**MySQL**

**USER MANAGEMENT**

**List all users**

**>** select user from mysql.user;

**Create the user**

**>** create user <username>@localhost identified by '<password>';

**>** create user IF NOT EXISTS vissu@localhost IDENTIFIED BY 'vissu';

**Switch to user**

**>** system mysql -u vissu -p;

**Show current user**

**>** select current\_user ();

**>** select user ();

**List the existing privileges for the user**

**>** show grants for <username>;   
**>** show grants for vissu;

**Give privileges to a new user**

**>** GRANT ALL PRIVILEGES ON \* . \* TO <username>@localhost;

**>** GRANT ALL PRIVILEGES ON practice.\* TO ‘vissu’@’localhost’;

**>** GRANT CREATE, SELECT, INSERT ON \* . \* TO ‘vissu’@’localhost’;

**>** GRANT SELECT, UPDATE, INSERT ON practice.\* TO ‘vissu’@’localhost’;

**Revoke privileges**

**>** revoke all on practice.\* from ‘vissu’@’localhost’;

**>** revoke all privileges on bookstore.\* from 'vissu'@'localhost';

**>** revoke UPDATE, INSERT ON mystudentdb.\* FROM ‘vissu’@l’ocalhost’;

**Flush all privileges**

**>** Flush privileges;

**Change user password**

**>** set password for <username>@localhost = '<password>';

**>** set password for vissu@localhost = 'vissu@12345';

**Drop the user**

**>** drop user <username>@localhost;

**>** drop user vissu@localhost;

**>** drop user vissu@localhost, temp@localhost;

**DATABASE MANAGEMENT**

**List all databases**

**>** show databases;

**Creating the database**

**>** create database practice;

**Changing the database**

**>** use practice;

**Dropping the database**

**>** drop database practice;

**COPY Database**

**1. First create new database to copy.**

**>** create database IF NOT EXISTS practice\_copy;

**2. Open Command Prompt and change the directory to the mysql installed location in your pc.**

**>** cd C:\Program Files\MySQL\MySQL Server 8.0\bin

**3. Now dump the database to a .sql extension file.**

**>** mysqldump -u <username> -p <source database> > <output file path>

**>** mysqldump -u root -p practice > E:\practrice.sql

**4. Now load this data from .sql extension file to database.**

**>** mysql -u <username> -p <destination database> < <input file path >

**>** mysql -u root -p practice\_copy < E:\practice.sql

**DATA TYPES**

**Integer**

1. TINYINT ===🡺 8-BIT PRECISON
2. SMALLINT ===🡺 16-BIT PRECISION
3. MEDIUMINT ===🡺 24-BIT PRECISION
4. INT ===🡺 32-BIT PRECISION
5. BIGINT ===🡺 64-BIT PRECISION

**Float integer**

1. FLOAT (m, d) ===🡺 You can define the display length (m) and the number of decimals (d). Decimal precision can go to 24 places for a float type. It requires 2 bytes for storage.
2. DOUBLE (m, d) ===🡺 You can define the display length (m) and the number of decimals (d). Decimal precision can go to 53 places for a double. It requires 8 bytes for storage.
3. DECIMAL (m, d) ===🡺 Defining the display length (m) and the number of decimals (d) is required.

**Datetime**

1. YEAR [2|4] ===🡺 Year value as 2 digits or 4 digits. default is 4. 1 byte for storage.
2. DATE ===🡺 '**yyyy-mm-dd'**. 3 bytes for storage.
3. TIME ===🡺 '**HH: MM: SS**'. 3 bytes for storage.
4. DATETIME ===🡺 **'yyyy-mm-dd hh: mm: ss**'. 5 bytes for storage.
5. TIMESTAMP ===🡺 '**YYYY-MM-DD HH: MM: SS**'. 4 bytes for storage.

**String**

1. CHAR
2. VARCHAR
3. TINYTEXT
4. TEXT
5. MEDIUMTEXT
6. LONGTEXT
7. BINARY
8. VARBINARY
9. ENUM
10. SET

**TABLE**

**TABLE MANAGEMENT CONCEPTS**

1. How to create a table?
2. How to alter the table?
3. How to add or delete columns to the table?
4. How to rename the table?
5. How to describe the table?
6. How to copy the table?
7. How to truncate the table?
8. How to drop the table?
9. How to repair table?
10. Table locking?

Before getting into table creation, inserting data, and all we need to know about CONSTRAINTS and DATATYPES.

**CONSTRAINTS**

A CONSTRAINT is used to define rules on column, what values can be allowed or restricted to be stored in the column.

The purpose of including constraints is to enforce the integrity of a database.

CONSTRAINTS can be classified into 2 types.

1. Column Level Constraints
2. Table Level Constraints

**How to Create a table?**

**Syntax-1:**

**CREATE TABLE** <table name>

(<column name-1> <**DATATYPE**> <**COLUMN CONSTRAINT**> <**EXTRA CONSTRAINT**>,

<column name-2> <**DATATYPE**> <**COLUMN CONSTRAINT**> <**EXTRA CONSTRAINT**>,

<column name-3> <**DATATYPE**> <**COLUMN CONSTRAINT**> <**EXTRA CONSTRAINT**>,

**PRIMARY KEY** (<column name-1>, <column name-2>….so on)

);

**Ex:**

**CREATE TABLE** user

(uid **INT NOT NULL UNIQUE AUTO\_INCREMENT,**

uname **VARCHAR (75),**

**PRIMARY KEY** (uid, uname)

);

**Note:** With this syntax approach there is one problem, if the table is already created then it will give the error “**Table already exists**”. To avoid this error, we have to use syntax-2.

**Syntax-2:**

**CREATE TABLE IF NOT EXISTS** <table name>

(<column name-1> <**DATATYPE**> <**COLUMN CONSTRAINT**> <**EXTRA CONSTRAINT**>,

<column name-2> <**DATATYPE**> <**COLUMN CONSTRAINT**> <**EXTRA CONSTRAINT**>,

<column name-3> <**DATATYPE**> <**COLUMN CONSTRAINT**> <**EXTRA CONSTRAINT**>,

**PRIMARY KEY** (<column name-1>, <column name-2>….so on)

);

**Ex:**

**CREATE TABLE IF NOT EXISTS** user

(uid **INT NOT NULL UNIQUE AUTO\_INCREMENT,**

uname **VARCHAR (75),**

**PRIMARY KEY** (uid, uname)

);

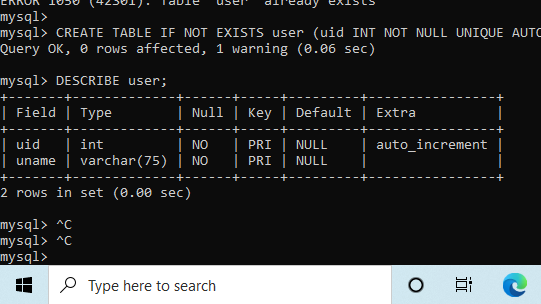
**How to know the table schema?**

**Syntax:**

**DESCRIBE** <table name>;

**Ex:**

**DESCRIBE** user;



**How to drop the table?**

**Syntax-1:**

**DROP TABLE** <table name>;

**Ex:**

**DROP TABLE** user;

**Note:** If the specified table is not there it will gives the error “**Unknown table**”. To avoid this, we have to use syntax-2.

**Syntax-2:**

**DROP TABLE IF EXISTS** <table name>;

**Ex:**

**DROP TABLE IF EXISTS** user;