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 keyto 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 recordwill be stored into STUDENTtable.

Step5: 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 ony name and date of birth from the table STUDENT.

SELECT StdName, DOB FROM student ;

3. To display all students record where percentage is greater of 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;
```

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 FROMstudent
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 SWATIMISHRA 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;
```

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?

Answer: **select ename,sal from empl where sal >= 2200;**

b. Write a query to display details of employs who are not getting commission?

Answer: **select * from empl where comm is null;**

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?

Answer: **select ename,sal from empl where sal not between 2500 and 4000;**

d. Write a query to display the name, job title and salary of employees who don't have manager?

Answer: **select ename,job,sal from empl where mgr is null;**

e. Write a query to display the name of employee whose name contains "A" as third alphabet?

Answer: **select ename from empl where ename like "__a%";**

f. Write a query to display the name of employee whose name contains "T" as last alphabet?

Answer: **select ename from empl where ename like "%t";**

g. Write a query to display the name of employee whose name contains "M" as First and "L" as third alphabet?

Answer: **select ename from empl where ename like "m_l%";**

h. Write a query to display details of employs with the text "Not given", if commission is null?

Answer: **select empno, ename, job, mgr, hiredate, sal, ifnull(comm, "not given") comm,deptno from empl;**