**MySQL\_Commands**

Saturday, November 13, 2021

12:09 AM

|  |  |
| --- | --- |
| **Table of contents**   * 1. **Creating databases and table**      1. Create database      2. Create table      3. Drop      4. Use      5. Select      6. Data types         1. Int         2. Varchar   2. **Data insertion and table structure**      1. Insert      2. Multiple insert      3. Warnings      4. Not null      5. Default      6. Primary key   3. **CRUD commands**      1. Create      2. Select and where clause      3. Read      4. Update      5. Delete |  |
| **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\_incremen**t 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) |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
| Work in Progress… |  |