

## SQL PRACTICAL ASSIGNMENT

**Lab Activity 1:** Create a table STUDENT with under mentioned structure by using SQL Statement:

StdID	Number	Primary Key
StdName	Character (30)	NOT NULL
Sex	Character(6)	Male or Female
Percentage	Number	
SClass	Number	
Sec	Character	
Stream	Character(10)	Science or Commerce
DOB	Date	Date of Birth

Step 1: Open MySQL, Open Database and create table as:

```
CREATE TABLE Student (  
StdID INT(4) PRIMARY KEY, StdName VARCHAR(30) NOT NULL,  
Sex VARCHAR(1), Percentage DECIMAL(5,2), SClass INT ,  
Sec VARCHAR(1), Stream VARCHAR(10), DOB DATE );
```

Step 2: Press Enter key to complete create table:

Step 3: Insert records into STUDENT table.

```
INSERT INTO Student VALUES (1001, 'AKSHRA AGARWAL','FEMALE',70,11,'A', '10/11/1996');
```

Step 4: As you press enter key after typing above statement, 1 record will be stored into STUDENT table.

Step 5: Similarly like step 3, enter other records of the following table.

StdID	StdName	Sex	Percentage	Class	Sec	Stream	DOB
1001	AKSHRA AGARWAL	FEMALE	70	11	A	Science	10/11/1996
1002	ANJANI SHARMA	FEMALE	75	11	A	Commerce	18/09/1996
1003	ANSHUL SAXENA	MALE	78	11	A	Commerce	19/11/1996
1004	AISHWARYA SINGH	FEMALE	79	11	A	Commerce	1/11/1996
1005	AKRITI SAXENA	FEMALE	76	11	A	Commerce	20/09/1996
1006	KHUSHI AGARWAL	FEMALE	77	11	A	Commerce	14/09/2003
1007	MAAHI AGARWAL	FEMALE	74	11	A	Science	21/04/1997
1008	MITALI GUPTA	FEMALE	78	12	A	Science	26/11/1997
1009	NIKUNJ AGARWAL	MALE	58	12	A	Science	12/7/1997
1010	PARKHI	FEMALE	59	12	A	Commerce	20/12/1997

1011	PRAKHAR TIWARI	MALE	43	12	A	Science	22/04/1997
1012	RAGHAV GANGWAR	MALE	58	12	A	Commerce	21/12/1997
1013	SAHIL SARASWAT	MALE	57	12	A	Commerce	13/08/1997
1014	SWATI MISHRA	FEMALE	98	11	A	Science	13/08/1996
1015	HARSH AGARWAL	MALE	58	11	B	Science	28/08/2003
1016	HARSHIT KUMAR	MALE	98	11	B	Science	22/05/2003
1017	JAHANVI KAPOOR	MALE	65	11	B	Science	10/1/1997
1018	STUTI MISHRA	MALE	66	11	C	Commerce	10/1/1996
1019	SURYANSH KUMAR AGARWAL	MALE	85	11	C	Commerce	22/08/2007
1020	TANI RASTOGI	FEMALE	75	12	C	Commerce	15/01/1998
1021	TANISHK GUPTA	MALE	55	12	C	Science	11/4/1998
1022	TANMAY AGARWAL	MALE	57	11	C	Commerce	28/06/1998
1023	YASH SAXENA	MALE	79	11	C	Science	13/3/1998
1024	YESH DUBEY	MALE	85	12	C	Commerce	3/4/1998

**Lab Activity 2:** Open school database, then select student table and use following SQL statements.  
**TYPE THE STATEMENT, PRESS ENTER AND NOTE THE OUTPUT**

- 1 To display all the records form STUDENT table.  
SELECT \* FROM student ;
2. To display only name and date of birth from the table STUDENT.  
SELECT StdName, DOB FROM student ;
3. To display all students record where percentage is greater or equal to 80 FROM student table.  
SELECT \* FROM student WHERE percentage >= 80;
4. To display student name, stream and percentage where percentage of student is more than 80  
SELECT StdName, Stream, Percentage WHERE percentage > 80;
5. To display all records of science students whose percentage is more than 75 form student table.  
SELECT \* FORM student WHERE stream = 'Science' AND percentage > 75;

**Lab Activity 3:** Open school database, then select student table and use following SQL statements.  
**TYPE THE STATEMENT, PRESS ENTER AND NOTE THE OUTPUT**

1. To display the STUDENT table structure.

**DESCRIBE Student;**

2. To add a column (FIELD) in the STUDENT table, for example TeacherID as VARCHAR(20);

**ALTER TABLE Student ADD TeacherID VARCHAR(20);**

3. Type the statement

**DESC Student;**

Press enter key, now note the difference in table structure.

4. Type the statement and press enter key, note the new field that you have added as TeacherID

**SELECT \* FROM student;**

5. To modify the TeacherID data type form character to integer.

```
ALTER TABLE Student MODIFY TeacherID INTEGER ;
DESC Student;
SELECT * FROM student;
```

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#### Lab Activity 4

1. To Drop (Delete) a field form a table. For e.g you want to delete TeacherID field.

```
ALTER TABLE Student DROP TeacherID;
```

2. To subtract 5 form all students percentage and display name and percentage.

```
SELECT name, percentage - 5 FROM Student;
```

3. Using column alise for example we want to display StdName as Student Name and DOB as Date of Birth then the statement will be.

```
SELECT StdName AS "Student Name",
       DOB As "Date of Birth" FROM Student;
```

4. Display the name of all students whose stream is not Science

```
SELECT StdName FROM student
WHERE Stream <> 'Science';
```

5. Display all name and percentage where percentage is between 60 and 80

```
SELECT StdName, percentage FROM student WHERE percentage >=60 AND
percentage<=80 ;
```

#### Lab Activity 5:

1. To change a student name from SWATI MISHRA to SWATI VERMA whose StdID is 1014 and also change percentage 86.

```
UPDATE Student SET StdName = 'SWATI VERMA', percentage = 86
WHERE StdId = 1014;
```

2. To delete the records form student table where StdId is 1016.

```
DELETE FROM Student WHERE StdID = 1016;
```

3. Type the following SQL statement and note the output.

```
SELECT * FROM Student WHERE StdName LIKE 'G_ ' ;
SELECT * FROM Student WHERE StdName='G';
SELECT * FROM Student WHERE StdName LIKE 'G%' ;
SELECT * WHERE Student WHERE StdName='%G%' ;
```

4. Display all the streams in student table.

```
SELECT DISTINCT Stream FROM Student;
```

5. Note the output of the following statement.

```
SELECT StdName, Sex, Stream FROM Student WHERE percentage BETWEEN 70 AND 80;
```

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### Do yourself:

Create a Table **Empl** to store employee details as shown below and write statements for following queries based on the table.

empno	ename	job	mgr	hiredate	sal	comm	deptno
8369	SMITH	CLERK	8902	1990-12-18	800.00	NULL	20
8499	ANYA	SALESMAN	8698	1991-02-20	1600.00	300.00	30
8521	SETH	SALESMAN	8698	1991-02-22	1250.00	500.00	30
8566	MAHADEVAN	MANAGER	8839	1991-04-02	2985.00	NULL	20
8654	MOMIN	SALESMAN	8698	1991-09-28	1250.00	1400.00	30
8698	BINA	MANAGER	8839	1991-05-01	2850.00	NULL	30
8882	SHIVANSH	MANAGER	8839	1991-06-09	2450.00	NULL	10
8888	SCOTT	ANALYST	8566	1992-12-09	3000.00	NULL	20
8839	AMIR	PRESIDENT	NULL	1991-11-18	5000.00	NULL	10
8844	KULDEEP	SALESMAN	8698	1991-09-08	1500.00	0.00	30

1. Consider the **Empl** table and write SQL command to get the following.
    - a. Write a query to display EName and Sal of employees whose salary are greater than or equal to 2200?
    - b. Write a query to display details of employs who are not getting commission?
    - c. Write a query to display employee name and salary of those employees who don't have their salary in range of 2500 to 4000?
    - d. Write a query to display the name, job title and salary of employees who don't have manager?
    - e. Write a query to display the name of employee whose name contains "A" as third alphabet?
    - f. Write a query to display the name of employee whose name contains "T" as last alphabet?
    - g. Write a query to display the name of employee whose name contains "M" as First and "L" as third alphabet?
    - h. Write a query to display details of employs with the text "Not given", if commission is null?
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