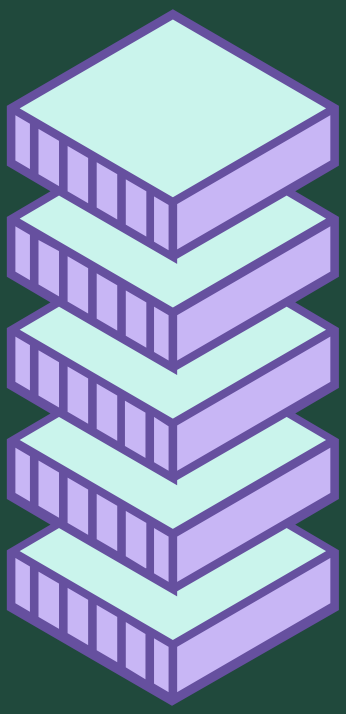

SQL Commands

Using MySQL Database

SYED ARSALAN AMIN

https://github.com/SyedArsalanAmin

MySQL_Commands

Saturday, November 13, 2021 12:09 AM

Table of contents

Commands	**Output/Exp**
show databases; #shows available databases	+--------------------+ | Database | +--------------------+ | information_schema | | mysql | | performance_schema | | sakila | | sys | | world | +--------------------+ 6 rows in set (0.00 sec)
create database test_database; # create database	
drop database test_database; #delete database	
use test_database; #use the selected database	
select database(); # tells the currently selected database	+------------+ | database() | +------------+ | my_pets | +------------+ 1 row in set (0.00 sec)
create table cats(age **int**, address **varchar**(100)); #creating table with name cats	
show tables; #shows available tables in the selected database.	+--------------------+ | Tables_in_my_pets | +--------------------+ | cats | +--------------------+ 1 row in set (0.01 sec)
show columns from cats # shows columns from the table cats. OR **desc** cats; #performs the same action as above describes the table.	+-------+--------------+------+-----+---------+-------+ | Field | Type | Null | Key | Default | Extra | +-------+--------------+------+-----+---------+-------+ | name | varchar(100) | YES | | NULL | | | age | int | YES | | NULL | | +-------+--------------+------+-----+---------+-------+ 2 rows in set (0.02 sec)
drop table cats; # deletes the table cats from the database.	
Inserting data in the tables **insert into** cats (name, age) **values** ("jetson", 7); #this will insert data into already existing table.	
select * from cats;	+----------+------+ | name | age | +----------+------+ | jetson | 8 | | victoria | 6 |

```
+----------+------+
2 rows in set (0.01 sec)
```

Multiple insert:

```
insert into cats (name, age) # don't forget to write table
values ("tim", 4), #name.
("john", 5),
("katy", 9),
("lens", 20);
```

show warnings; # shows you warnings.

```
insert into cats (name)
values ("cluadia");

# NULL is yes in the table. It means its ok to have
unknown value.
# NULL not means its 0.
```

```
+-------+-------------+------+-----+---------+-------+
| Field | Type        | Null | Key | Default | Extra |
+-------+-------------+------+-----+---------+-------+
| name  | varchar(50) | YES  |     | NULL    |       |
| age   | int         | YES  |     | NULL    |       |
+-------+-------------+------+-----+---------+-------+
2 rows in set (0.00 sec)
```

```
create table cats2 (
name varchar(50) not null,
age int not null ); # this will ensure that name and age
columns don't have null values. Default value is specifies
if nothing is provided.
```

```
create table cats2 (
name varchar(50) default "name not specified",
age int default 20 ); # here if any column entry is
null/not provided then default value is replaced.
```

```
create table cats2 (
name varchar(50) not null default "name is not specifies",
age int not null default 20 ); # here you can't write null
values and if no value provided then replaced by default
value.
```

```
+-------+-------------+------+-----+--------------------+-------+
| Field | Type        | Null | Key | Default            | Extra |
+-------+-------------+------+-----+--------------------+-------+
| name  | varchar(50) | NO   |     | name not specified |       |
| age   | int         | NO   |     | 20                 |       |
+-------+-------------+------+-----+--------------------+-------+
2 rows in set (0.01 sec)
```

```
create table unique_cats (
cat_id int not null,
name varchar(50),
age int,
primary key (cat_id)
); # primary key is unique to each entry.
```

```
# auto_increment will increment id as more entries comes
#in automatically.

create table employees(
id int auto_increment not null,
first_name varchar(50),
last_name varchar(50),
middle_name varchar(50),
current_status varchar(50) not null default "employed",
primary key(id)
);

insert into employees(id, first_name, last_name,
current_status)
values(1, "dolly", "devil", "internship");
```

```
+----------------+-------------+------+-----+----------+----------------+
| Field          | Type        | Null | Key | Default  | Extra          |
+----------------+-------------+------+-----+----------+----------------+
| id             | int         | NO   | PRI | NULL     | auto_increment |
| first_name     | varchar(50) | YES  |     | NULL     |                |
| last_name      | varchar(50) | YES  |     | NULL     |                |
| middle_name    | varchar(50) | YES  |     | NULL     |                |
| current_status | varchar(50) | NO   |     | employed |                |
+----------------+-------------+------+-----+----------+----------------+
5 rows in set (0.00 sec)

mysql> select * from employees;
+----+------------+-----------+-------------+----------------+
| id | first_name | last_name | middle_name | current_status |
+----+------------+-----------+-------------+----------------+
|  1 | dolly      | devil     | NULL        | internship     |
+----+------------+-----------+-------------+----------------+
1 row in set (0.01 sec)
```

CRUD Commands(Create, Read, Update, Delete):

```
# inserting data in cats table
insert into cats(name, breed, age)
values('Ringo', 'Tabby', 4),
('Cindy', 'Maine Coon', 10),
('Dumbledore', 'Maine Coon', 11),
('Egg', 'Persian', 4),
('Misty', 'Tabby', 13),
('George Michael', 'Ragdoll', 9),
('Jackson', 'Sphynx', 7);
```

Select statement

select * from cats; # gives us all the rows in the cats table.

```
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      1 | Ringo          | Tabby      |    4 |
|      2 | Cindy          | Maine Coon |   10 |
|      3 | Dumbledore     | Maine Coon |   11 |
|      4 | Egg            | Persian    |    4 |
|      5 | Misty          | Tabby      |   13 |
|      6 | George Michael | Ragdoll    |    9 |
|      7 | Jackson        | Sphynx     |    7 |
```

```
+--------+---------------+------------+------+
7 rows in set (0.01 sec)
```

```
select name from cats; #Accessing specific columns using #select statement.
```

```
+----------------+
| name           |
+----------------+
| Ringo          |
| Cindy          |
| Dumbledore     |
| Egg            |
| Misty          |
| George Michael |
| Jackson        |
+----------------+
7 rows in set (0.00 sec)
```

```
select name, age from cats;#selecting multiple columns at once. Here order matters as in the next query.
```

```
+----------------+------+
| name           | age  |
+----------------+------+
| Ringo          |    4 |
| Cindy          |   10 |
| Dumbledore     |   11 |
| Egg            |    4 |
| Misty          |   13 |
| George Michael |    9 |
| Jackson        |    7 |
+----------------+------+
7 rows in set (0.00 sec)
```

```
select breed, age, name from cats;
```

```
+------------+------+----------------+
| breed      | age  | name           |
+------------+------+----------------+
| Tabby      |    4 | Ringo          |
| Maine Coon |   10 | Cindy          |
| Maine Coon |   11 | Dumbledore     |
| Persian    |    4 | Egg            |
| Tabby      |   13 | Misty          |
| Ragdoll    |    9 | George Michael |
| Sphynx     |    7 | Jackson        |
+------------+------+----------------+
7 rows in set (0.00 sec)
```

Where clause

```
select * from cats where age=4;
```

```
+--------+-------+---------+------+
| cat_id | name  | breed   | age  |
+--------+-------+---------+------+
|      1 | Ringo | Tabby   |    4 |
|      4 | Egg   | Persian |    4 |
+--------+-------+---------+------+
2 rows in set (0.00 sec)
```

```
select * from cats where name='Egg'; # you can also write "egg", capital letter #doesn't affect the query.
```

```
+--------+------+---------+------+
| cat_id | name | breed   | age  |
+--------+------+---------+------+
|      4 | Egg  | Persian |    4 |
+--------+------+---------+------+
1 row in set (0.00 sec)
```

Some practice queries-Select, Where:

```
select cat_id from cats;
```

```
+--------+
| cat_id |
+--------+
|      1 |
|      2 |
|      3 |
|      4 |
|      5 |
|      6 |
|      7 |
+--------+
7 rows in set (0.00 sec)
```

```
select name, breed from cats;
```

```
+----------------+------------+
| name           | breed      |
+----------------+------------+
| Ringo          | Tabby      |
| Cindy          | Maine Coon |
| Dumbledore     | Maine Coon |
| Egg            | Persian    |
| Misty          | Tabby      |
| George Michael | Ragdoll    |
| Jackson        | Sphynx     |
+----------------+------------+
7 rows in set (0.00 sec)
```

```
select name, age from cats where breed='Tabby';
```

```
+-------+------+
| name  | age  |
+-------+------+
| Ringo |    4 |
| Misty |   13 |
+-------+------+
```

```
2 rows in set (0.00 sec)
```

```
select cat_id, age from cats where cat_id=age;
```

```
+--------+------+
| cat_id | age  |
+--------+------+
|      4 |    4 |
|      7 |    7 |
+--------+------+
2 rows in set (0.00 sec)
```

Aliases:

```
select cat_id as id, name as cats_names from cats;
#aliases only changes name of the column for showing
original column name are not changed.
```

```
+----+----------------+
| id | cats_names     |
+----+----------------+
|  1 | Ringo          |
|  2 | Cindy          |
|  3 | Dumbledore     |
|  4 | Egg            |
|  5 | Misty          |
|  6 | George Michael |
|  7 | Jackson        |
+----+----------------+
7 rows in set (0.00 sec)
```

Update statement:

Keep in mind! do check before updating that you are updating the right entries, same goes for delete statement.

```
update cats set breed='Shorthair' where breed='Tabby';
#changing breed from 'tabby' to 'shorthair'.
```

```
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      1 | Ringo          | Shorthair  |    4 |
|      2 | Cindy          | Maine Coon |   10 |
|      3 | Dumbledore     | Maine Coon |   11 |
|      4 | Egg            | Persian    |    4 |
|      5 | Misty          | Shorthair  |   13 |
|      6 | George Michael | Ragdoll    |    9 |
|      7 | Jackson        | Sphynx     |    7 |
+--------+----------------+------------+------+
7 rows in set (0.01 sec)
```

```
update cats set age=14 where name='Misty'; # change age
#from 13 to 14.
```

```
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      1 | Ringo          | Shorthair  |    4 |
|      2 | Cindy          | Maine Coon |   10 |
|      3 | Dumbledore     | Maine Coon |   11 |
|      4 | Egg            | Persian    |    4 |
|      5 | Misty          | Shorthair  |   14 |
|      6 | George Michael | Ragdoll    |    9 |
|      7 | Jackson        | Sphynx     |    7 |
+--------+----------------+------------+------+
7 rows in set (0.00 sec)
```

Some practice queries-Update:

```
update cats set name='Jack' where name='jackson'; # update
'jackson' to 'jack'
```

```
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      1 | Ringo          | Shorthair  |    4 |
|      2 | Cindy          | Maine Coon |   10 |
|      3 | Dumbledore     | Maine Coon |   11 |
|      4 | Egg            | Persian    |    4 |
|      5 | Misty          | Shorthair  |   14 |
|      6 | George Michael | Ragdoll    |    9 |
|      7 | Jack           | Sphynx     |    7 |
+--------+----------------+------------+------+
7 rows in set (0.00 sec)
```

```
update cats set breed='British Shorthair' where
name='Ringo'; # update 'Ringo' # breed to 'British
Shorthair'.
```

```
+--------+----------------+------------------+------+
| cat_id | name           | breed            | age  |
+--------+----------------+------------------+------+
|      1 | Ringo          | British Shorthair |    4 |
|      2 | Cindy          | Maine Coon       |   10 |
|      3 | Dumbledore     | Maine Coon       |   11 |
|      4 | Egg            | Persian          |    4 |
|      5 | Misty          | Shorthair        |   14 |
|      6 | George Michael | Ragdoll          |    9 |
|      7 | Jack           | Sphynx           |    7 |
+--------+----------------+------------------+------+
7 rows in set (0.00 sec)
```

```
update cats set age=12 where breed='Maine Coon'; # update
'Maine Coon' age to 12.
```

```
+--------+----------------+------------------+------+
| cat_id | name           | breed            | age  |
+--------+----------------+------------------+------+
|      1 | Ringo          | British Shorthair |    4 |
|      2 | Cindy          | Maine Coon       |   12 |
|      3 | Dumbledore     | Maine Coon       |   12 |
|      4 | Egg            | Persian          |    4 |
|      5 | Misty          | Shorthair        |   14 |
|      6 | George Michael | Ragdoll          |    9 |
|      7 | Jack           | Sphynx           |    7 |
+--------+----------------+------------------+------+
7 rows in set (0.00 sec)
```

Delete statement:

Before deleting something it is a good practice that you check what are going to delete by using select statement.

delete from cats where name='egg'; # note that the cat_id 4 no longer existing.

```
| cat_id | name           | breed              | age  |
+--------+----------------+--------------------+------+
|      1 | Ringo          | British Shorthair |    4 |
|      2 | Cindy          | Maine Coon         |   12 |
|      3 | Dumbledore     | Maine Coon         |   12 |
|      5 | Misty          | Shorthair          |   14 |
|      6 | George Michael | Ragdoll            |    9 |
|      7 | Jack           | Sphynx             |    7 |
+--------+----------------+--------------------+------+
6 rows in set (0.01 sec)
```

delete cats; #this will delete all the data inside the #table but the table structure still exist you can put data inside it.
drop table will entirely remove your table.

Some practice queries-Delete:

delete from cats where age=4;

```
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      2 | Cindy          | Maine Coon |   12 |
|      3 | Dumbledore     | Maine Coon |   12 |
|      5 | Misty          | Shorthair  |   14 |
|      6 | George Michael | Ragdoll    |    9 |
|      7 | Jack           | Sphynx     |    7 |
+--------+----------------+------------+------+
5 rows in set (0.00 sec
```

delete from cats where age=cat_id; # deletes data where age and cat_id are same.

```
+--------+----------------+------------+------+
| cat_id | name           | breed      | age  |
+--------+----------------+------------+------+
|      2 | Cindy          | Maine Coon |   12 |
|      3 | Dumbledore     | Maine Coon |   12 |
|      5 | Misty          | Shorthair  |   14 |
|      6 | George Michael | Ragdoll    |    9 |
+--------+----------------+------------+------+
4 rows in set (0.00 sec)
```

delete from cats; # deletes all data from the table. Table still exists.

```
Empty set (0.00 sec)
```
