# Class Notes

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| Class: XI | Date: 22-Oct-2021 |
| Subject: Informatics Practices | Topic: Structured Query Language |

## Database Handling commands in MySQL

**Creating a Database.**
**The following command will create School database in MySQL.**
**mysql> CREATE DATABASE School;**


**Opening a database**
**To open an existing database, following command is used.**
**mysql> USE school ;**


**Getting listings of database and tables**
**mysql> SHOW DATABASES;**
**mysql> SHOW TABLES;**


**Deleting a Database and Table**
**mysql> DROP DATABASE School;**
**mysql> DROP TABLE Student;**


**Viewing Table Structure**
**mysql> DESCRIBE Student;**

## Creating Tables & Inserting records

**Creating Simple Tables:**
    **CREATE TABLE < Table Name>**
    **(<Col name1><data type>[(size)],....);**
    **Data types- INTEGER, NUMERIC(P,D), CHAR(n), VARCHAR(n), DATE etc.**

**NB.: This sheet is prepared from home.**

mysql> CREATE TABLE Employee (empID int(2),
          ename char(30), city char(25),
          pay float(8,2));

**Inserting Records:**
          INSERT INTO <Table Name> VALUES (value1, vale2, ......);
          String and Date type values must be enclosed in single or double quotes.
mysql> INSERT INTO Employee VALUES (1,'Sahil','Allahabad',15000);
mysql> INSERT INTO Employee VALUES (2, 'Vishal', 'Dehradun',20000);
mysql> INSERT INTO Employee VALUES (3, 'Somesh', 'Mumbai',10500);

## Making Simple Queries Using SELECT

The SELECT command of SQL, empower you to make a request (queries) to retrieve stored records from the database.

The syntax of SQL is given below
SELECT < [Distinct | ALL] *| column name(s)>
FROM <table(s)>
WHERE <condition>
ORDER BY <column name> [ASC | DESC] ;
Consider the table Student having some records as –

| StID | FirstName | LastName | DOB | City | Class |
|------|-----------|----------|----------|-----------|-------|
| S1 | Sahil | Kumar | 10-11-48 | Allahabad | 12 |
| S2 | Vikas | Firoz | 10-05-70 | Delhi | 11 |
| S3 | Irphan | Salim | 05-10-70 | Jaipur | 11 |
| S4 | Somesh | Jain | 10-04-72 | Mumbai | 10 |
| S5 | Joseph | Thomas | 12-03-75 | Mumbai | 10 |

**NB.: This sheet is prepared from home.**

## Selecting all columns

If you want to view all columns of the empl table, then you should give the following command

mysql> SELECT * FROM empl;
MySQL will display the all records
with all columns in the empl table.
* Is used to represent all columns.

## Selecting columns

If you want to view only eName and job columns of the empl table

select ename, job from empl;
select ename, sal from empl;

## Eliminating Duplicate values in a column - DISTINCT

mysql> select job from empl;
mysql> select distinct job from empl;

## Doing simple calculations

We can also perform simple calculations with SQL Select command. SQL provide a dummy table named DUAL, which can be used for this purpose.
mysql> SELECT 4*3 ;

## Scalar expressions with selected fields

SQL allows us to place scalar expressions and constants among the selected fields.
For example:
mysql> select ename,sal+1000 from empl;

**NB.: This sheet is prepared from home.**

**Handling Nulls**

Empty values are represented as Nulls in a table.
mysql> select ename, job, comm from empl
See the null values appear as Null. If we want
to substitute null with a value in the output,
we can use IFNULL() function.

**Handling Nulls**
IFNULL() Syntax:
IFNULL(columnname, value-to-be-substituted)
mysql> select ename, job,
       ifnull(comm, 'Not Entitled') from empl

**Putting text in the query output:**
mysql> select ename, ' gets the commission ', comm from empl

NB.: This sheet is prepared from home.