|  |  |
| --- | --- |
| **Handy MySQL Commands** | |
| **Description** | **Command** |
| To login (from unix shell) use -h only if needed. | [mysql dir]/bin/mysql -h hostname -u root -p |
| Create a database on the sql server. | create database [databasename]; |
| List all databases on the sql server. | show databases; |
| Switch to a database. | use [db name]; |
| To see all the tables in the db. | show tables; |
| To see database's field formats. | describe [table name]; |
| To delete a db. | drop database [database name]; |
| To delete a table. | drop table [table name]; |
| Show all data in a table. | SELECT \* FROM [table name]; |
| Returns the columns and column information pertaining to the designated table. | show columns from [table name]; |  |
|  |  |  |
| Show certain selected rows with the value "whatever". | SELECT \* FROM [table name] WHERE [field name] = "whatever"; |  |
|  |  |  |
| Show all records containing the name "Bob" AND the phone number '3444444'. | SELECT \* FROM [table name] WHERE name = "Bob" AND phone\_number = '3444444'; |  |
|  |  |  |
| Show all records not containing the name "Bob" AND the phone number '3444444' order by the phone\_number field. | SELECT \* FROM [table name] WHERE name != "Bob" AND phone\_number = '3444444' order by phone\_number; |  |
|  |  |  |
| Show all records starting with the letters 'bob' AND the phone number '3444444'. | SELECT \* FROM [table name] WHERE name like "Bob%" AND phone\_number = '3444444'; |  |
|  |  |  |
| Use a regular expression to find records. Use "REGEXP BINARY" to force case-sensitivity. This finds any record beginning with a. | SELECT \* FROM [table name] WHERE rec RLIKE "^a$"; |  |
|  |  |  |
| Show unique records. | SELECT DISTINCT [column name] FROM [table name]; |  |
| Show selected records sorted in an ascending (asc) or descending (desc). | SELECT [col1],[col2] FROM [table name] ORDER BY [col2] DESC; |  |
| Count rows. | SELECT COUNT(\*) FROM [table name]; |  |
|  |  |  |
| Join tables on common columns. | select lookup.illustrationid, lookup.personid,person.birthday from lookup left join person on lookup.personid=person.personid=statement to join birthday in person table with primary illustration id; |  |
| Switch to the mysql db. Create a new user. | INSERT INTO [table name] (Host,User,Password) VALUES('%','user',PASSWORD('password')); |  |
| Change a users password.(from unix shell). | [mysql dir]/bin/mysqladmin -u root -h hostname.blah.org -p password 'new-password' |  |
| Change a users password.(from MySQL prompt). | SET PASSWORD FOR 'user'@'hostname' = PASSWORD('passwordhere'); |  |
| Switch to mysql db.Give user privilages for a db. | INSERT INTO [table name] (Host,Db,User,Select\_priv,Insert\_priv,Update\_priv,Delete\_priv,Create\_priv,Drop\_priv) VALUES ('%','db','user','Y','Y','Y','Y','Y','N'); |  |
| To update info already in a table. | UPDATE [table name] SET Select\_priv = 'Y',Insert\_priv = 'Y',Update\_priv = 'Y' where [field name] = 'user'; |  |
| Delete a row(s) from a table. | DELETE from [table name] where [field name] = 'whatever'; |  |
| Update database permissions/privilages. | FLUSH PRIVILEGES; |  |
| Delete a column. | alter table [table name] drop column [column name]; |  |
| Add a new column to db. | alter table [table name] add column [new column name] varchar (20); |  |
| Change column name. | alter table [table name] change [old column name] [new column name] varchar (50); |  |
| Make a unique column so you get no dupes. | alter table [table name] add unique ([column name]); |  |
| Make a column bigger. | alter table [table name] modify [column name] VARCHAR(3); |  |
| Delete unique from table. | alter table [table name] drop index [colmn name]; |  |
| Load a CSV file into a table. | LOAD DATA INFILE '/tmp/filename.csv' replace INTO TABLE [table name] FIELDS TERMINATED BY ',' LINES TERMINATED BY '\n' (field1,field2,field3); |  |
| Dump all databases for backup. Backup file is sql commands to recreate all db's. | [mysql dir]/bin/mysqldump -u root -ppassword --opt >/tmp/alldatabases.sql |  |
| Dump one database for backup. | [mysql dir]/bin/mysqldump -u username -ppassword --databases databasename >/tmp/databasename.sql |  |
| Dump a table from a database. | [mysql dir]/bin/mysqldump -c -u username -ppassword databasename tablename > /tmp/databasename.tablename.sql |  |
| Restore database (or database table) from backup. | [mysql dir]/bin/mysql -u username -ppassword databasename < /tmp/databasename.sql |  |
| Create Table Example 1. | CREATE TABLE [table name] (firstname VARCHAR(20), middleinitial VARCHAR(3), lastname VARCHAR(35),suffix VARCHAR(3), officeid VARCHAR(10),userid VARCHAR(15),username VARCHAR(8),email VARCHAR(35),phone VARCHAR(25), groups  VARCHAR(15),datestamp DATE,timestamp time,pgpemail VARCHAR(255)); |  |
| Create Table Example 2. | create table [table name] (personid int(50) not null auto\_increment primary key,firstname varchar(35),middlename varchar(50),lastname varchar(50) default 'bato'); |  |
| Port number | SHOW GLOBAL VARIABLES LIKE 'PORT'; |  |

**Table 4.2. MySQL Data Types**

| **Type** | **Size** | **Description** |
| --- | --- | --- |
| **CHAR[Length]** | Length bytes | A fixed-length field from 0 to 255 characters long |
| **VARCHAR[Length]** | String length + 1 or 2 bytes | A variable-length field from 0 to 65,535 characters long |
| **TINYTEXT** | String length + 1 bytes | A string with a maximum length of 255 characters |
| **TEXT** | String length + 2 bytes | A string with a maximum length of 65,535 characters |
| **MEDIUMTEXT** | String length + 3 bytes | A string with a maximum length of 16,777,215 characters |
| **LONGTEXT** | String length + 4 bytes | A string with a maximum length of 4,294,967,295 characters |
| **TINYINT[Length]** | 1 byte | Range of –128 to 127 or 0 to 255 unsigned |
| **SMALLINT[Length]** | 2 bytes | Range of –32,768 to 32,767 or 0 to 65,535 unsigned |
| **MEDIUMINT[Length]** | 3 bytes | Range of –8,388,608 to 8,388,607 or 0 to 16,777,215 unsigned |
| **INT[Length]** | 4 bytes | Range of –2,147,483,648 to 2,147,483,647 or 0 to 4,294,967,295 |
| **BIGINT[Length]** | 8 bytes | Range of –9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 or 0 to 18,446,744,073,709,551,615 unsigned |
| **FLOAT[Length, Decimals]** | 4 bytes | A small number with a floating decimal point |
| **DOUBLE[Length, Decimals]** | 8 bytes | A large number with a floating decimal point |
| **DECIMAL[Length, Decimals]** | Length + 1 or 2 bytes | A **DOUBLE** stored as a string, allowing for a fixed decimal point |
| **DATE** | 3 bytes | In the format of YYYY-MM-DD |
| **DATETIME** | 8 bytes | In the format of YYYY-MM-DD HH:MM:SS |
| **TIMESTAMP** | 4 bytes | In the format of YYYYMMDDHHMMSS; acceptable range starts in 1970 and ends in the year 2038 |
| **TIME** | 3 bytes | In the format of HH:MM:SS |
| **ENUM** | 1 or 2 bytes | Short for enumeration, which means that each column can have one of several possible values |
| **SET** | 1, 2, 3, 4, or 8 bytes | Like **ENUM** except that each column can have more than one of several possible values |

Example

RDBMS : Relational database management System.

Database : Database is collection of tables

Table : Table collection of rows and columns

Database : IUT\_DB

Table : Student

|  |  |  |  |
| --- | --- | --- | --- |
| StudentID (Primary Key) | Student\_Name | Age | SchoolID (Foreign Key) |
| 101 | Mekribon | 19 | 1 |
| 102 | Tokhirjon | 20 | 2 |
| 103 | Javohir | 20 | 1 |

Table : School

|  |  |  |
| --- | --- | --- |
| SchoolID(Primary key) | School\_Name |  |
| 1 | SOCIE |  |
| 2 | SOL |  |

Row : means records

Column : means field

mysql: [Warning] C:\Program Files\MySQL\MySQL Server 8.0\bin\mysql.exe: ignoring option '--no-beep' due to invalid value ''.

Enter password: \*\*\*\*

Welcome to the MySQL monitor. Commands end with ; or \g.

Your MySQL connection id is 13

Server version: 8.0.13 MySQL Community Server - GPL

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owners.

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

mysql> SHOW GLOBAL VARIABLES LIKE 'PORT';

+---------------+-------+

| Variable\_name | Value |

+---------------+-------+

| port | 3306 |

+---------------+-------+

1 row in set (0.97 sec)

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| iut\_db |

| mysql |

| performance\_schema |

| sakila |

| sys |

| world |

+--------------------+

7 rows in set (0.45 sec)

mysql> use world;

Database changed

mysql> show tables;

+-----------------+

| Tables\_in\_world |

+-----------------+

| city |

| country |

| countrylanguage |

+-----------------+

3 rows in set (0.26 sec)

mysql> describe city;

+-------------+----------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+-------------+----------+------+-----+---------+----------------+

| ID | int(11) | NO | PRI | NULL | auto\_increment |

| Name | char(35) | NO | | | |

| CountryCode | char(3) | NO | MUL | | |

| District | char(20) | NO | | | |

| Population | int(11) | NO | | 0 | |

+-------------+----------+------+-----+---------+----------------+

5 rows in set (0.09 sec)

mysql>

mysql> describe city;

+-------------+----------+------+-----+---------+----------------+

| Field | Type | Null | Key | Default | Extra |

+-------------+----------+------+-----+---------+----------------+

| ID | int(11) | NO | PRI | NULL | auto\_increment |

| Name | char(35) | NO | | | |

| CountryCode | char(3) | NO | MUL | | |

| District | char(20) | NO | | | |

| Population | int(11) | NO | | 0 | |

+-------------+----------+------+-----+---------+----------------+

5 rows in set (0.02 sec)

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| iut\_db |

| mysql |

| performance\_schema |

| sakila |

| sys |

| world |

+--------------------+

7 rows in set (0.19 sec)

mysql> drop database iut\_db;

Query OK, 1 row affected (2.66 sec)

mysql> create database IUT\_DB;

Query OK, 1 row affected (0.23 sec)

mysql> SHOW DATABASES;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| iut\_db |

| mysql |

| performance\_schema |

| sakila |

| sys |

| world |

+--------------------+

7 rows in set (0.18 sec)

mysql> USE IUT\_DB;

Database changed

mysql> create table Student (StudentID int(3), Student\_Name char(20), Age int(2));

Query OK, 0 rows affected (1.94 sec)

mysql> show tables;

+------------------+

| Tables\_in\_iut\_db |

+------------------+

| student |

+------------------+

1 row in set (0.02 sec)

mysql> describe student;

+--------------+----------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+----------+------+-----+---------+-------+

| StudentID | int(3) | YES | | NULL | |

| Student\_Name | char(20) | YES | | NULL | |

| Age | int(2) | YES | | NULL | |

+--------------+----------+------+-----+---------+-------+

3 rows in set (0.00 sec)

mysql> select \* from student;

Empty set (0.05 sec)

mysql> insert into student values(101,"Mekribon",19);

Query OK, 1 row affected (0.16 sec)

mysql> select \* from student;

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

+-----------+--------------+------+

1 row in set (0.00 sec)

mysql> insert into student(studentid,student\_name,age) values(102, "tohirjon",20);

Query OK, 1 row affected (1.15 sec)

mysql>

mysql> select \* from student;

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

| 102 | tohirjon | 20 |

+-----------+--------------+------+

2 rows in set (0.00 sec)

mysql> insert into student(student\_name,studentid,age) values("jovohir",103,19);

Query OK, 1 row affected (0.53 sec)

mysql> select \* from student;

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

| 102 | tohirjon | 20 |

| 103 | jovohir | 19 |

+-----------+--------------+------+

3 rows in set (0.00 sec)

mysql> select studentid from student;

+-----------+

| studentid |

+-----------+

| 101 |

| 102 |

| 103 |

+-----------+

3 rows in set (0.00 sec)

mysql> select \* from student where studentid=101;

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

+-----------+--------------+------+

1 row in set (0.00 sec)

mysql> select \* from student where age=19;

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

| 103 | jovohir | 19 |

+-----------+--------------+------+

2 rows in set (0.00 sec)

mysql> select \* from student where student\_name like "m%";

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

+-----------+--------------+------+

1 row in set (0.00 sec)

mysql> select \* from student where student\_name like "%r";

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 103 | jovohir | 19 |

+-----------+--------------+------+

1 row in set (0.00 sec)

mysql> delete from student where studentid=103;

Query OK, 1 row affected (0.32 sec)

mysql> select \* from student;

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

| 102 | tohirjon | 20 |

+-----------+--------------+------+

2 rows in set (0.00 sec)

mysql>

mysql> drop table student;

Query OK, 0 rows affected (0.85 sec)

mysql> show tables;

Empty set (0.00 sec)

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| iut\_db |

| mysql |

| performance\_schema |

| sakila |

| sys |

| world |

+--------------------+

7 rows in set (0.04 sec)

mysql> drop database iut\_DB;

Query OK, 0 rows affected (1.75 sec)

mysql> show databases;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| mysql |

| performance\_schema |

| sakila |

| sys |

| world |

+--------------------+

6 rows in set (0.00 sec)

mysql> create database IUT\_DB;

Query OK, 1 row affected (0.17 sec)

mysql> SHOW DATABASES;

+--------------------+

| Database |

+--------------------+

| information\_schema |

| iut\_db |

| mysql |

| performance\_schema |

| sakila |

| sys |

| world |

+--------------------+

7 rows in set (0.04 sec)

mysql> USE IUT\_DB;

Database changed

mysql> create table Student (StudentID int(3), Student\_Name char(20), Age int(2));

Query OK, 0 rows affected (1.27 sec)

mysql> show tables;

+------------------+

| Tables\_in\_iut\_db |

+------------------+

| student |

+------------------+

1 row in set (0.05 sec)

mysql> describe student;

+--------------+----------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+----------+------+-----+---------+-------+

| StudentID | int(3) | YES | | NULL | |

| Student\_Name | char(20) | YES | | NULL | |

| Age | int(2) | YES | | NULL | |

+--------------+----------+------+-----+---------+-------+

3 rows in set (0.13 sec)

mysql> insert into student values(101,"Mekribon",19);

Query OK, 1 row affected (0.24 sec)

mysql> insert into student(studentid,student\_name,age) values(102, "tohirjon",20);

Query OK, 1 row affected (1.06 sec)

mysql> insert into student(student\_name,studentid,age) values("jovohir",103,19);

Query OK, 1 row affected (0.13 sec)

mysql> select \* from student;

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

| 102 | tohirjon | 20 |

| 103 | jovohir | 19 |

+-----------+--------------+------+

3 rows in set (0.00 sec)

mysql> select \* from student where studentid=101;

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

+-----------+--------------+------+

1 row in set (0.00 sec)

mysql> select \* from student where student\_name like "m%";

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

+-----------+--------------+------+

1 row in set (0.00 sec)

mysql> select \* from student where age=19;

+-----------+--------------+------+

| StudentID | Student\_Name | Age |

+-----------+--------------+------+

| 101 | Mekribon | 19 |

| 103 | jovohir | 19 |

+-----------+--------------+------+

2 rows in set (0.00 sec)

mysql> alter table student add (dob date);

Query OK, 0 rows affected (1.77 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;

+--------------+----------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+----------+------+-----+---------+-------+

| StudentID | int(3) | YES | | NULL | |

| Student\_Name | char(20) | YES | | NULL | |

| Age | int(2) | YES | | NULL | |

| dob | date | YES | | NULL | |

+--------------+----------+------+-----+---------+-------+

4 rows in set (0.03 sec)

mysql> alter table student drop dob;

Query OK, 0 rows affected (2.38 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> describe student;

+--------------+----------+------+-----+---------+-------+

| Field | Type | Null | Key | Default | Extra |

+--------------+----------+------+-----+---------+-------+

| StudentID | int(3) | YES | | NULL | |

| Student\_Name | char(20) | YES | | NULL | |

| Age | int(2) | YES | | NULL | |

+--------------+----------+------+-----+---------+-------+

3 rows in set (0.00 sec)

mysql> alter table student drop age;

Query OK, 0 rows affected (1.91 sec)

Records: 0 Duplicates: 0 Warnings: 0

mysql> select \* from student;

+-----------+--------------+

| StudentID | Student\_Name |

+-----------+--------------+

| 101 | Mekribon |

| 102 | tohirjon |

| 103 | jovohir |

+-----------+--------------+

3 rows in set (0.00 sec)

mysql>