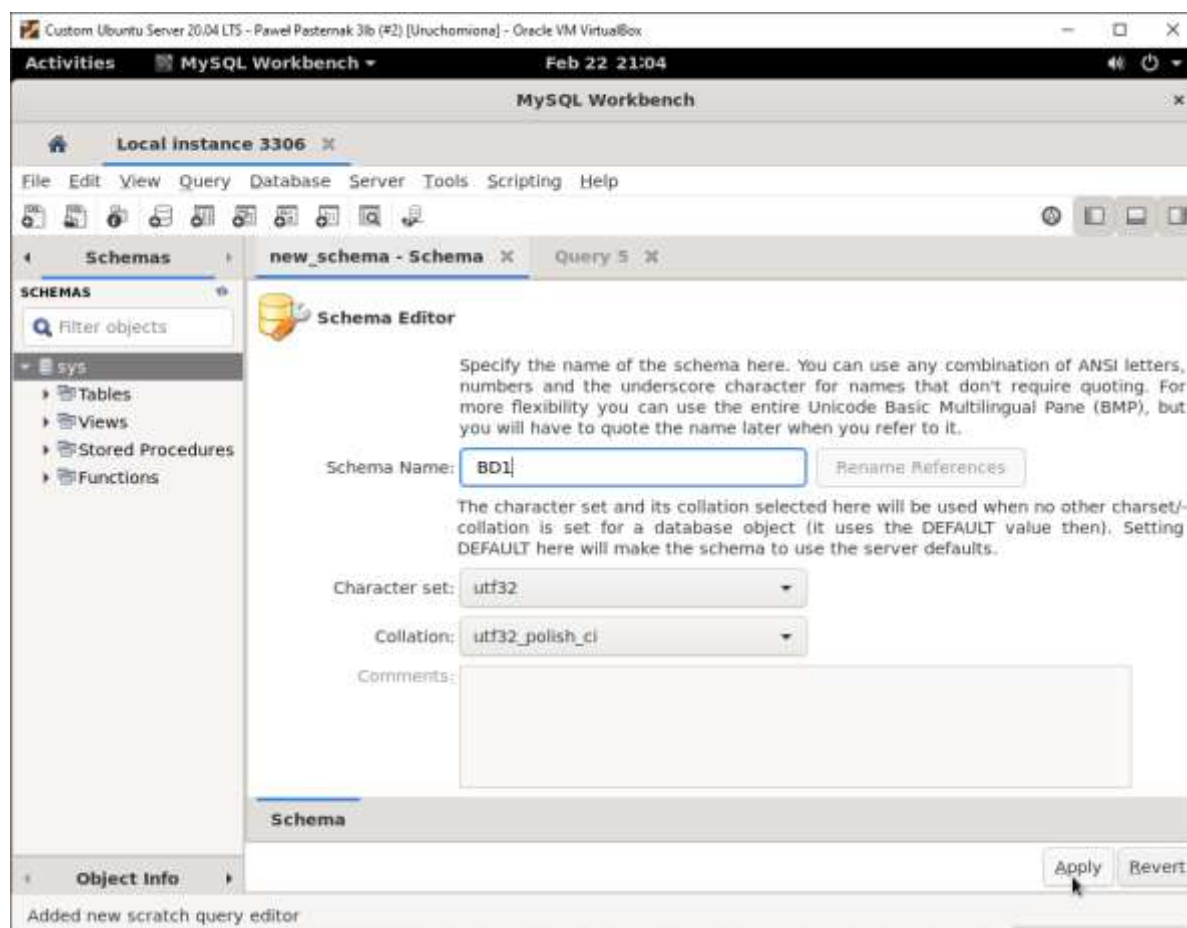
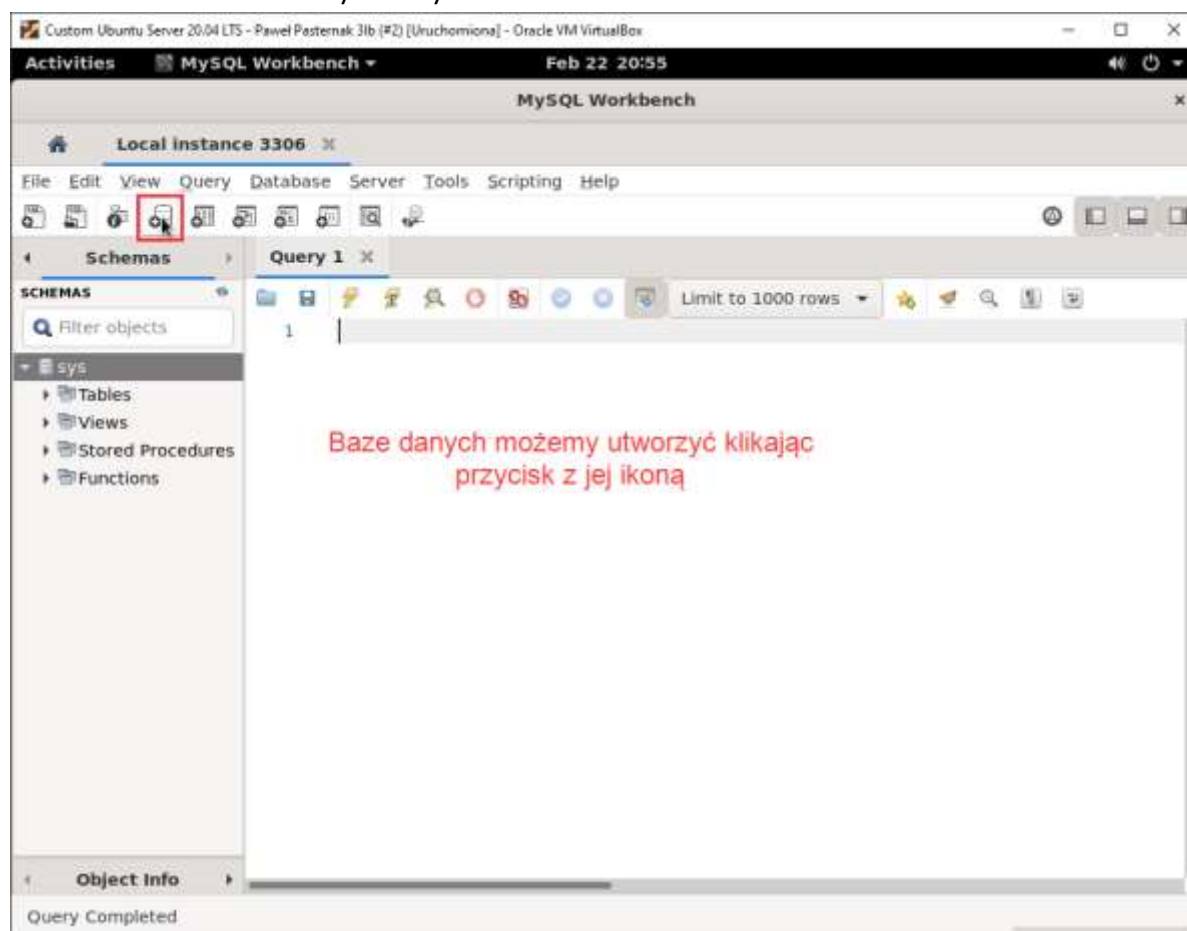
The screenshot shows the MySQL Workbench interface. The 'Query 1' tab is active, displaying the following SQL query:

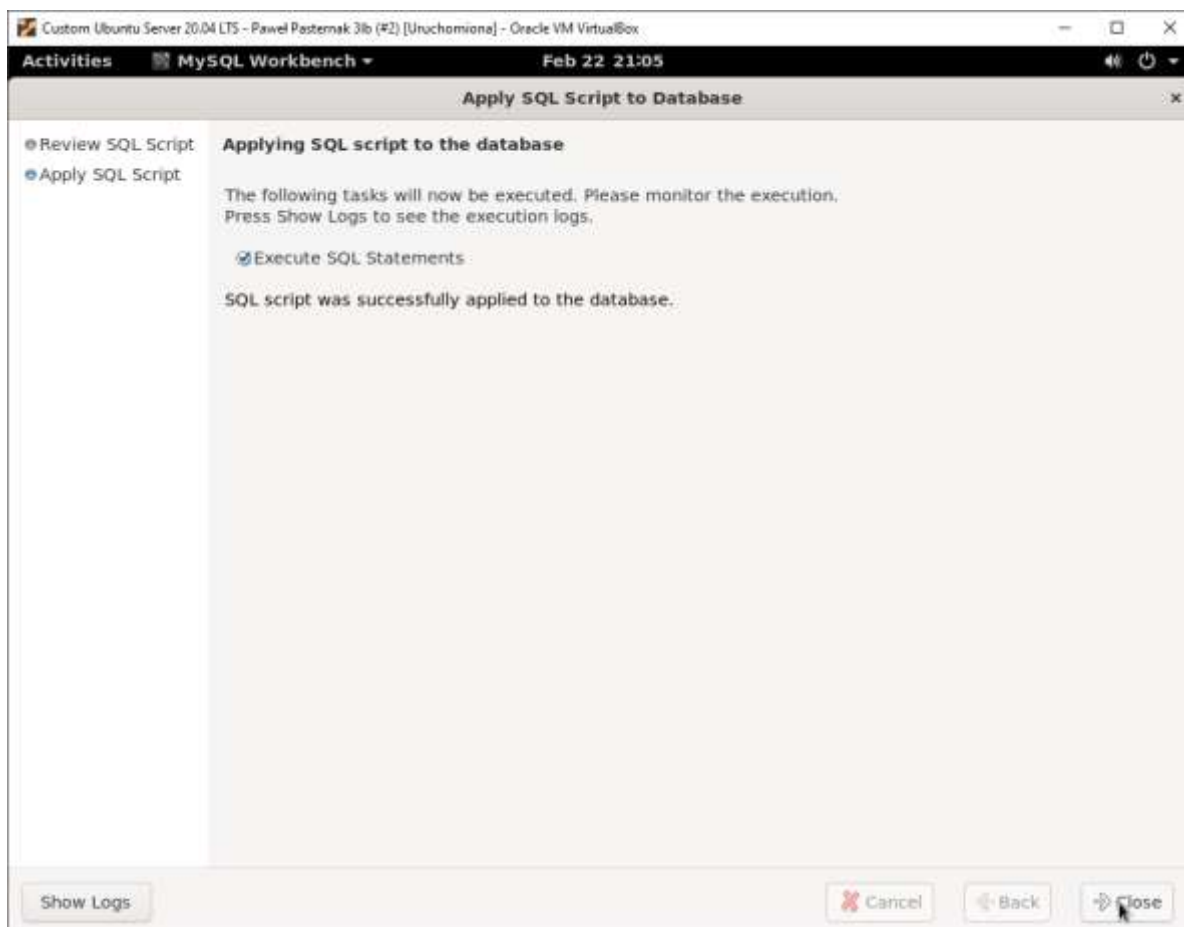
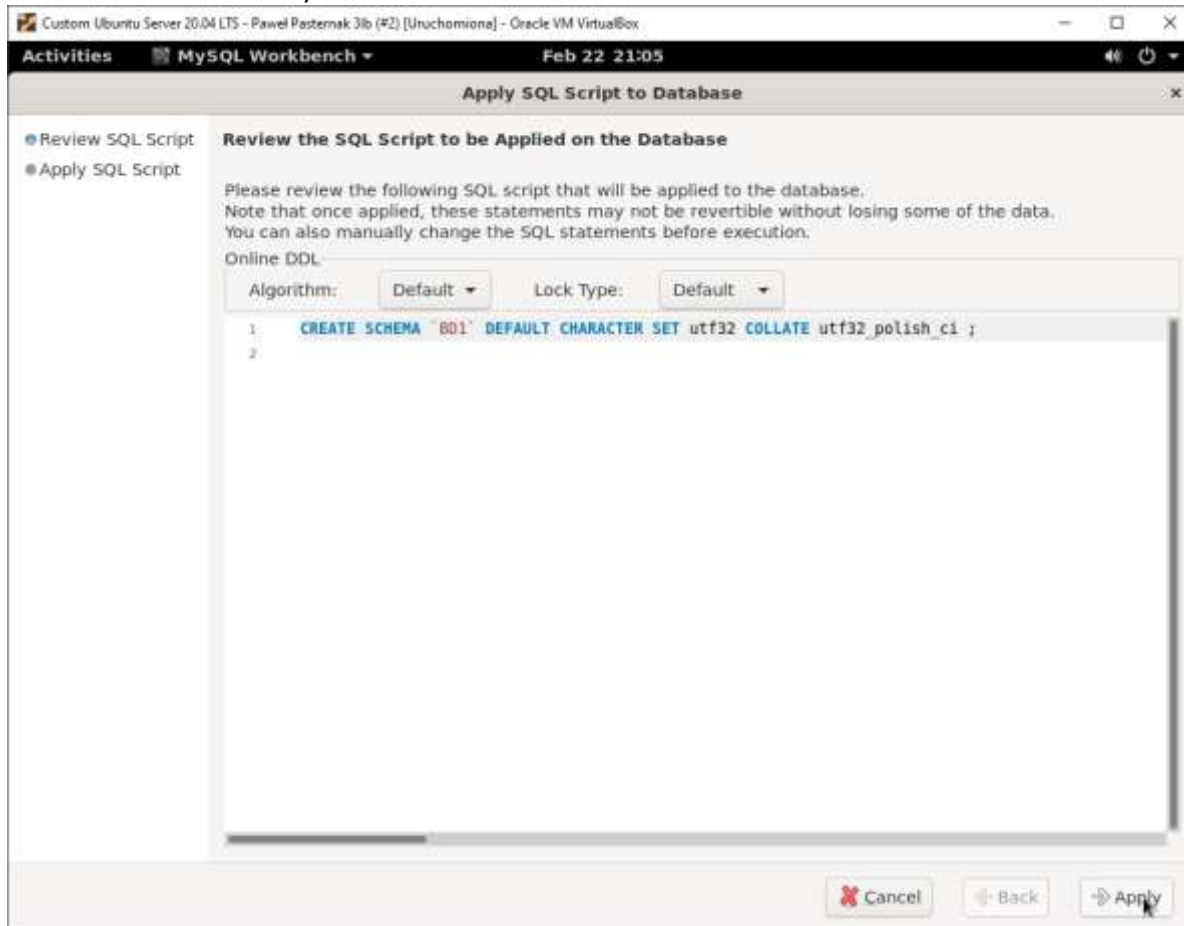
```
1 • select * from user;
```

The 'Result Grid' shows the output of the 'select * from user;' query, listing the users and their privileges. The table has 10 columns: #, Host, User, Select_priv, Insert_priv, Update_priv, Delete_priv, Create_priv, Drop_priv, and Repl_priv. The rows show users like 'debian-sys-maint', 'mysql.infoschema', 'mysql.session', 'mysql.sys', and 'root'.

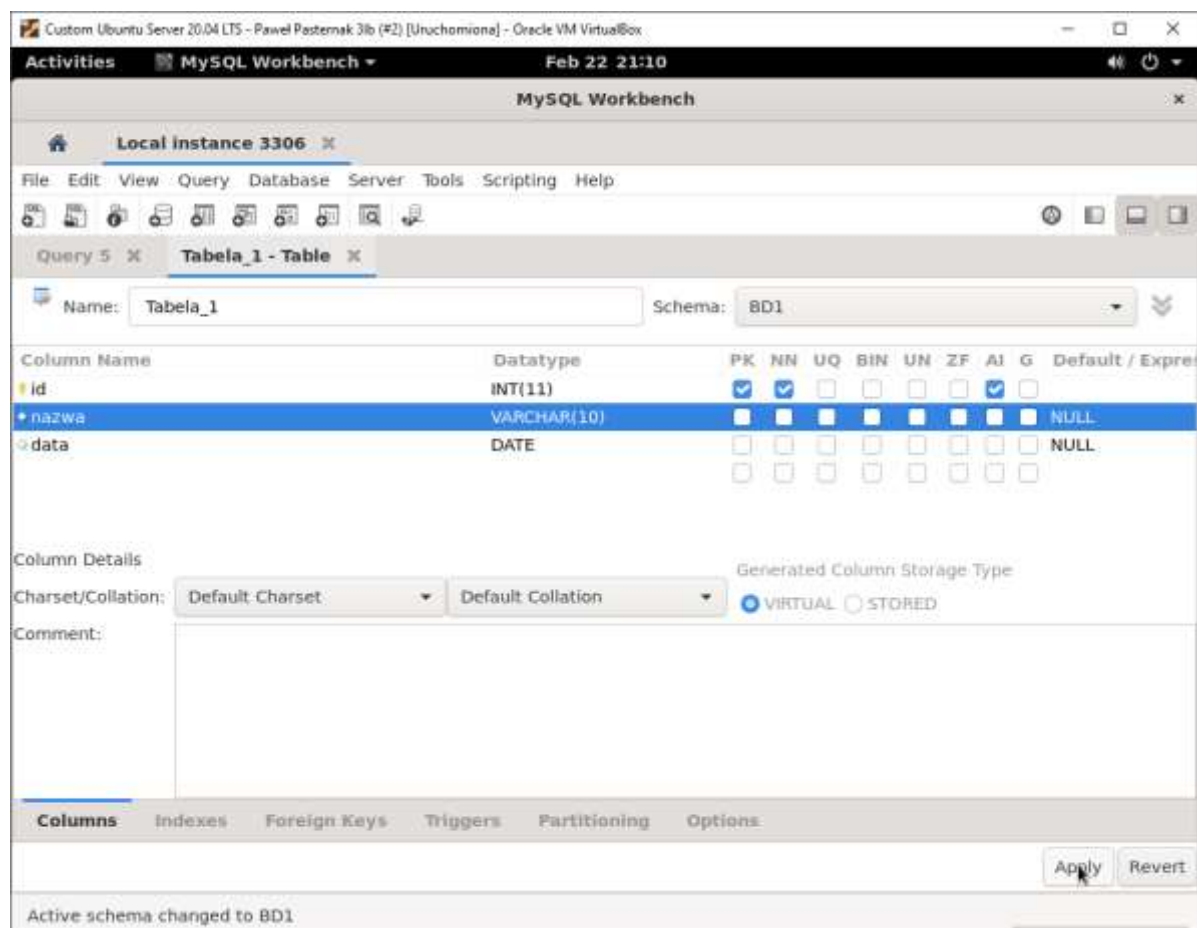
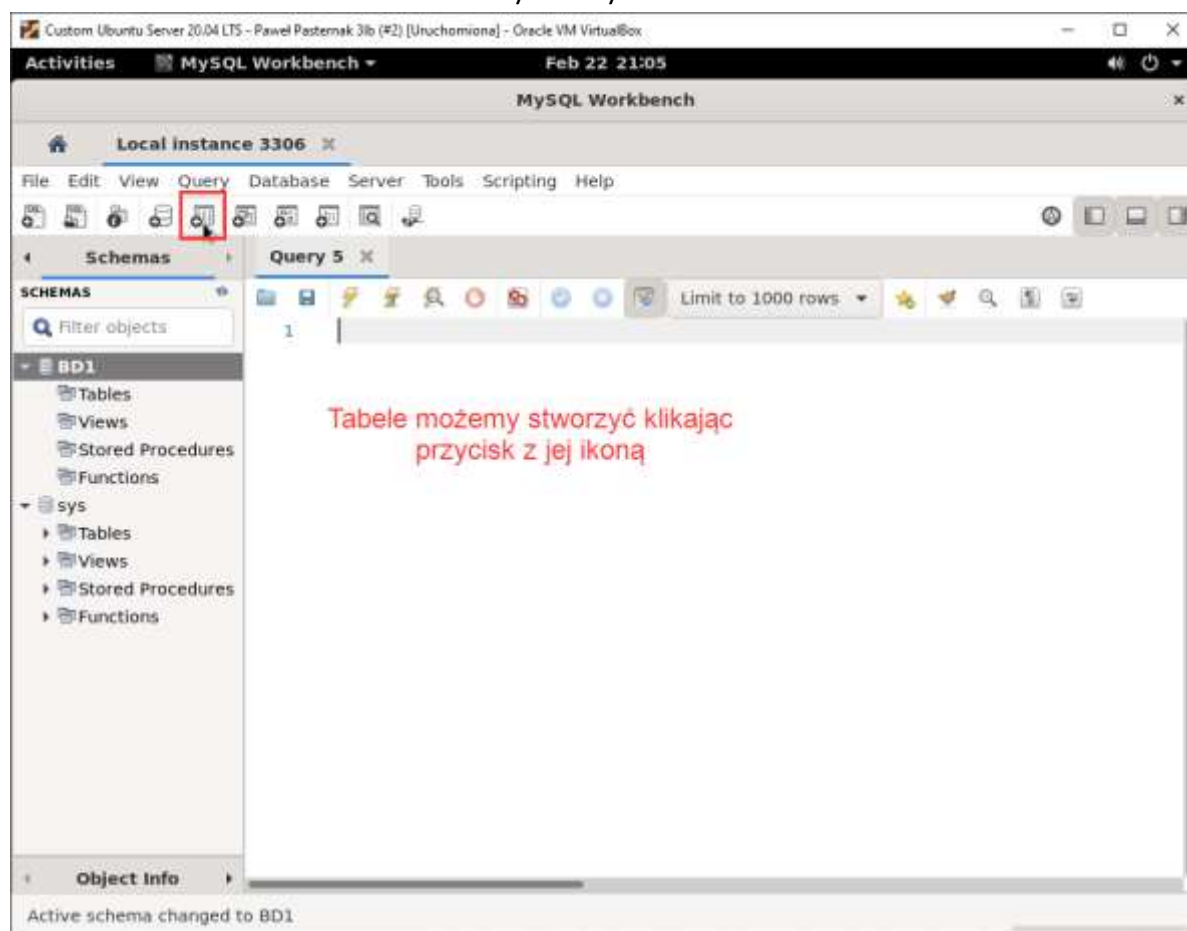
#	Host	User	Select_priv	Insert_priv	Update_priv	Delete_priv	Create_priv	Drop_priv	Repl_priv
1	localhost	debian-sys-maint	Y	Y	Y	Y	Y	Y	Y
2	localhost	mysql.infoschema	Y	N	N	N	N	N	N
3	localhost	mysql.session	N	N	N	N	N	N	N
4	localhost	mysql.sys	N	N	N	N	N	N	N
5	localhost	root	Y	Y	Y	Y	Y	Y	Y
*									

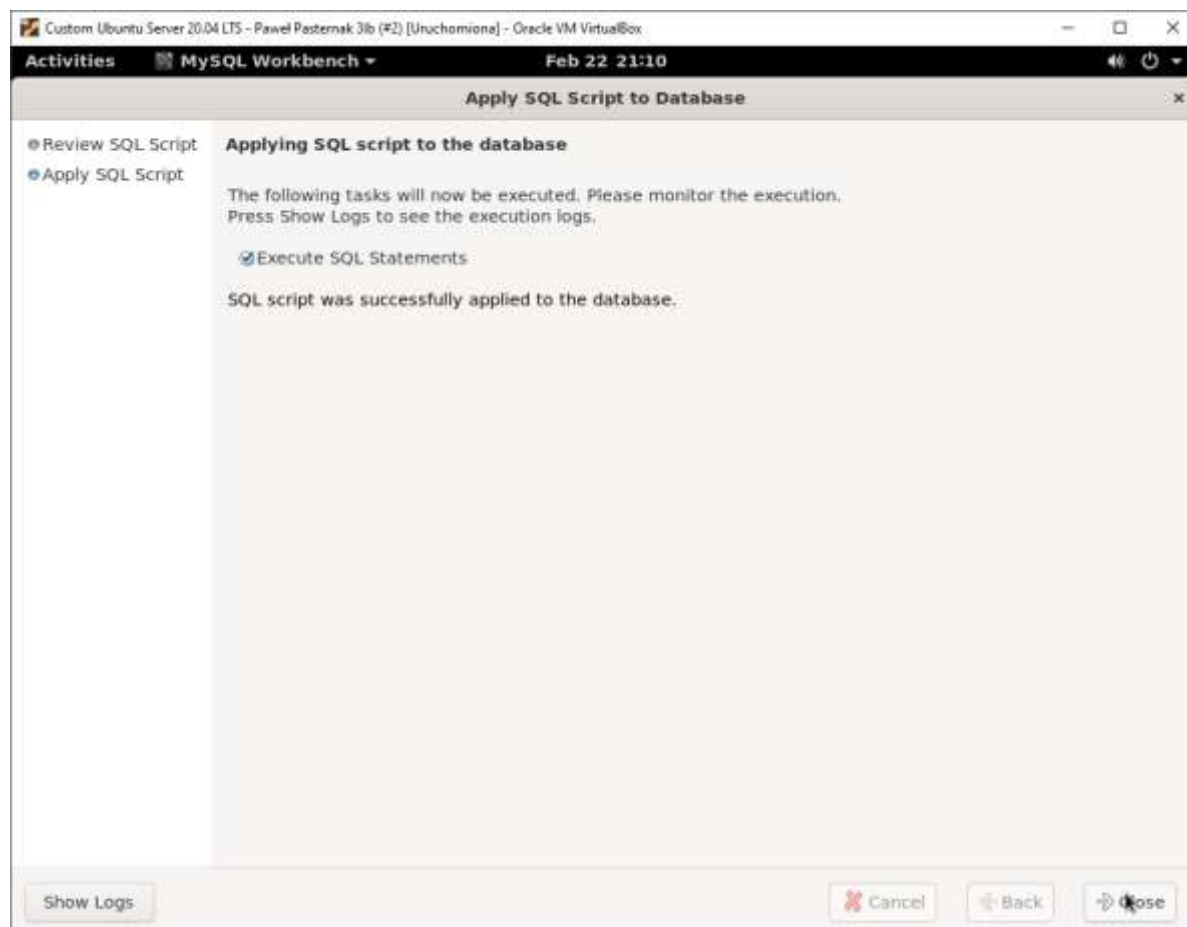
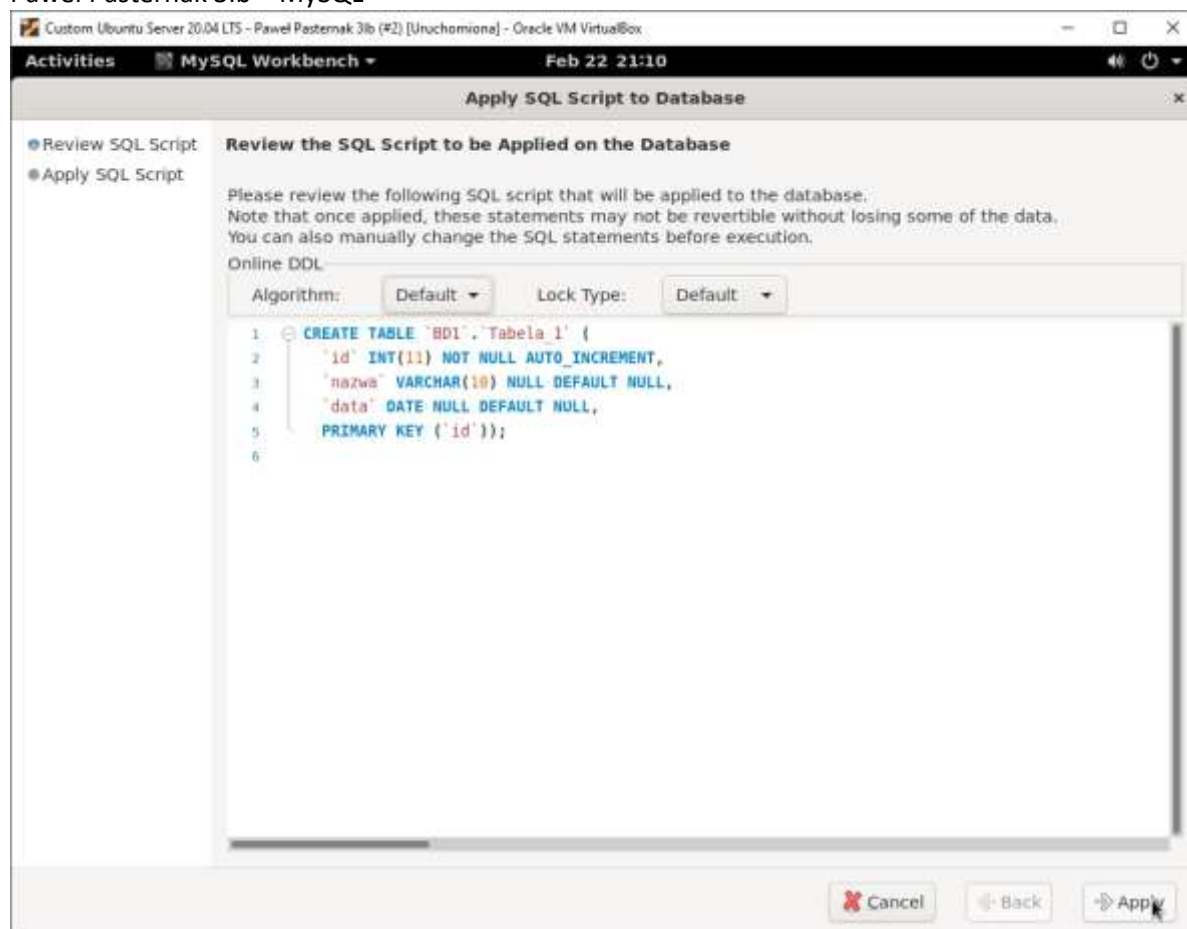
4. Tworzenie bazy danych





5. Dodawanie tabeli do bazy danych





6. Praca z bazą danych

- Pokazanie istniejących w niej tabel i wszystkich w niej danych

The image displays two screenshots of the MySQL Workbench interface, demonstrating database operations.

Top Screenshot: The 'Query 1' tab is active, showing the SQL statement `1 * show tables;`. The 'Schemas' panel on the left shows the database 'BD1' expanded, with 'Tables' selected. The 'Result Grid' displays the output of the query:

#	Tables_in_BD1
1	Tabela_1

The status bar at the bottom indicates 'Query Completed'.

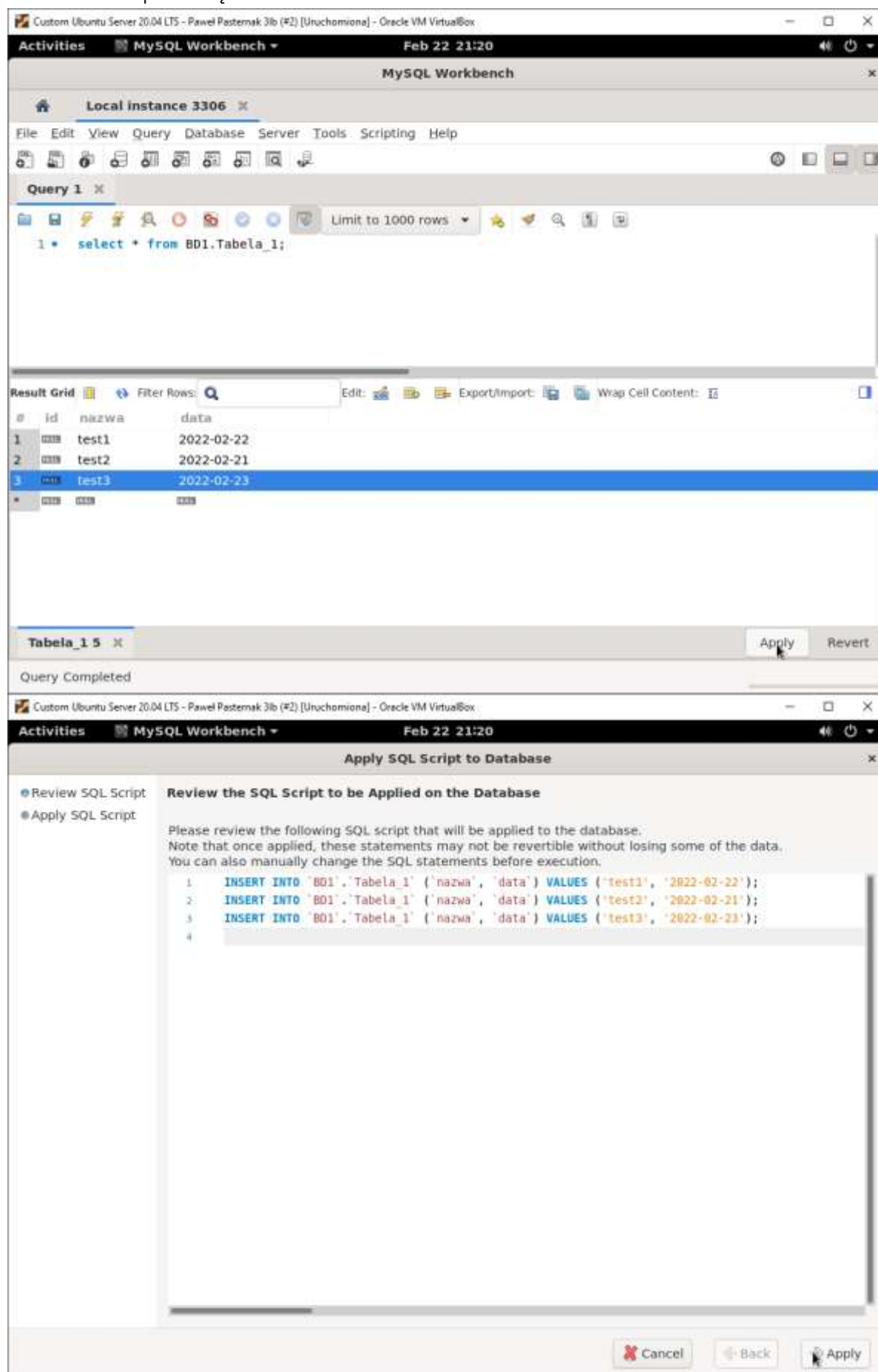
Bottom Screenshot: The 'Query 1' tab is active, showing the SQL statement `1 * select * from BD1.Tabela_1;`. The 'Schemas' panel on the left shows the database 'BD1' expanded, with 'Tables' selected. The 'Result Grid' displays the output of the query:

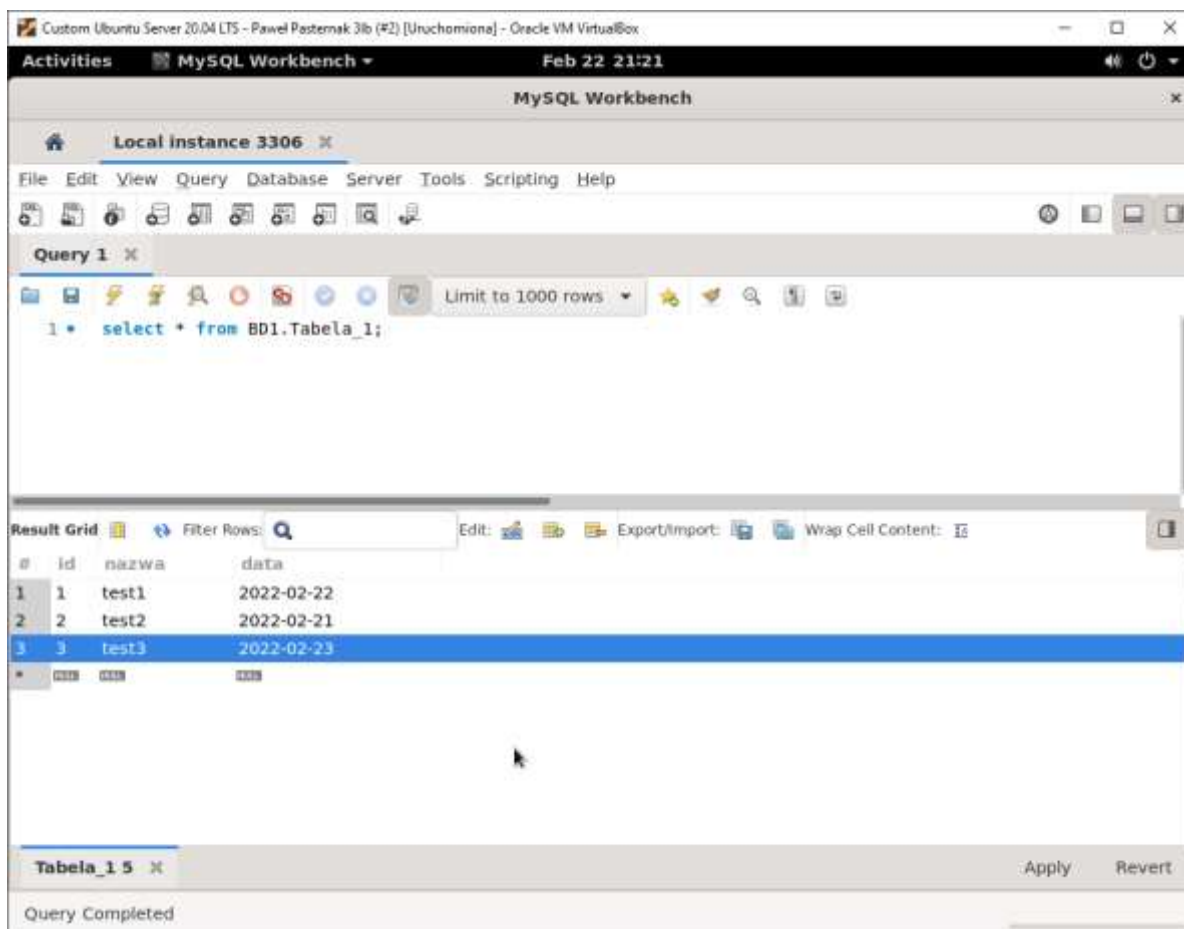
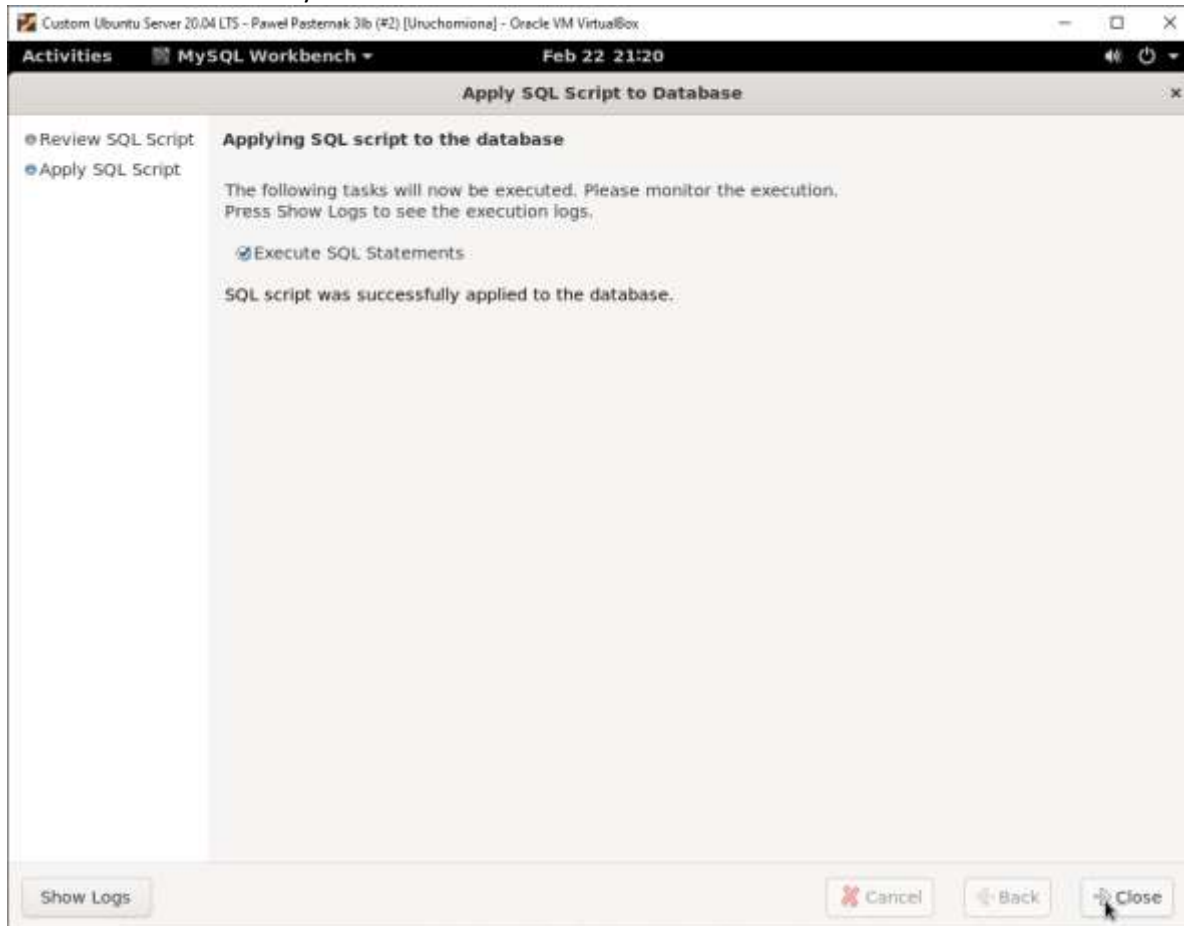
#	id	nazwa data
1	1	1

The status bar at the bottom indicates 'Query Completed'.

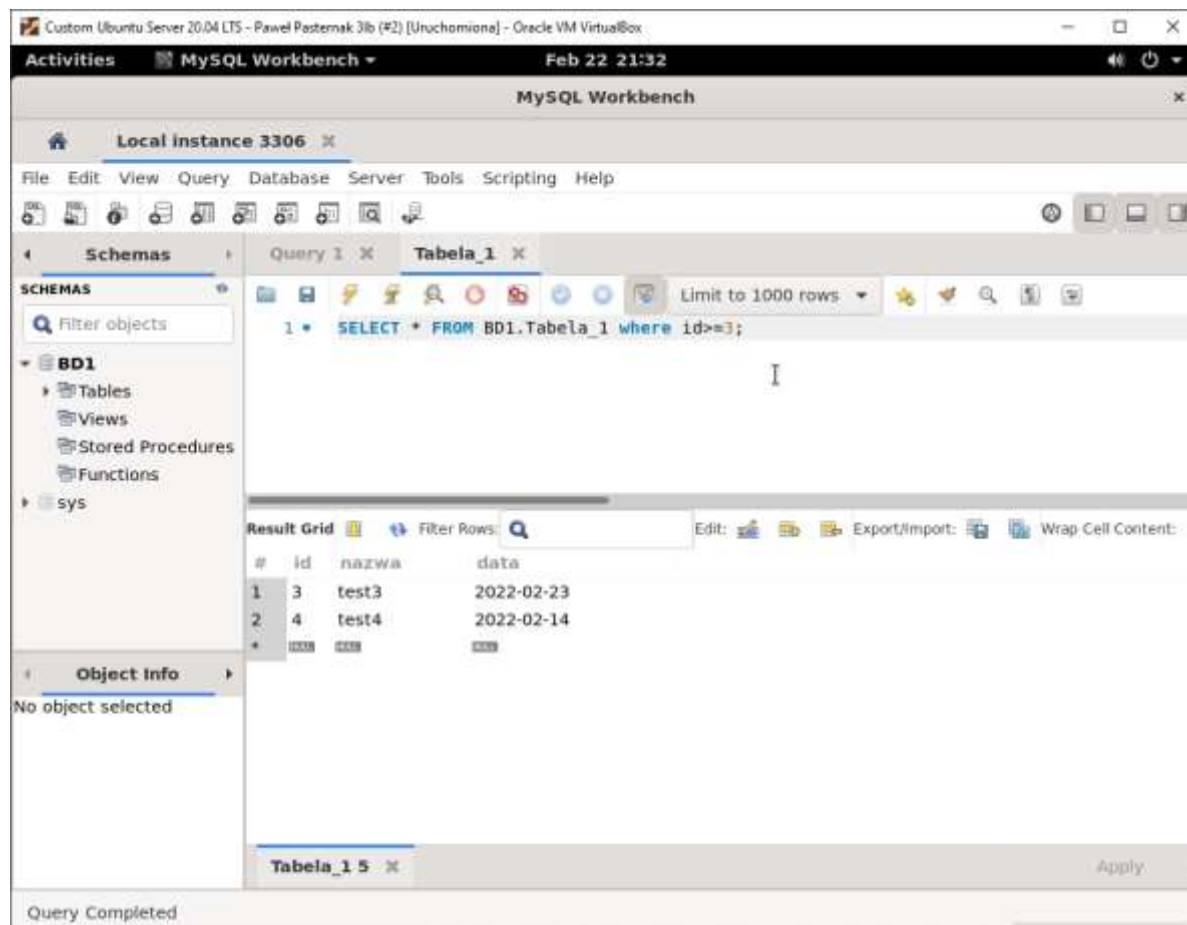
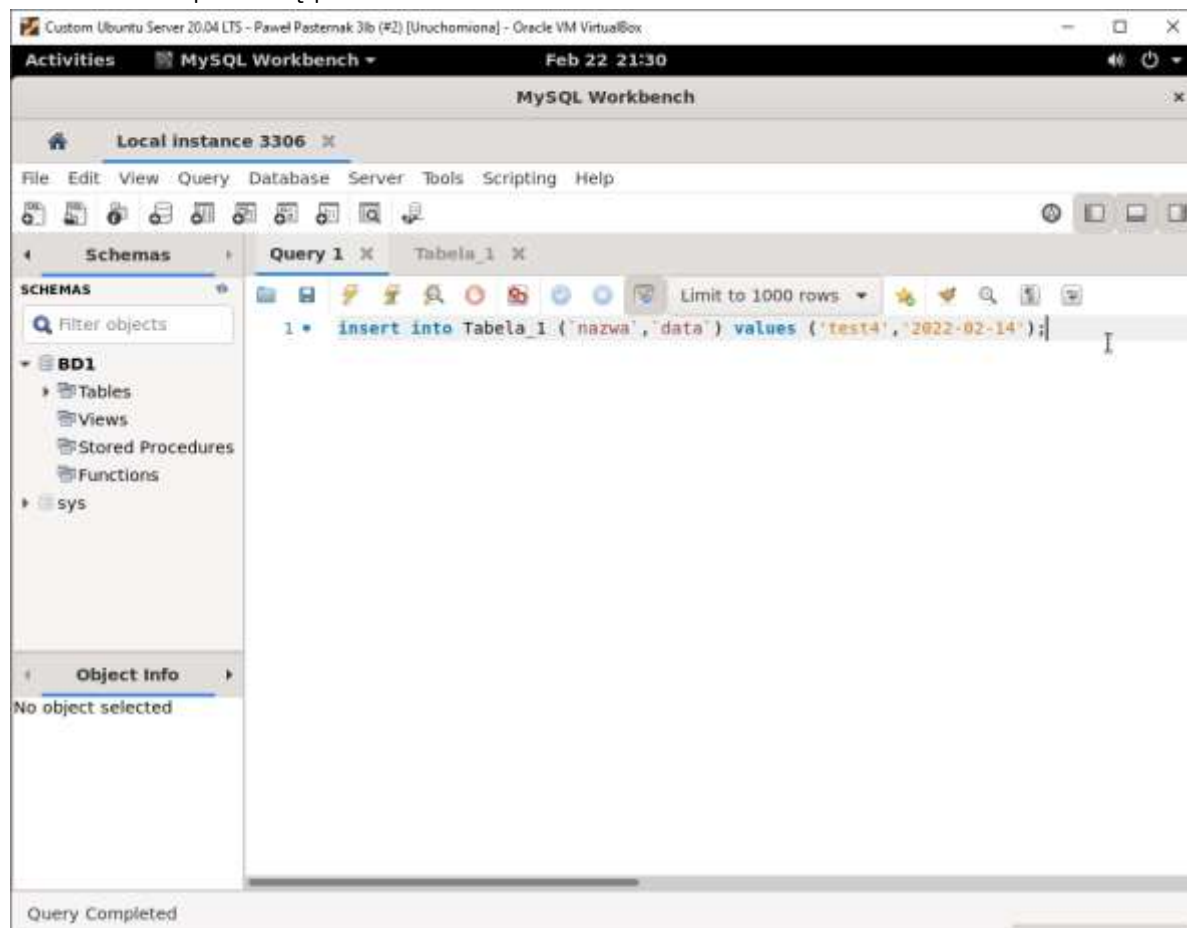
7. Dodawanie rekordów do tabeli

- Za pomocą GUI

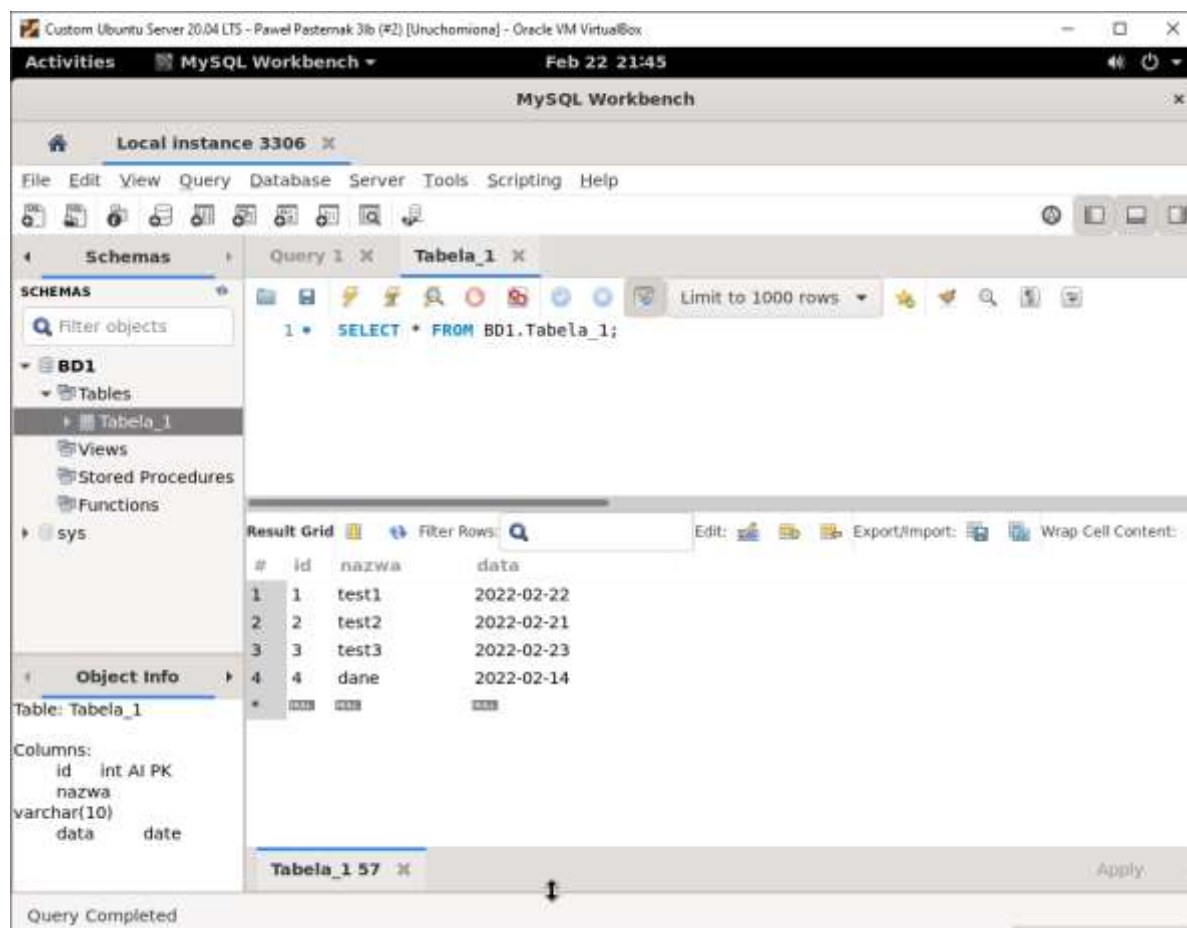
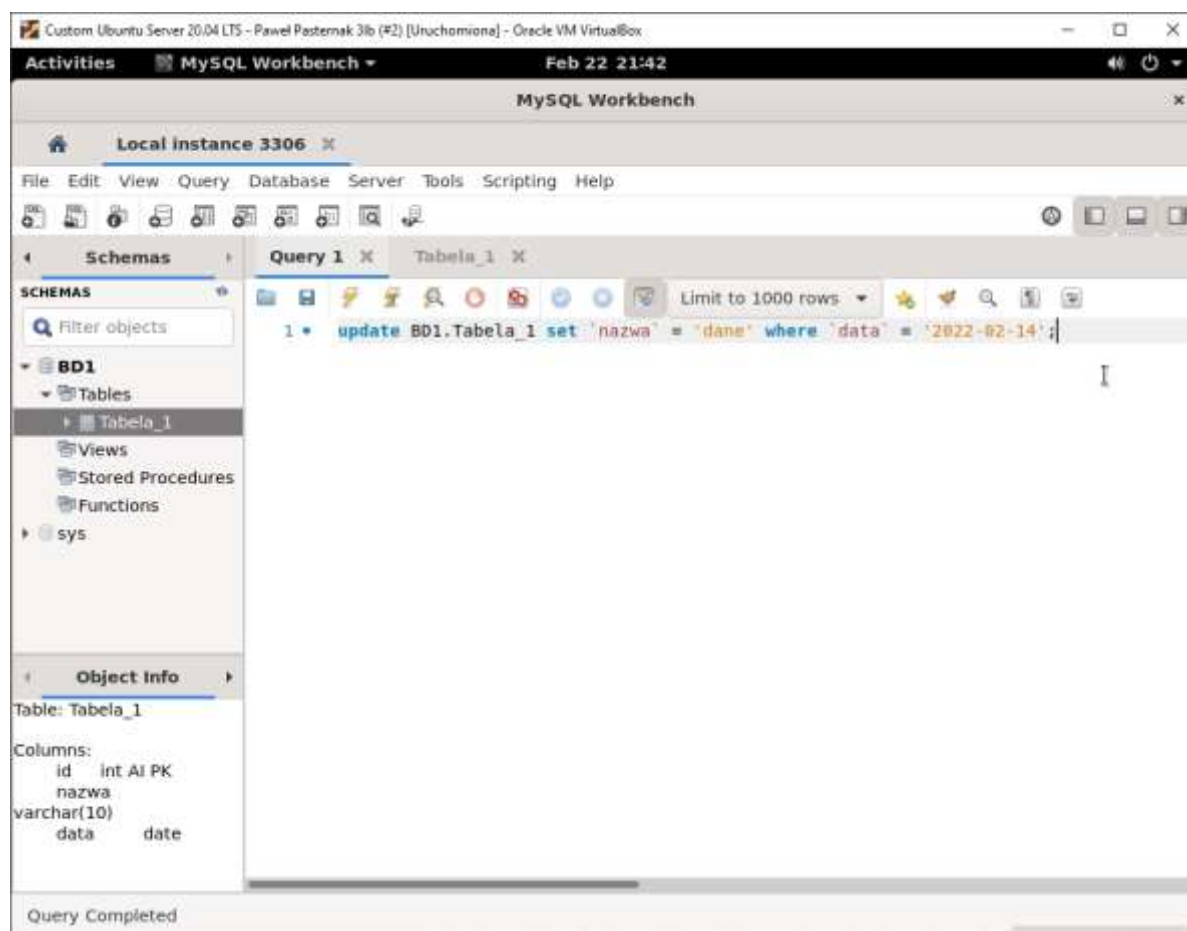




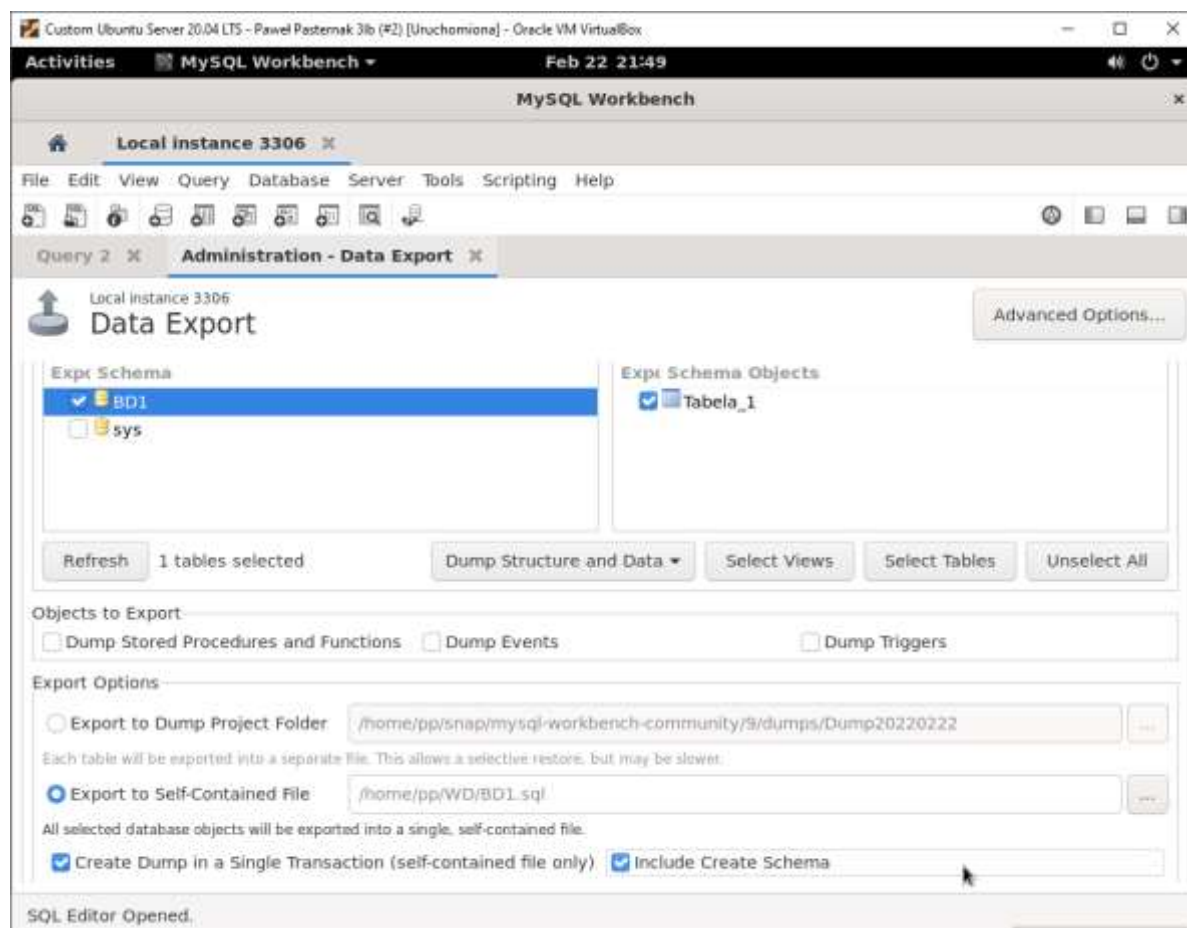
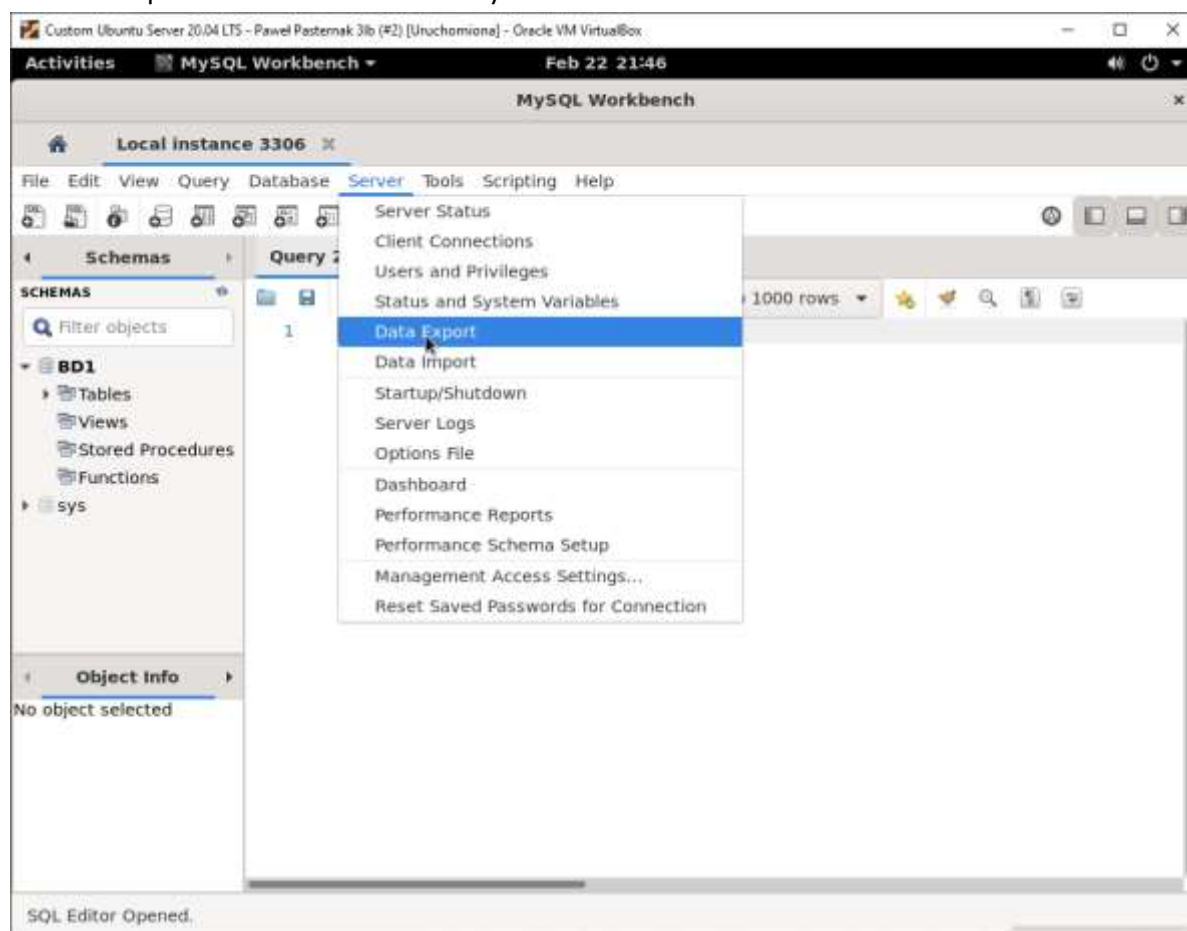
- Za pomocą poleceń



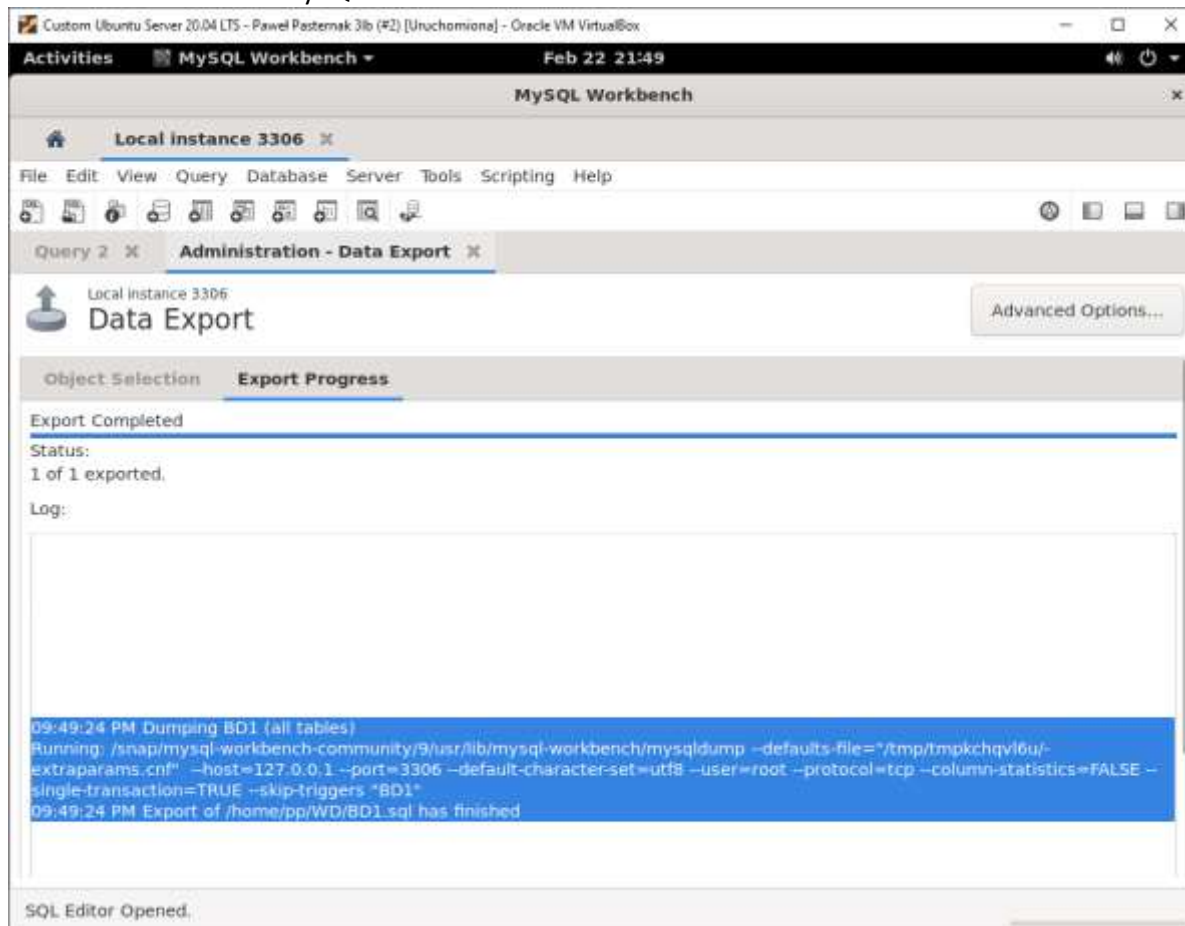
8. Aktualizowanie rekordów w tabeli



9. Eksportowanie baz danych



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- Schemat do utworzenia tabeli:

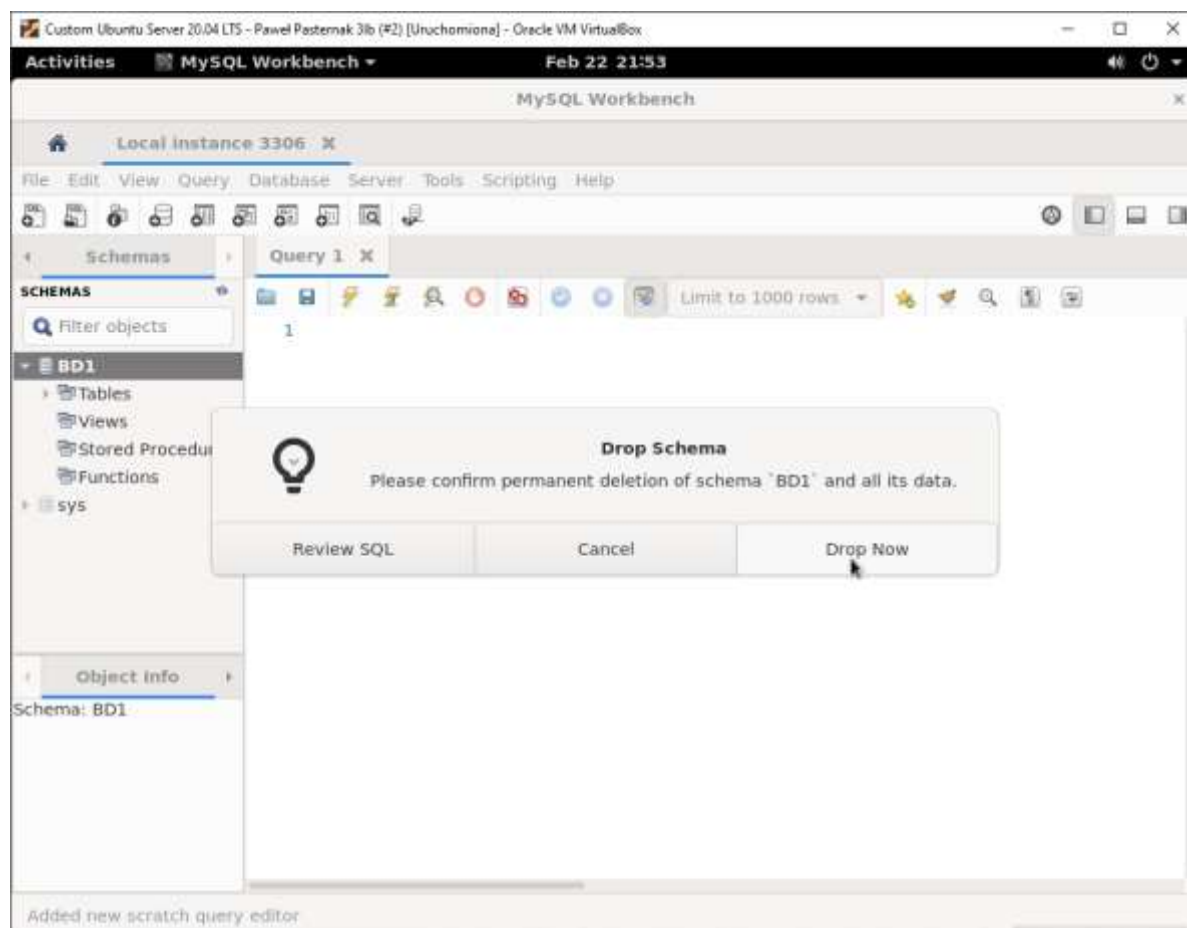
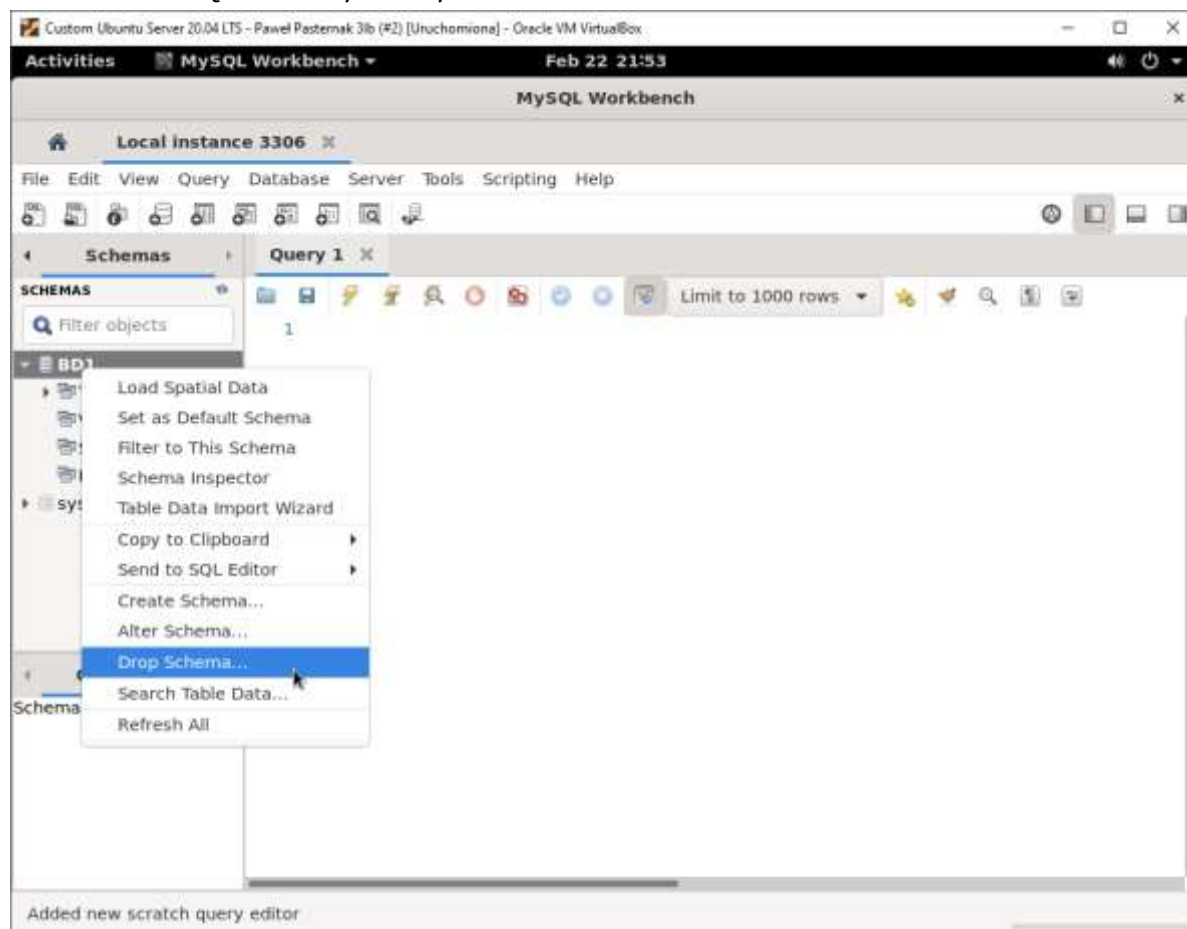
```
pp@custom-server: ~/WT x + -
CREATE DATABASE IF NOT EXISTS `BD1` /*!40100 DEFAULT CHARACTER SET utf32 COLLATE utf32_polish_ci */ /*!180
016 DEFAULT ENCRYPTION='N' */;
USE `BD1`;
MySQL dump 10.13 Distrib 8.0.25, for Linux (x86_64)
--
-- Host: 127.0.0.1 Database: BD1
--
-- Server version      8.0.28-0ubuntu0.20.04.3

/*!40101 SET @OLD_CHARACTER_SET_CLIENT=@@CHARACTER_SET_CLIENT */;
/*!40101 SET @OLD_CHARACTER_SET_RESULTS=@@CHARACTER_SET_RESULTS */;
/*!40101 SET @OLD_COLLATION_CONNECTION=@@COLLATION_CONNECTION */;
/*!50503 SET NAMES utf8 */;
/*!40103 SET @OLD_TIME_ZONE=@@TIME_ZONE */;
/*!40103 SET TIME_ZONE='+00:00' */;
/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0 */;
/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS, FOREIGN_KEY_CHECKS=0 */;
/*!40101 SET @OLD_SQL_MODE=@@SQL_MODE, SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;
/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;

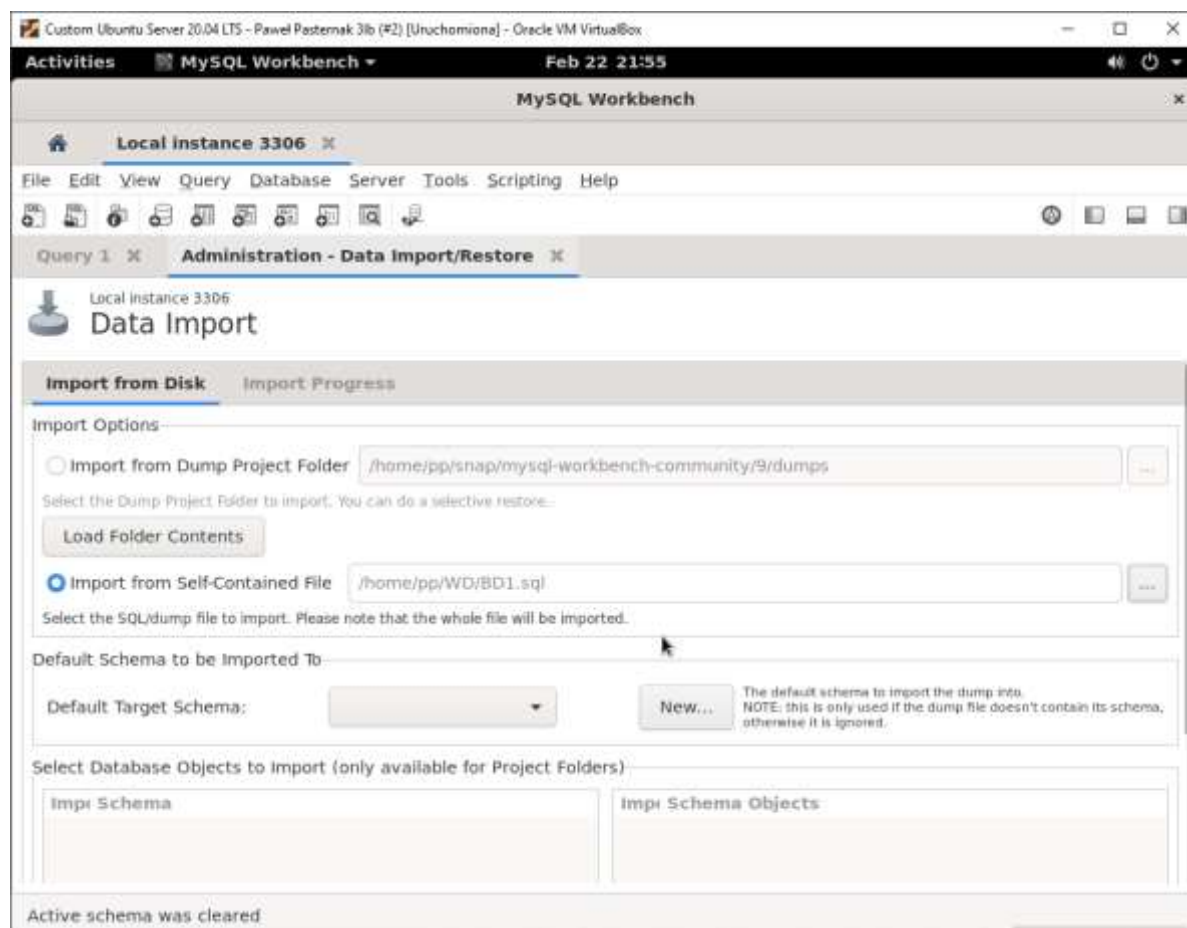
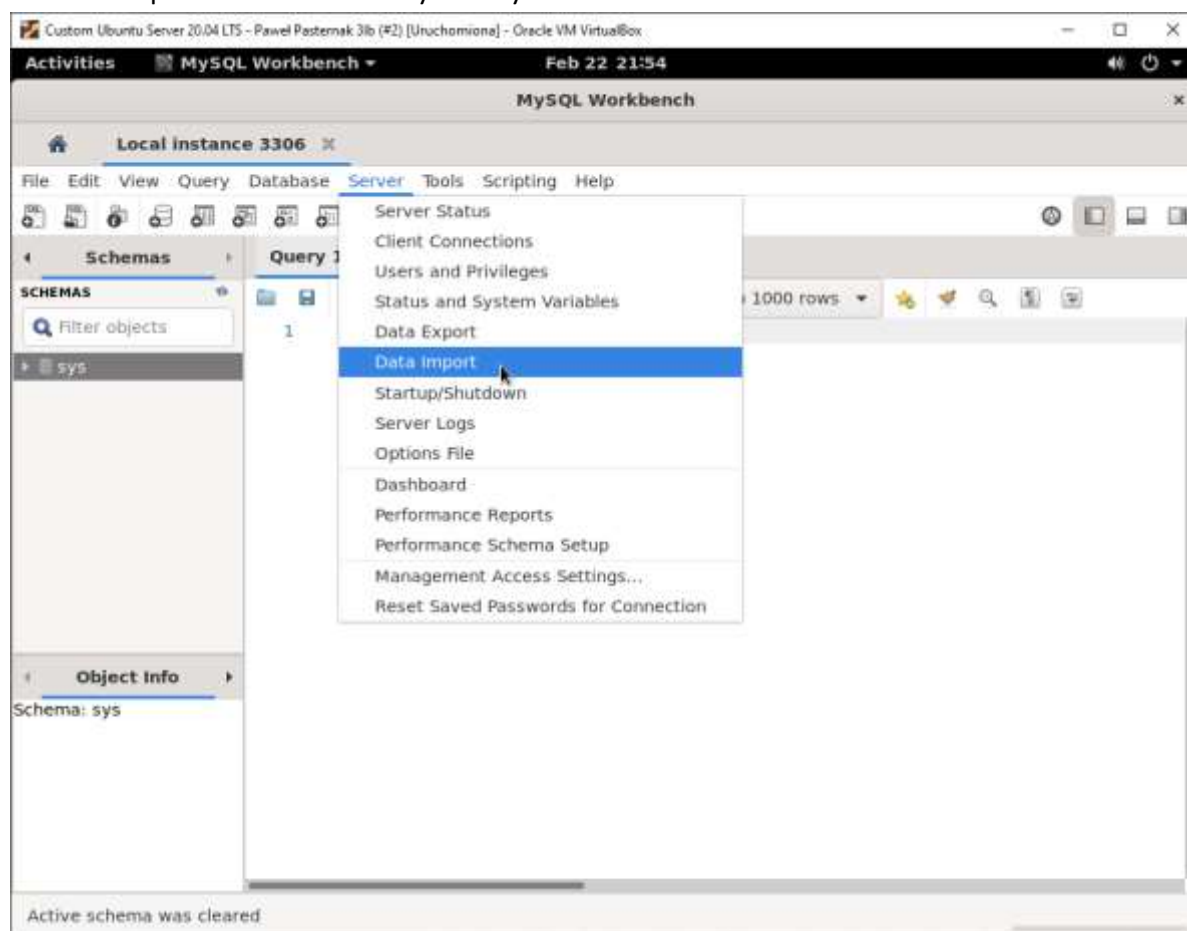
--
-- Table structure for table `Tabela_1`
--

DROP TABLE IF EXISTS `Tabela_1`;
BD1.sql 3,1 Top
```

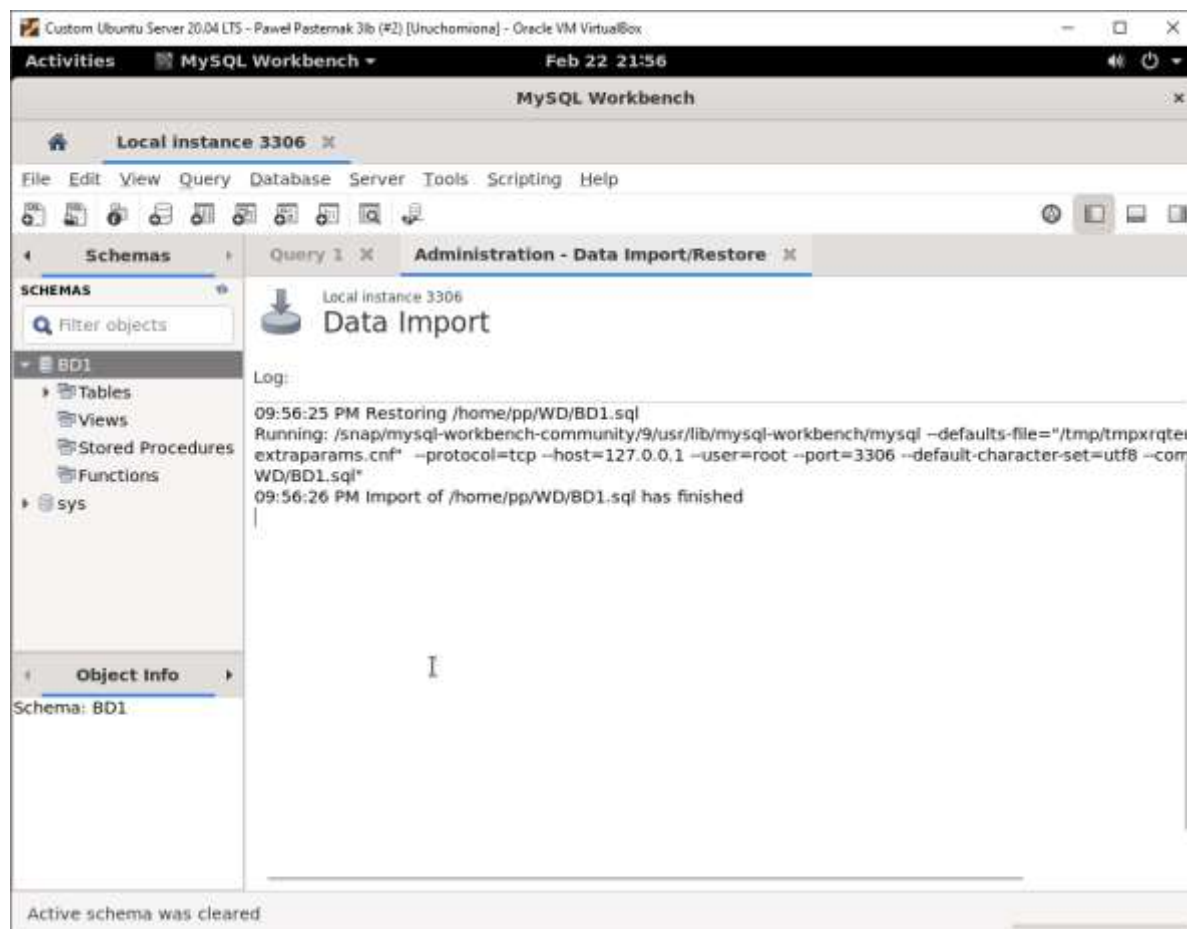
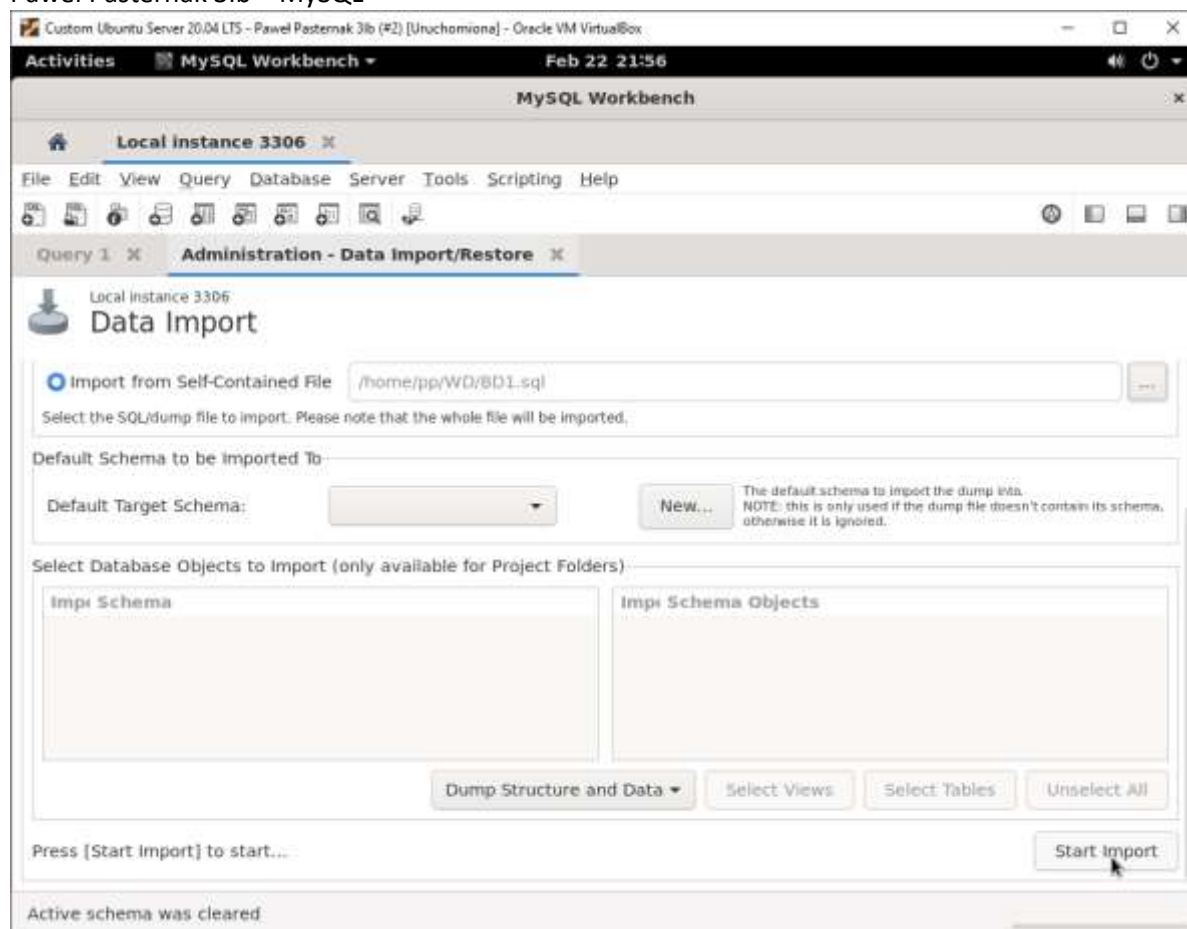

10. Usunięcie bazy danych



11. Importowanie bazy danych

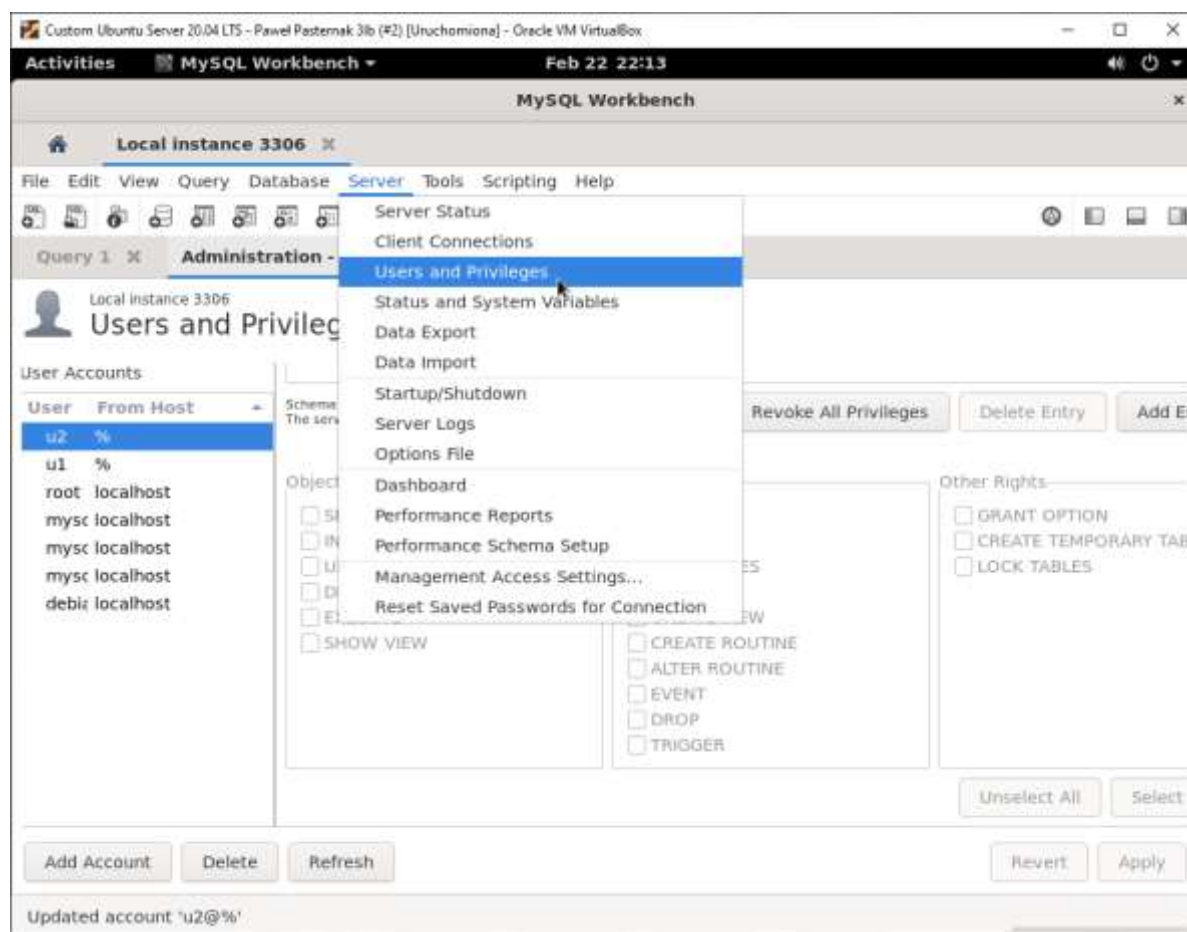


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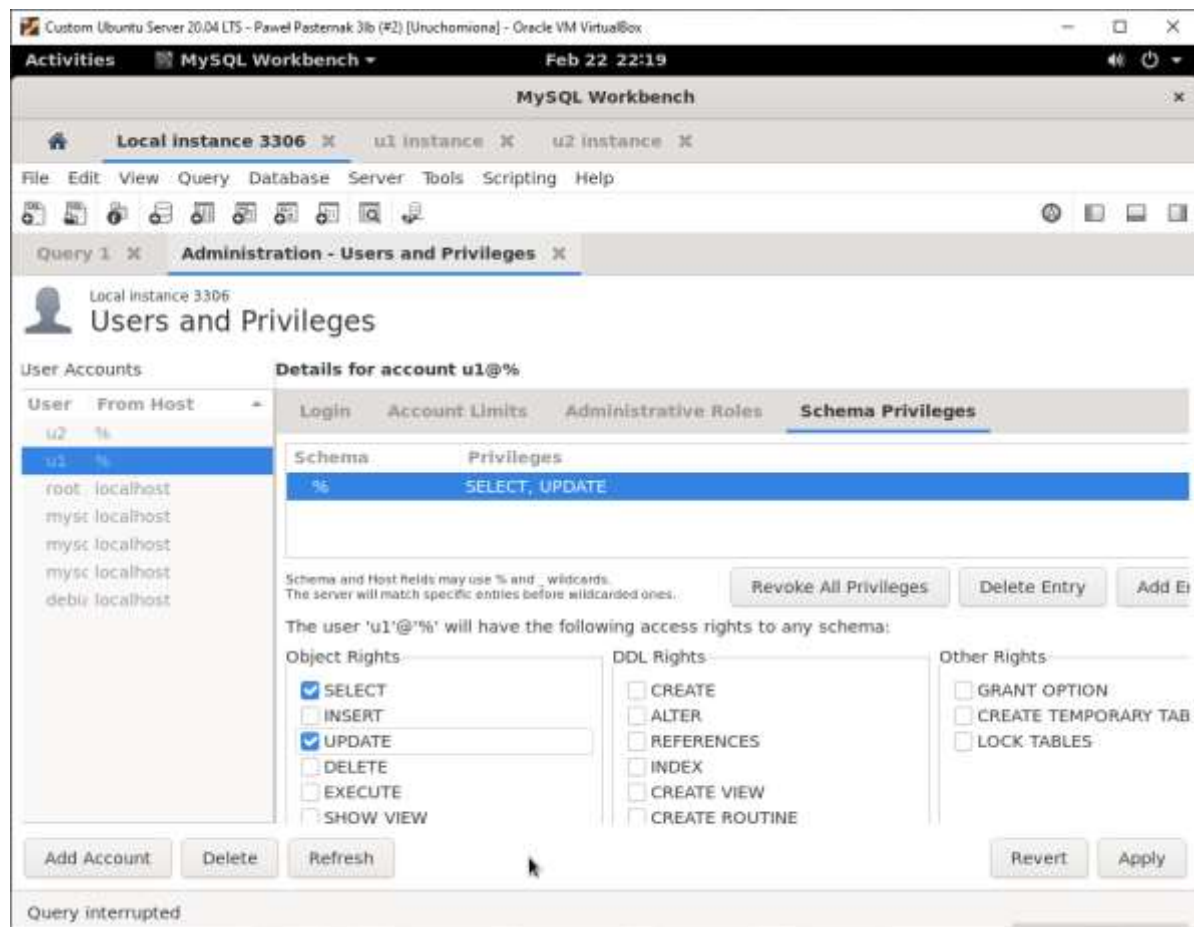
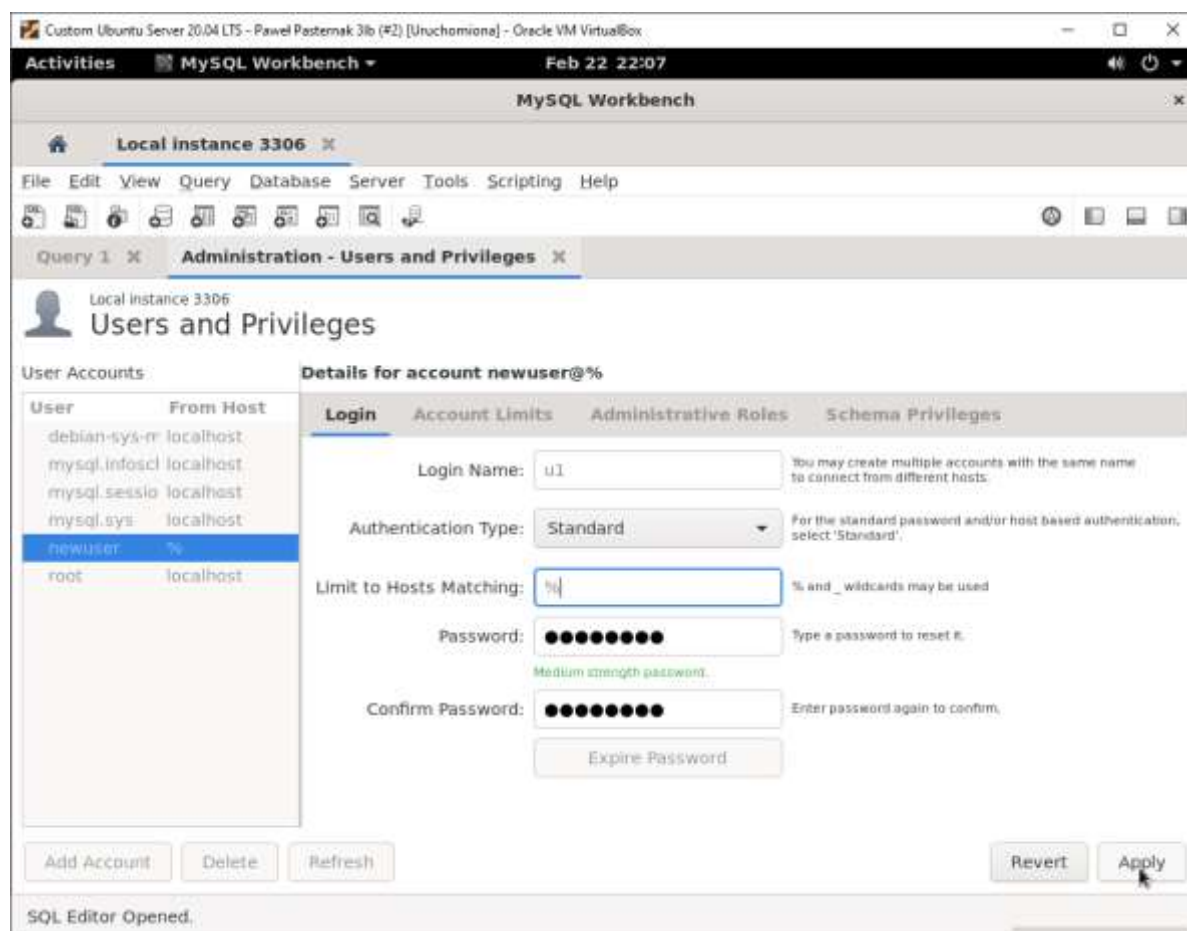


12. Dodawanie użytkowników i uprawnień dla nich

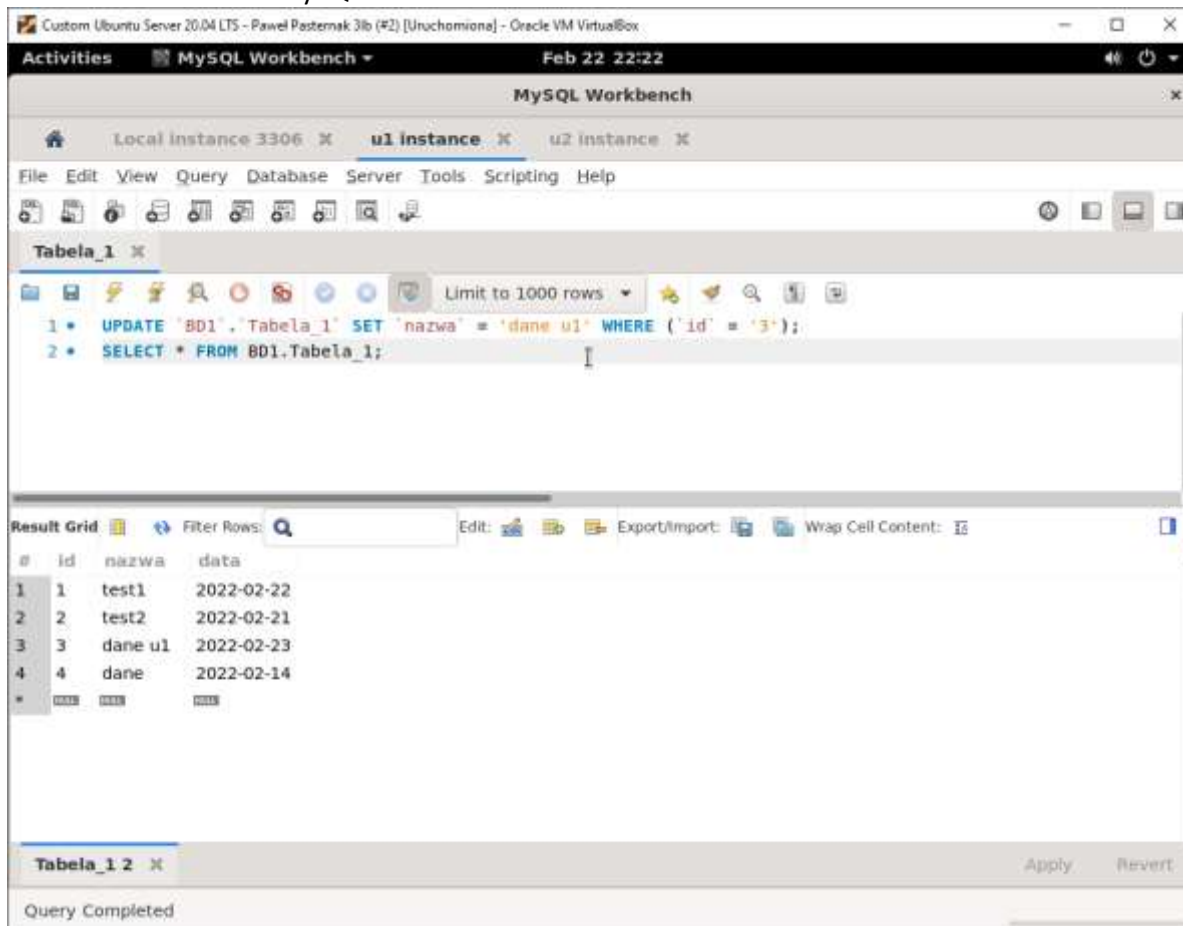
```
pp@custom-server:~$ sudo useradd -m u1
pp@custom-server:~$ sudo useradd -m u2
pp@custom-server:~$
```



- U1



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Custom Ubuntu Server 20.04 LTS - Paweł Pasternak 31b (#2) [Unuchomiona] - Oracle VM VirtualBox

Activities MySQL Workbench Feb 22 22:22

MySQL Workbench

Local instance 3306 x u1 instance x u2 instance x

File Edit View Query Database Server Tools Scripting Help

Tabela_1 x

Limit to 1000 rows

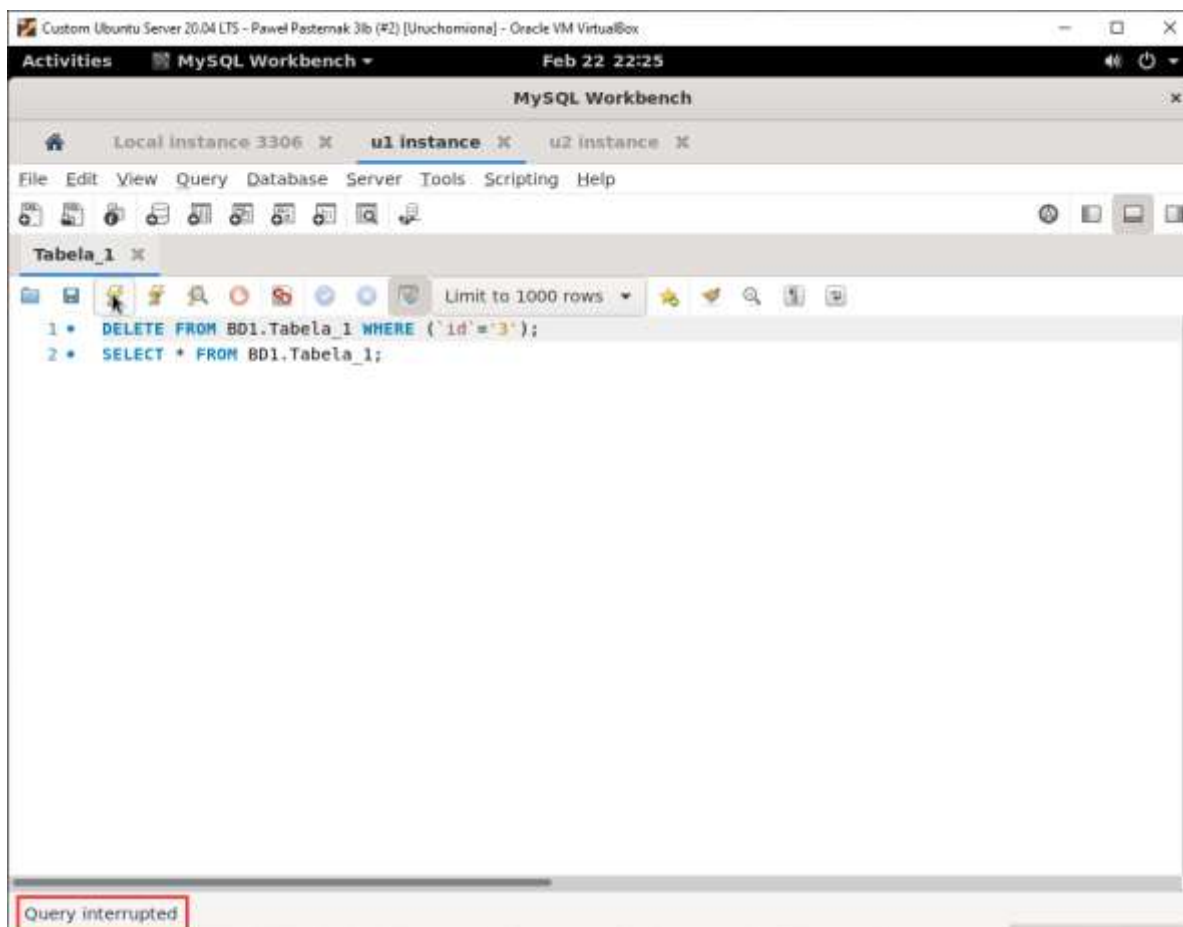
```
1 * UPDATE `BD1`.`Tabela_1` SET `nazwa` = 'dane u1' WHERE (`id` = '3');
2 * SELECT * FROM BD1.Tabela_1;
```

Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:

#	id	nazwa	data
1	1	test1	2022-02-22
2	2	test2	2022-02-21
3	3	dane u1	2022-02-23
4	4	dane	2022-02-14
*	more	more	more

Tabela_1 2 x Apply Revert

Query Completed



Custom Ubuntu Server 20.04 LTS - Paweł Pasternak 31b (#2) [Unuchomiona] - Oracle VM VirtualBox

Activities MySQL Workbench Feb 22 22:25

MySQL Workbench

Local instance 3306 x u1 instance x u2 instance x

File Edit View Query Database Server Tools Scripting Help

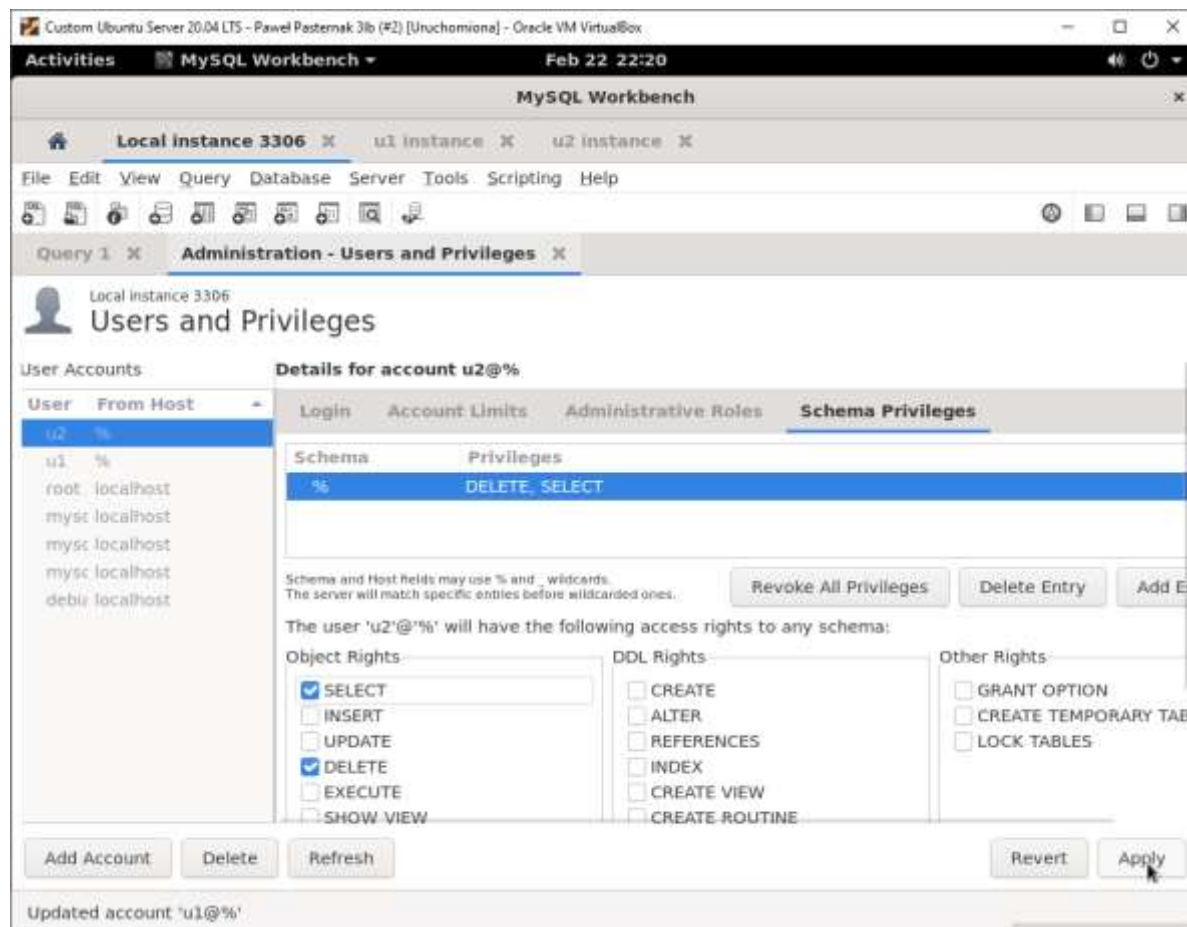
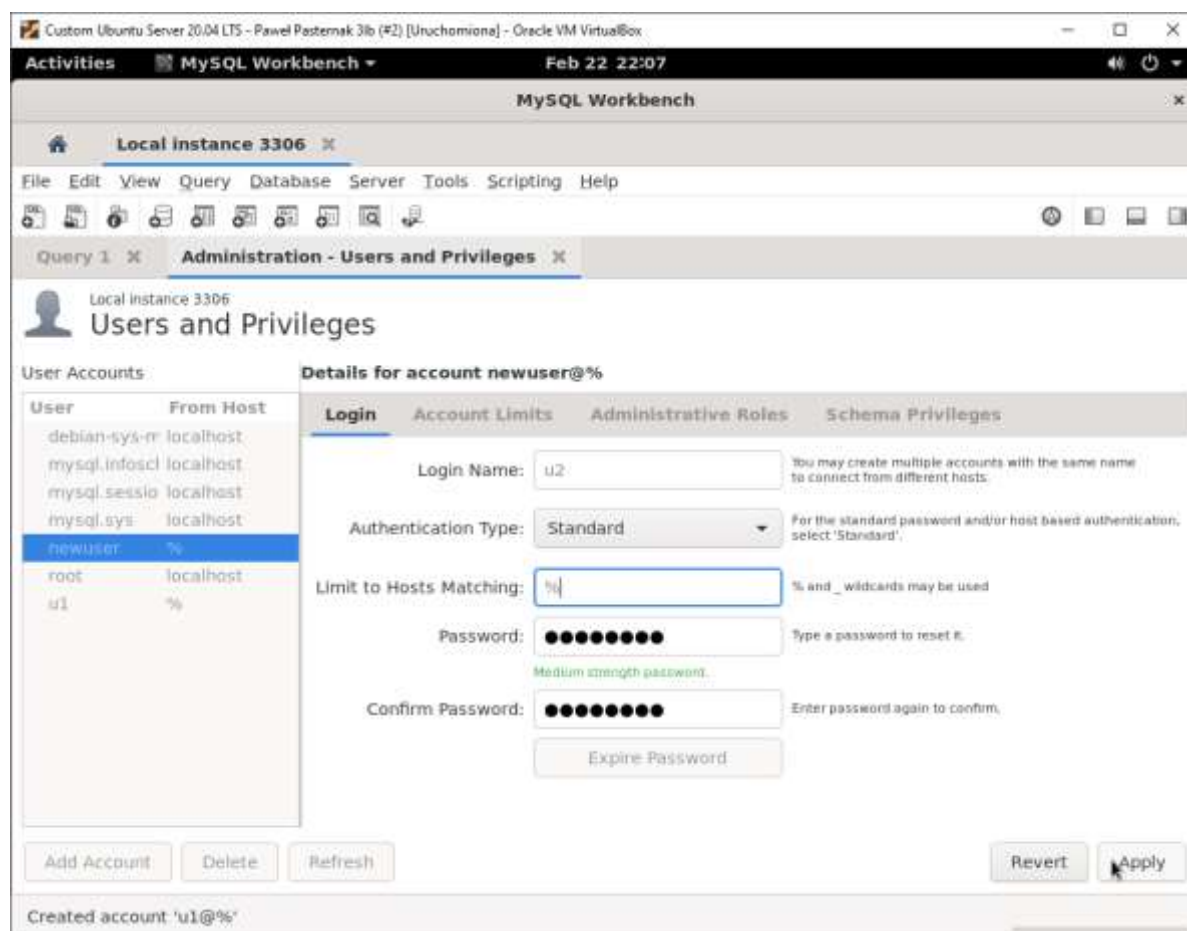
Tabela_1 x

Limit to 1000 rows

```
1 * DELETE FROM BD1.Tabela_1 WHERE (`id` = '3');
2 * SELECT * FROM BD1.Tabela_1;
```

Query interrupted

- U2



Paweł Pasternak 31b – MySQL

