

20. Database administration and security.

**Ma'lumotlar bazasini administratorlash va xavfsizligini ta'minlash.
(GRANT, REVOKE)**

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TERMINLAR:

Administratorlash: Bu foydalanuvchilarni boshqarish, ularga turli xil imtiyozlar berish yoki cheklovlar qo'yishni nazorat qilishdir.

Xavfsizlikni ta'minlash: Bu tizimga kirish uchun turli murakkab parollardan foydalanish, ma'lumotlar bazasidan foydalanuvchi shaxslar uchun, turli xil taqiq va cheklovlarni o'rnatishdir.

CREATE USER: Yangi foydalanuvchi yaratish operatori.

DROP USER: Foydalanuvchini o'chirish operatori.

GRANT: Foydalanuvchilarga huquq, imtiyoz (privileges) berish operatori.

GRANT ALL PRIVILEGES: Foydalanuvchilarga barcha imtiyozlarni berish operatori.

REVOKE: Foydalanuvchilardan huquq, imtiyozni olib tashlash (ban) operatori.

REVOKE ALL PRIVILEGES : Foydalanuvchilardan barcha huquqni olish (banned) operatori.

ALTER USER Foydalanuvchini parolini o'zgartirish operatori.

RENAME: Foydalanuvchini nomi(login) ni va hostini o'zgartirish operatori.

CREATE USER: Yangi foydalanuvchi yaratish operatori.

1-usul: faqat localhostdagi ma'lumotlar bazasiga ulana oladigan foydalanuvchi yaratish:

CREATE USER 'user_name' @ 'host_name'

IDENTIFIED BY 'user_password';

2-usul: barcha hostdagi ma'lumotlar bazasiga ulana oladigan foydalanuvchi yaratish:

CREATE USER 'user_name' @ '%'

IDENTIFIED BY 'user_password';

DROP USER: Foydalanuvchini o'chirish operatori.

DROP USER 'user_name' @ 'localhost'

CREATE USER: Yangi foydalanuvchi yaratishga misol.

The screenshot shows the HeidiSQL Portable interface. On the left, the 'MyDatabases' tree view lists several databases: information_schema (176,0 KiB), institut, itcenter, mydb, mysql, performance_schema, proba, supermarket (48,0 KiB), tatu_tests, ubtuittest, and universitet. The main window displays a SQL query:

```
1 CREATE USER 'Murodbek'@'localhost'  
2 IDENTIFIED BY '123456789'
```

The status bar at the bottom provides connection information: 'Подключено: 00:18 h' (Connected: 00:18 h), 'MariaDB 10.3.22', 'Время работы: 07:56 h' (Working time: 07:56 h), and 'Серверное время: 1:0 Ожидание.' (Server time: 1:0 Waiting).

CREATE USER: Yangi foydalanuvchi yaratishga misol.

The screenshot shows the HeidiSQL Portable 11.0.0.5958 application window. The title bar reads "MyDatabases\ - HeidiSQL Portable 11.0.0.5958". The menu bar includes "Файл", "Редактировать", "Поиск", "Инструменты", "Переход", and "Помощь". The toolbar contains various icons for database management tasks. The left sidebar shows the connection path "MyDatabases\ information_schema". The main panel displays a table titled "Базы данных (1)" with one row for "information_schema". The table has columns: База данных, Размер, Объе..., Посл..., Табл..., Пред..., Функ..., Про..., Триг..., Соб..., Сопоставление п...". The status bar at the bottom shows "Подключено: 00:00 h" and "MariaDB 10.3.22".

ALTER USER AND RENAME: Foydalanuvchini parolini va nomini o'zgartirish operatori.

1. Foydalanuvchini parolini o'zgartirish:

ALTER USER 'user_name' @ 'host_name'

IDENTIFIED BY 'user_new_password';

2. Foydalanuvchini nomi (login) ni va hostini o'zgartirish:

RENAME USER 'user_name' @ 'host_name'

TO 'user_new_name'@'new_host_name'

ALTER USER: Foydalanuvchini parolini o'zgartirishga misol.

The screenshot shows the HeidiSQL Portable interface. On the left, the database tree is visible under 'MyDatabases' with several databases listed. In the center, the 'Запрос*' (Query) tab is active, displaying the following SQL code:

```
1 ALTER USER 'root'@'localhost'  
2 IDENTIFIED BY 'admin123'
```

The HeidiSQL interface includes a toolbar at the top with various icons for database management, and a status bar at the bottom providing connection information.

RENAME: Foydalanuvchini nomi(login) ni o'zgartirishga misol.

The screenshot shows the HeidiSQL Portable interface. On the left, the 'MyDatabases' tree view lists several databases: information_schema (176,0 KiB), institut, itcenter, mydb, mysql, performance_schema, proba, supermarket (48,0 KiB), tatu_tests, ubtuitest, and universitet. The main pane displays a SQL query:

```
1 RENAME USER 'root'@'localhost'  
2 TO 'Murodbek'@'localhost'
```

The HeidiSQL toolbar at the top includes icons for file operations, search, and connection status. The bottom status bar shows the connection details: 'Подключено: 00:30 h' (Connected: 00:30 h), 'MariaDB 10.3.22', 'Время работы: 08:08 h' (Working time: 08:08 h), and 'Серверное время: 1:1' (Server time: 1:1). A green 'Donate' button is visible in the top right corner.

GRANT: Foydalanuvchilarga imtiyoz (privileges) berish operatori.

1-usul: Faqat bitta bazaning bitta jadvali uchun imtiyoz berish:

GRANT privileges_name1, privileges_name2, ...

ON database_name.table_name

TO 'user_name1'@'host_name', 'user_name2'@'host_name', ...

2-usul: Bazaning barcha jadvali uchun imtiyoz berish:

GRANT privileges_name1, privileges_name2, ...

ON database_name.*

TO 'user_name1'@'host_name', 'user_name2'@'host_name', ...

3-usul: Barcha bazalarning barcha jadvali uchun imtiyoz berish:

GRANT privileges_name1, privileges_name2, ...

ON *.*

TO 'user_name1'@'host_name', 'user_name2'@'host_name', ...

PRIVILEGES
SELECT
INSERT
UPDATE
DELETE
CREATE
DROP
ALTER
GRANT
ALL

GRANT: Foydalanuvchilarga imtiyoz (privileges) berishga misol.

The screenshot shows the HeidiSQL Portable interface. On the left, the database tree is visible under 'MyDatabases' with several databases listed. In the main pane, a SQL query is being typed:

```
1 GRANT SELECT, INSERT  
2 ON institut.talabalar  
3 TO 'Murodbek'@'localhost'
```

The HeidiSQL interface includes a toolbar at the top, a menu bar in Russian, and various status indicators at the bottom.



Фильтр баз данных | Фильтр таблиц |

MyDatabases	224,0 KiB
information_schema	176,0 KiB
institut	48,0 KiB
talabalar	48,0 KiB

1 **DELETE FROM talabalar WHERE id=26**

MyDatabases: Ошибка

Ошибка SQL (1142): DELETE command denied to user
'Murodbek'@'localhost' for table 'talabalar'

OK

[Помощь по этой ошибке \(=> ecosia.org\)](#)

GRANT ALL PRIVILEGES: Foydalanuvchilarga barcha imtiyozlarni berish operatori.

1-usul: Faqat bitta bazaning bitta jadvali uchun barcha imtiyozni berish:

GRANT ALL PRIVILEGES

ON database_name.table_name

TO 'user_name1'@'host_name', 'user_name2'@'host_name', ...

2-usul: Bazaning barcha jadvali uchun barcha imtiyozni berish:

GRANT ALL PRIVILEGES

ON database_name.*

TO 'user_name1'@'host_name', 'user_name2'@'host_name', ...

3-usul: Barcha bazalarning barcha jadvali uchun barcha imtiyozni berish:

GRANT ALL PRIVILEGES

ON *.*

TO 'user_name1'@'host_name', 'user_name2'@'host_name', ...

GRANT ALL PRIVILEGES: Foydalanuvchilarga barcha imtiyozlarni berishga misol.

The screenshot shows the HeidiSQL Portable interface. On the left, the database tree is visible with 'MyDatabases' expanded, showing various databases like 'information_schema', 'institut', 'itcenter', etc. The main window contains a query editor with the following SQL code:

```
1 GRANT ALL PRIVILEGES
2 ON institut.*
3 TO 'Murodbek'@'localhost'
```

The code uses color coding for SQL keywords (blue), table names (yellow), and the user/host specification (green). The HeidiSQL toolbar and status bar at the bottom provide additional information about the connection and session details.

MyDatabases\institut\uqituvchilar - HeidiSQL Portable 11.0.0.5958

Файл Редактировать Поиск Инструменты Переход Помощь

Donate

Фильтр баз данных | Фильтр таблиц | Хост: 127.0.0.1 | База данных: institut | Таблица: uqituvchilar | Данные | Запрос* |

institut.uqituvchilar: 15 строк (приблизительно)

tartib_raqami	fio	lavozimi	kafedrasi	yillik_staji	oyligi	tel
31	Hujayev Otabek	PhD. Dotsent	Axborot texnologiyalari	9,5	12 500 000,00	+998916867847
74	Davletboyev Sardorbek	assistant o'qituvchi	Axborot texnologiyalari	2,0	4 800 000,00	+998914872323
46	Yusupova Janar	Katta o'qituvchi	Dasturiy injiniring	7,0	8 500 000,00	+998905476585
3	Adambayeva Feruza	Katta o'qituvchi	Gumanitar va ijtimoiy fanlar	7,0	7 200 000,00	+998990965959
19	Aliyev Oybek	assistant o'qituvchi	Dasturiy injiniring	7,5	9 000 000,00	+998914568585
80	Yusupov Firnafas	Professor. Dotsent	Dasturiy injiniring	18,0	12 000 000,00	+998918956746
45	Husainov Islom	Katta o'qituvchi	Tabiiy fanlar	8,5	7 800 000,00	+998906881441
19	Abdullayev Anvar	assistant o'qituvchi	Axborot texnologiyalari	2,0	4 800 000,00	+998994557557
86	Xaitboyev Azizbek	stajor o'qituvchi	Axborot xavfsizligi	0,5	4 800 000,00	+998913547889
56	Ismailov Shavkat	PhD. Dotsent	Telekommunikatsiya injiniringi	9,0	11 500 000,00	+998954872111
35	Jumaniyazov Fazliddin	Dotsent	Gumanitar va ijtimoiy fanlar	7,0	7 800 000,00	+998905743225
41	Sodiqov Mahmudjon	Katta o'qituvchi	Axborot xavfsizligi	6,0	7 200 000,00	+998918788898
92	Salayev Rahmonbergan	stajor o'qituvchi	Telekommunikatsiya injiniringi	1,5	4 800 000,00	+998881186565
36	Hajiyeva Iroda	PhD. Dotsent	Gumanitar va ijtimoiy fanlar	10,0	11 500 000,00	+998981232525
17	Yo'ldoshev O'ktamboy	stajor o'qituvchi	Raqamli ta'lim texnologiyalari	1,0	4 800 000,00	+998914143223

Подключено: 00:03 h | MariaDB 10.3.22 | Время работы: 08:32 h | Серверное время: 1:4 | Ожидание.

REVOKE: Foydalanuvchilardan huquq, imtiyozni olib tashlash (ban) operatori.

1-usul: Faqat bitta bazaning bitta jadvali uchun imtiyozlarni olib tashlash:

REVOKE privileges_name1, privileges_name2, ...

ON database_name.table_name

FROM 'user_name1'@'host_name', 'user_name2'@'host_name', ...

2-usul: Bazaning barcha jadvali uchun imtiyozlarni olib tashlash:

REVOKE privileges_name1, privileges_name2, ...

ON database_name.*

FROM 'user_name1'@'host_name', 'user_name2'@'host_name', ...

3-usul: Barcha bazalarning barcha jadvali uchun imtiyozlarni olib tashlash:

REVOKE privileges_name1, privileges_name2, ...

ON *.*

FROM 'user_name1'@'host_name', 'user_name2'@'host_name', ...

PRIVILEGES
SELECT
INSERT
UPDATE
DELETE
CREATE
DROP
ALTER
GRANT
ALL

REVOKE ALL PRIVILEGES Foydalanuvchilardan barcha imtiyozni olib tashlash operatori.

1-usul: Faqat bitta bazaning bitta jadvali uchun barcha imtiyozni olib tashlash:

REVOKE ALL PRIVILEGES

ON database_name.table_name

FROM 'user_name1'@'host_name', 'user_name2'@'host_name', ...

2-usul: Bazaning barcha jadvali uchun barcha imtiyozni olib tashlash:

REVOKE ALL PRIVILEGES

ON database_name.*

FROM 'user_name1'@'host_name', 'user_name2'@'host_name', ...

3-usul: Barcha bazalarning barcha jadvali uchun barcha imtiyozni olib tashlash:

REVOKE ALL PRIVILEGES

ON *.*

FROM 'user_name1'@'host_name', 'user_name2'@'host_name', ...

REVOKE ALL PRIVILEGES Foydalanuvchilardan barcha imtiyozni olib tashlashga misol.

The screenshot shows the HeidiSQL Portable interface with the title bar "MyDatabases - HeidiSQL Portable 11.0.0.5958". The menu bar includes "Файл", "Редактировать", "Поиск", "Инструменты", "Переход", and "Помощь". The toolbar contains various icons for database management. The connection details are "Хост: 127.0.0.1" and "Запрос*". The left sidebar shows the database structure under "MyDatabases", including "information_schema", "institut", "itcenter", "mydb", "mysql", "performance_schema", "proba", "supermarket", "tatu_tests", "ubtuittest", and "universitet". The main query window displays the following SQL code:

```
1 REVOKE ALL PRIVILEGES
2 ON institut.*
3 FROM 'Murodbek'@'localhost'
```

The status bar at the bottom provides connection information: "Подключено: 01:14 h", "MariaDB 10.3.22", "Время работы: 08:52 h", "Серверное время: 2:0", and "Ожидание".

MyDatabases\institut\talabalar - HeidiSQL Portable 11.0.0.5958

Файл Редактировать Поиск Инструменты Переход Помощь

Donate

Фильтр баз данных Фильтр таблиц ★

Хост: 127.0.0.1 База данных: institut Таблица: talabalar Данные Запрос

institut.talabalar: 16 строк (приблизительно)

id familiya ism T_sanasi guruh_id shartnoma_id bosqich_id

1	Ismoilov	Saidmurod	1998-02-24	7	2	2
2	Habibullayev	Abror	2000-08-04	1	2	(NULL)
5	Bekchanov	Asadbek	1997-03-29	3	1	3
8	Sotliqov	Dastonbek	2004-08-22	1	2	2
9	Kuchkarov	Dilshodbek	1999-06-11	11	2	(NULL)
10	Artikov					3
12	Samandarov					3
26	Abdullayeva					4
29	Abdullayeva					1
31	Norimbetov					4
34	Kamolova					3
37	Nurullayev					4
39	Raximberganov					3
41	Tajiyeva	Umida	1999-10-25	13	2	3
43	O'rionov	Xalilla	2000-01-10	1	1	3
44	Rahimboyev	Sanjar	2001-06-07	4	(NULL)	(NULL)

MyDatabases: Ошибка ×

 Ошибка SQL (1142): UPDATE command denied to user 'Murodbek'@'localhost' for table 'talabalar'

OK

 [Помощь по этой ошибке \(=> ecosia.org\)](#)

Подключено: 00:04 h MariaDB 10.3.22 Время работы: 08:57 h Серверное время: 2:0 Ожидание.

REVOKE: Foydalanuvchilardan imtiyozni olib tashlashga misol.

The screenshot shows the HeidiSQL Portable interface. The left sidebar displays a tree view of databases under 'MyDatabases', including 'information_schema', 'institut', 'itcenter', 'mydb', 'mysql', 'performance_schema', 'proba', 'supermarket', 'tatu_tests', 'ubtuittest', and 'universitet'. The main pane contains a SQL query:

```
1 REVOKE SELECT, INSERT  
2 ON institut.talabalar  
3 FROM 'Murodbek'@'localhost'
```

The status bar at the bottom indicates the connection is established (Подключено: 02:45 h), the database is MariaDB 10.3.22, the work time is 10:23 h, and the server time is 3:3. A 'Donate' button is visible in the top right corner.

MyDatabases\ - HeidiSQL Portable 11.0.0.5958

Файл Редактировать Поиск Инструменты Переход Помощь

Фильтр баз данных Фильтр таблиц

Хост: 127.0.0.1 Запрос

Donate

MyDatabases

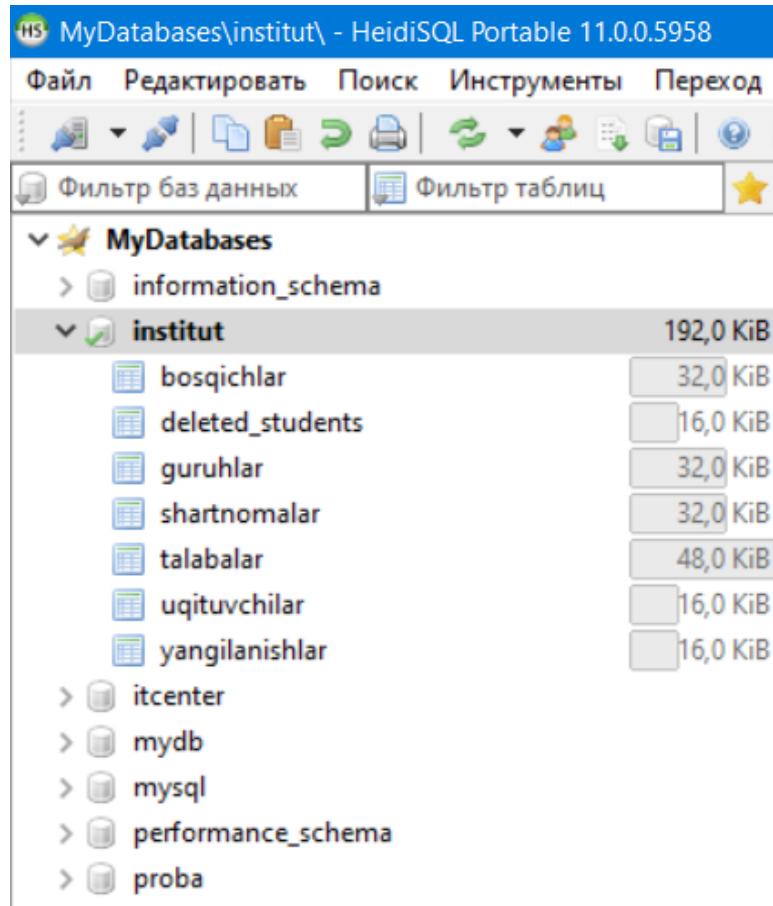
information_schema

Базы данных (1) Переменные Состояние Процессы Статистика команд

База данных ^	Размер	Объе...	Посл...	Табл...	Пред...	Функ...	Про...	Триг...	Соб...	Сопоставление п...
information_schema										

Подключено: 00:00 h MariaDB 10.3.22 Время работы: 09:06 h Серверное время: 2:1 Ожидание.

Topshiriq: Murodbek nomli foydalanuvchini o'chiring, so'ng "**KI_Dekani**" va "**AT_Mudiri**" nomli foydalanuvchilar yarating, ularga mos ravishda "**Hikmat111**" va "**Otabek99**" deb parol qo'ying, "**KI_Dekani**" ga **localhost** dagi institut bazasining talabalar jadvalida **SELECT, UPDATE, INSERT, ALTER** amallarini bajara olish imtiyozlarini bering, "**AT_Mudiri**" ga esa shu bazaning uqituvchilar jadvalida barcha amallarni bajarish huquqini bering.



MyDatabases\ - HeidiSQL Portable 11.0.0.5958

Файл Редактировать Поиск Инструменты Переход Помощь

Фильтр баз данн[] Фильтр таблиц[] Хост: 127.0.0.1 Запрос* []

Donate

MyDatabases

- information_schema
- institut
 - bosqichlar 32,0 KiB
 - deleted_students 16,0 KiB
 - guruhiar 32,0 KiB
 - shartnomalar 32,0 KiB
 - talabalar 48,0 KiB
 - uqituvchilar 16,0 KiB
 - yangilanishlar 16,0 KiB
- itcenter
- mydb
- mysql
- performance_schema
- proba
- supermarket
- tatu_tests
- ubtuittest
- universitet

```
1 DROP USER 'Murodbek'@'localhost';
2
3 CREATE USER 'KI_Dekani'@'localhost'
4 IDENTIFIED BY 'Hikmat111';
5
6 CREATE USER 'Otabek99'@'localhost'
7 IDENTIFIED BY 'TelekomDekan02';
8
9 GRANT SELECT, UPDATE, INSERT, ALTER
10 ON institut.talabalar
11 TO 'KI_Dekani'@'localhost';
12
13 GRANT ALL PRIVILEGES
14 ON institut.uqituvchilar
15 TO 'Otabek99'@'localhost';
16
```

r1 : c34 (344 B) Подключено: 02:32 h MariaDB 10.3.22 Время работы: 10:10 h Серверное время: 3:2 Ожидание.

A photograph of a classroom with red desks and chairs. Ten students are shown, all with their heads down on their desks, appearing to be asleep. They are of various ages and ethnicities, wearing casual clothing. The scene conveys a sense of exhaustion or lack of engagement.

SAVOLLAR?