Начало работы с SQL-сервером

Показ результатов операций и запросов

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✓ **Создать базу данных на MySQL сервере:**

✓ **Показать список всех баз данных на сервере MySQL:**

```
Enter password: **********
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 9
Server version: 8.0.11 MySQL Community Server - GPL

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owners.

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

mysql> create database xmc1;
Query OK, 1 row affected (0.08 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| sys                |
| xmc                |
| xmc1               |
+--------------------+
6 rows in set (0.00 sec)
```

✓ **Переключиться для работы с определённой базой данных:**
✓ **Удалить базу данных:**
✓ **Отобразить все таблицы в базе данных:**
✓ **Просмотреть формат таблицы в базе:**

```
mysql> use xmc;
Database changed
mysql> drop database xmc1;
Query OK, 0 rows affected (0.05 sec)

mysql> show tables;
+--------------+
| Tables_in_xmc |
+--------------+
| kadry        |
| name         |
+--------------+
2 rows in set (0.00 sec)

mysql> describe kadry;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| firstname     | varchar(20) | YES  |     | NULL    |       |
| middleinitial | varchar(3)  | YES  |     | NULL    |       |
| lastname      | varchar(35) | YES  |     | NULL    |       |
| AGE           | varchar(30) | YES  | UNI | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
4 rows in set (0.00 sec)
```

✓ **Показать все содержимое таблицы:**

✓ **Отобразить количество строк в таблице:**

✗ **Подсчитать количество колонок в таблице(не получится)**

```
mysql> select * from kadry;
+-----------+---------------+----------+------+
| firstname | middleinitial | lastname | AGE  |
+-----------+---------------+----------+------+
| valentina | v.            | ivanova  | 25   |
| ivan      | i.            | ivanov   | 39   |
| ivan      | p.            | petrov   | 29   |
+-----------+---------------+----------+------+
3 rows in set (0.00 sec)

mysql> select count(*) from kadry;
+----------+
| count(*) |
+----------+
|        3 |
+----------+
1 row in set (0.00 sec)
```

✓ **Удаление строки в таблице:**

✓ **Удаление столбца из таблицы:**


```
mysql> delete from kadry where middleinitial='p.';
Query OK, 1 row affected (0.04 sec)

mysql> select * from kadry;
+-----------+---------------+----------+------+
| firstname | middleinitial | lastname | AGE  |
+-----------+---------------+----------+------+
| valentina | v.            | ivanova  | 25   |
| ivan      | i.            | ivanov   | 39   |
+-----------+---------------+----------+------+
2 rows in set (0.00 sec)

mysql> alter table kadry drop index age;
Query OK, 0 rows affected (0.12 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select * from kadry;
+-----------+---------------+----------+------+
| firstname | middleinitial | lastname | AGE  |
+-----------+---------------+----------+------+
| valentina | v.            | ivanova  | 25   |
| ivan      | i.            | ivanov   | 39   |
+-----------+---------------+----------+------+
2 rows in set (0.00 sec)
```

- ✓ **Удалить таблицу из базы:**
- ✓ **Добавить колонку в таблицу (пример):**
- ✓ **Изменение имени колонки:**
- ✓ **Создать колонку с уникальным именем, чтобы избежать дубликатов в названиях:**

```
mysql> drop table name;
Query OK, 0 rows affected (0.12 sec)

mysql> show tables;
+--------------+
| Tables_in_xmc |
+--------------+
| kadry        |
+--------------+
1 row in set (0.00 sec)

mysql> alter table kadry add column position varchar(20);
Query OK, 0 rows affected (0.40 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> alter table kadry change position POSI varchar(20);
Query OK, 0 rows affected (0.06 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> select * from kadry;
+-----------+---------------+----------+------+------+
| firstname | middleinitial | lastname | AGE  | POSI |
+-----------+---------------+----------+------+------+
| valentina | v.            | ivanova  | 25   | NULL |
| ivan      | i.            | ivanov   | 39   | NULL |
+-----------+---------------+----------+------+------+
2 rows in set (0.00 sec)

mysql>
mysql> alter table kadry add unique (firstname);
Query OK, 0 rows affected (0.06 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

✓ Изменение размера колонки :

```
mysql> describe kadry;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| firstname     | varchar(20) | YES  | UNI | NULL    |       |
| middleinitial | varchar(3)  | YES  |     | NULL    |       |
| lastname      | varchar(35) | YES  |     | NULL    |       |
| AGE           | varchar(30) | YES  |     | NULL    |       |
| POSI          | varchar(20) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
5 rows in set (0.01 sec)

mysql> alter table kadry modify POSI varchar(30);
Query OK, 0 rows affected (0.10 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> show columns from kadry;
+---------------+-------------+------+-----+---------+-------+
| Field         | Type        | Null | Key | Default | Extra |
+---------------+-------------+------+-----+---------+-------+
| firstname     | varchar(20) | YES  | UNI | NULL    |       |
| middleinitial | varchar(3)  | YES  |     | NULL    |       |
| lastname      | varchar(35) | YES  |     | NULL    |       |
| AGE           | varchar(30) | YES  |     | NULL    |       |
| POSI          | varchar(30) | YES  |     | NULL    |       |
+---------------+-------------+------+-----+---------+-------+
5 rows in set (0.00 sec)
```

- ✓ **Отобразить строки в определённой таблице, содержащие "25":**
- ✓ **Показать все уникальные записи:**
- ✓ **Отобразить выбранные записи, отсортированные по возрастанию или убыванию:**

```
mysql> select * from kadry where AGE =25;
+-----------+---------------+----------+------+------+
| firstname | middleinitial | lastname | AGE  | POSI |
+-----------+---------------+----------+------+------+
| valentina | v.            | ivanova  | 25   | NULL |
+-----------+---------------+----------+------+------+
1 row in set (0.01 sec)

mysql> select distinct firstname from kadry;
+-----------+
| firstname |
+-----------+
| ivan      |
| valentina |
+-----------+
2 rows in set (0.00 sec)

mysql> select firstname,middleinitial from kadry order by AGE desc;
+-----------+---------------+
| firstname | middleinitial |
+-----------+---------------+
| ivan      | i.            |
| valentina | v.            |
+-----------+---------------+
2 rows in set (0.01 sec)
```

✓ **Регулярные выражения: найти все записи, значения столбцов "teacher"которых начинаются с буквы А:**

```
mysql> select * from `teaching plan`;
+------------+-------------+----------+-------+
| Codesubject | rename      | teacher  | hours |
+------------+-------------+----------+-------+
|          1 | math        | bolic    |    50 |
|          2 | physics     | alexs    |    30 |
|          3 | english     | daming   |    20 |
|          4 | russian     | elena    |    40 |
|          5 | computer    | jenny    |    40 |
|          6 | history     | profess  |    15 |
|          7 | math        | polosin  |    50 |
|          8 | english     | xiaoming |    20 |
|          9 | physics     | yiwan    |    30 |
|         10 | computer    | bormel   |    30 |
|         11 | algebra     | tochili  |    30 |
|         12 | programming | jenny    |    20 |
|         13 | russian     | olega    |    30 |
|         14 | gernman     | olega    |    20 |
|         15 | gym         | chenli   |    30 |
|         16 | dismath     | zalahof  |    25 |
|         17 | numerical   | vlagimi1 |    35 |
|         18 | diffequa    | sheglof  |    45 |
|         19 | math        | nikitin  |    50 |
|         20 | english     | dada     |    15 |
|         21 | gym         | baobao   |    35 |
|         22 | supercomp   | bormel   |    30 |
|         23 | stats       | laode    |    50 |
|         24 | funcala     | boris    |    40 |
|         25 | comptuer    | vylitok  |    30 |
+------------+-------------+----------+-------+
25 rows in set (0.02 sec)

mysql> select * from `teaching plan` where teacher rlike "b";
+------------+-------------+----------+-------+
| Codesubject | rename      | teacher  | hours |
+------------+-------------+----------+-------+
|          1 | math        | bolic    |    50 |
|         10 | computer    | bormel   |    30 |
|         21 | gym         | baobao   |    35 |
|         22 | supercomp   | bormel   |    30 |
|         24 | funcala     | boris    |    40 |
+------------+-------------+----------+-------+
5 rows in set (0.00 sec)
```