**Notes MySQL**

**Steps to work in VS code:**

1. Create virtual environment, activate virtual environments
2. Install mysql driver: pip install mysql-connector-python
3. Install MySQL extension. Any extension
4. Ctrl+shift+p select MYSQL: connection click and add all the things asked like username, password etc. after set it means now db connection is build now connects to the MySQL server by following code:

import mysql.connector  
  
mydb = mysql.connector.connect(  
  host="localhost",  
  user="yourusername",  
  password="yourpassword"  
)  
  
print(mydb)

1. When connected to MySQL server create a Database now by following code:

# Creating a cursor object using the cursor() method cursor = my\_db.cursor() # SQL statement to create a database create\_database\_query = "CREATE DATABASE IF NOT EXISTS company\_db"

1. After database creation create table and show table and check if it exists.
2. Run queries.

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**How to work in MySQL Workbench:**

1. Install **mysql workbench** and practice in it.
2. Make connection
3. Create Schema
4. **Create table in query:**

CREATE TABLE my\_table(

id INT AUTO\_INCREMENT PRIMARY KEY,

name VARCHAR(255),

age TINYINT UNSIGNED,

gender VARCHAR(10),

qualification VARCHAR(30),

profession VARCHAR(30)

);

1. **Insert values into table:**

INSERT INTO persons (name, age, gender, qualification, profession)

VALUES ('Alice Johnson', 28, 'Female', 'Bachelor\'s Degree', 'Engineer');

INSERT INTO persons (name, age, gender, qualification, profession)

VALUES ('Bob Smith', 35, 'Male', 'Master\'s Degree', 'Data Scientist');

1. **Search for specific values from the columns:**

SELECT \* FROM table\_name;

SELECT column\_name FROM table\_name WHERE age<5

1. **Delete specific row:**

DELETE from my\_table where id=2;

1. **Delete all rows:**

DELETE from my\_table;

1. **Delete table:**

DROP my\_table;

1. **Update specific value in table:**

UPDATE new

SET name = 'Malik'

WHERE name = 'samreen';

1. **Update all values in table:**

UPDATE new

SET name = 'Malik'

1. **Join tables:**

There are four types of joins:

1. **Inner join:** is by default when we write join it means inner join. **(Intersection)**CREATE TABLE Employees (

EmployeeID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR(50),

DepartmentID INT

);

CREATE TABLE Departments (

DepartmentID INT PRIMARY KEY,

DepartmentName VARCHAR(50)

);

-- Insert data into Employees table

INSERT INTO Employees (Name, DepartmentID)

VALUES

('Alice', 1),

('Bob', 2),

('Charlie', 1),

('David', NULL);

-- Insert data into Departments table

INSERT INTO Departments (DepartmentID, DepartmentName)

VALUES

(1, 'HR'),

(2, 'IT'),

(3, 'Sales');

SELECT Employees.Name, Departments.DepartmentName

FROM Employees

INNER JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID

1. **Full join:** (**Union)**

**SELECT Employees.Name, Departments.DepartmentName**

**FROM Employees**

**Left JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID**

**UNION**

**SELECT Employees.Name, Departments.DepartmentName**

**FROM Employees**

**RIGHT JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID;**

1. **Right join**

SELECT Employees.Name, Departments.DepartmentName

FROM Employees

Left JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID

**4) Left join**

SELECT Employees.Name, Departments.DepartmentName

FROM Employees

Left JOIN Departments ON Employees.DepartmentID = Departments.DepartmentID