LAB ACTIVITY

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
```

```
mysql> create table tbl_student (StdId int (4) primary key,StdName
varchar(30) not null,sex varchar(7),percentage int ,sclass int,Sec
varchar(1),Stream varchar(10),DOB DATE);
Query OK, 0 rows affected, 1 warning (0.02 sec)

mysql> DESC tbl_student;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| StdId      | int         | NO   | PRI | NULL    |       |
| StdName    | varchar(30) | NO   |     | NULL    |       |
| sex        | varchar(7)  | YES  |     | NULL    |       |
| percentage | int         | YES  |     | NULL    |       |
| sclass     | int         | YES  |     | NULL    |       |
| Sec        | varchar(1)  | YES  |     | NULL    |       |
| Stream     | varchar(10) | YES  |     | NULL    |       |
| DOB        | date        | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

INSERTING RECORD INTO THE TABLE:

```
mysql> INSERT INTO tbl_student VALUES (1001, 'AKSHRA
AGARWAL','FEMALE',70,11,'A','science','1996-11-10');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1002, 'ANJANI
SHARMA','FEMALE',75,11,'A','Commerce','1996-09-18');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1003, 'ANSHUL
SAXENA','MALE',78,11,'A','Commerce','1996-11-19');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1004, 'AISHWARIYA
SINGH','FEMALE',79,11,'A','Commerce','1996-11-1');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1005, 'AKRITI
SAXENA','FEMALE',76,11,'A','Commerce','1996-09-20');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1006, 'KHUSHI
AGARWAL','FEMALE',77,11,'A','Commerce','1996-09-14');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1007, 'MAAHI
AGARWAL','FEMALE',74,11,'A','Science','1997-04-21');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1008, 'MITALI
GUPTA','FEMALE',78,12,'A','Science','1997-11-26');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1009, 'NIKUNJ
AGARWAL','MALE',58,12,'A','Science','1997-07-12');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1010,
'PARKHI','FEMALE',59,12,'A','Commerce','1997-12-20');
Query OK, 1 row affected (0.00 sec)
```

```
mysql> INSERT INTO tbl_student VALUES (1011, 'PRAKHAR
TIWARI','MALE',43,12,'A','Science','1997-04-22');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1012, 'RAGHAV
GANDWAR','MALE',58,12,'A','Commerce','1997-08-13');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1013, 'SAHIL
SARASWAT','MALE',57,12,'A','Commerce','1997-08-13');
Query OK, 1 row affected (0.00 sec)

mysql>  INSERT INTO tbl_student VALUES (1014, 'SWATI
MISHRA','FEMALE',98,11,'A','Science','1997-08-13');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1015,
'HARSHAGARWAL','MALE',58,11,'B','Science','2003-08-28');
Query OK, 1 row affected (0.00 sec)

mysql>  INSERT INTO tbl_student VALUES (1016, 'HARSHIT
KUMAR','MALE',98,11,'B','Science','2003-05-22');
Query OK, 1 row affected (0.00 sec)

mysql>  INSERT INTO tbl_student VALUES (1017, 'JAHANVI
KAPOOR','MALE',65,11,'B','Science','1997-01-10');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1018, 'STUTI
MISHRA','MALE',66,11,'C','Commerce','1996-01-10');
Query OK, 1 row affected (0.00 sec)

mysql>  INSERT INTO tbl_student VALUES (1019, 'SURYANSH KUMAR
AGARWAL','MALE',85,11,'C','Commerce','2007-08-22');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO tbl_student VALUES (1020, 'TANI
RASTOGI','FEMALE',75,12,'C','Commerce','1998-01-15');
Query OK, 1 row affected (0.00 sec)

mysql>  INSERT INTO tbl_student VALUES (1021, 'TANISHK
GUPTA','MALE',55,12,'C','Science','1998-04-11');
```

```
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1022, 'TANMAY
AGARWAL','MALE',57,11,'C','Commerce','1998-06-28');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1023, 'YASH
SAXENA','MALE',79,11,'C','Science','1998-03-13');
Query OK, 1 row affected (0.00 sec)

mysql> INSERT INTO tbl_student VALUES (1024, 'YESH
DUBEY','MALE',85,12,'C','Commerce','1998-04-03');
Query OK, 1 row affected (0.00 sec)




mysql> select * from tbl_student;
```

StdId	StdName	sex	percentage	sclass	Sec	Stream	DOB
1001	AKSHRA AGARWAL	FEMALE	70	11	A	science	1996-11-10
1002	ANJANI SHARMA	FEMALE	75	11	A	Commerce	1996-09-18
1003	ANSHUL SAXENA	MALE	78	11	A	Commerce	1996-11-19
1004	AISHWARIYA SINGH	FEMALE	79	11	A	Commerce	1996-11-01
1005	AKRITI SAXENA	FEMALE	76	11	A	Commerce	1996-09-20
1006	KHUSHI AGARWAL	FEMALE	77	11	A	Commerce	1996-09-14
1007	MAAHI AGARWAL	FEMALE	74	11	A	Science	1997-04-21
1008	MITALI GUPTA	FEMALE	78	12	A	Science	1997-11-26
1009	NIKUNJ AGARWAL	MALE	58	12	A	Science	1997-07-12
1010	PARKHI	FEMALE	59	12	A	Commerce	1997-12-20
1011	PRAKHAR TIWARI	MALE	43	12	A	Science	1997-04-22
1012	RAGHAV GANDWAR	MALE	58	12	A	Commerce	1997-08-13
1013	SAHIL SARASWAT	MALE	57	12	A	Commerce	1997-08-13
1014	SWATI MISHRA	FEMALE	98	11	A	Science	1997-08-13
1015	HARSHAGARWAL	MALE	58	11	B	Science	2003-08-28
1016	HARSHIT KUMAR	MALE	98	11	B	Science	2003-05-22
1017	JAHANVI KAPOOR	MALE	65	11	B	Science	1997-01-10
1018	STUTI MISHRA	MALE	66	11	C	Commerce	1996-01-10
1019	SURYANSH KUMAR AGARWAL	MALE	85	11	C	Commerce	2007-08-22
1020	TANI RASTOGI	FEMALE	75	12	C	Commerce	1998-01-15
1021	TANISHK GUPTA	MALE	55	12	C	Science	1998-04-11
1022	TANMAY AGARWAL	MALE	57	11	C	Commerce	1998-06-28
1023	YASH SAXENA	MALE	79	11	C	Science	1998-03-13
1024	YESH DUBEY	MALE	85	12	C	Commerce	1998-04-03

```
24 rows in set (0.00 sec)
```

ACTIVITY -2:

1.To display all the records from the STUDENT table.

SELECT * FROM tbl_student ;

```
+-------+-----------------------+--------+------------+--------+------+----------+------------+
| StdId | StdName               | sex    | percentage | sclass | Sec  | Stream   | DOB        |
+-------+-----------------------+--------+------------+--------+------+----------+------------+
|  1001 | AKSHRA AGARWAL        | FEMALE |         70 |     11 | A    | science  | 1996-11-10 |
|  1002 | ANJANI SHARMA         | FEMALE |         75 |     11 | A    | Commerce | 1996-09-18 |
|  1003 | ANSHUL SAXENA         | MALE   |         78 |     11 | A    | Commerce | 1996-11-19 |
|  1004 | AISHWARIYA SINGH      | FEMALE |         79 |     11 | A    | Commerce | 1996-11-01 |
|  1005 | AKRITI SAXENA         | FEMALE |         76 |     11 | A    | Commerce | 1996-09-20 |
|  1006 | KHUSHI AGARWAL        | FEMALE |         77 |     11 | A    | Commerce | 1996-09-14 |
|  1007 | MAAHI AGARWAL         | FEMALE |         74 |     11 | A    | Science  | 1997-04-21 |
|  1008 | MITALI GUPTA          | FEMALE |         78 |     12 | A    | Science  | 1997-11-26 |
|  1009 | NIKUNJ AGARWAL        | MALE   |         58 |     12 | A    | Science  | 1997-07-12 |
|  1010 | PARKHI                | FEMALE |         59 |     12 | A    | Commerce | 1997-12-20 |
|  1011 | PRAKHAR TIWARI        | MALE   |         43 |     12 | A    | Science  | 1997-04-22 |
|  1012 | RAGHAV GANDWAR        | MALE   |         58 |     12 | A    | Commerce | 1997-08-13 |
|  1013 | SAHIL SARASWAT        | MALE   |         57 |     12 | A    | Commerce | 1997-08-13 |
|  1014 | SWATI MISHRA          | FEMALE |         98 |     11 | A    | Science  | 1997-08-13 |
|  1015 | HARSHAGARWAL          | MALE   |         58 |     11 | B    | Science  | 2003-08-28 |
|  1016 | HARSHIT KUMAR         | MALE   |         98 |     11 | B    | Science  | 2003-05-22 |
|  1017 | JAHANVI KAPOOR        | MALE   |         65 |     11 | B    | Science  | 1997-01-10 |
|  1018 | STUTI MISHRA          | MALE   |         66 |     11 | C    | Commerce | 1996-01-10 |
|  1019 | SURYANSH KUMAR AGARWAL | MALE   |         85 |     11 | C    | Commerce | 2007-08-22 |
|  1020 | TANI RASTOGI          | FEMALE |         75 |     12 | C    | Commerce | 1998-01-15 |
|  1021 | TANISHK GUPTA         | MALE   |         55 |     12 | C    | Science  | 1998-04-11 |
|  1022 | TANMAY AGARWAL        | MALE   |         57 |     11 | C    | Commerce | 1998-06-28 |
|  1023 | YASH SAXENA           | MALE   |         79 |     11 | C    | Science  | 1998-03-13 |
|  1024 | YESH DUBEY            | MALE   |         85 |     12 | C    | Commerce | 1998-04-03 |
+-------+-----------------------+--------+------------+--------+------+----------+------------+
24 rows in set (0.00 sec)
```

2. To display only name and date of birth from the table STUDENT.

SELECT StdName, DOB FROM tbl_student ;

mysql> SELECT StdName, DOB FROM tbl_student ;

```
+------------------------+------------+
| StdName                | DOB        |
+------------------------+------------+
| AKSHRA AGARWAL         | 1996-11-10 |
| ANJANI SHARMA          | 1996-09-18 |
| ANSHUL SAXENA          | 1996-11-19 |
| AISHWARIYA SINGH       | 1996-11-01 |
| AKRITI SAXENA          | 1996-09-20 |
| KHUSHI AGARWAL         | 1996-09-14 |
| MAAHI AGARWAL          | 1997-04-21 |
| MITALI GUPTA           | 1997-11-26 |
| NIKUNJ AGARWAL         | 1997-07-12 |
| PARKHI                 | 1997-12-20 |
| PRAKHAR TIWARI         | 1997-04-22 |
| RAGHAV GANDWAR         | 1997-08-13 |
| SAHIL SARASWAT         | 1997-08-13 |
| SWATI MISHRA           | 1997-08-13 |
| HARSHAGARWAL           | 2003-08-28 |
| HARSHIT KUMAR          | 2003-05-22 |
| JAHANVI KAPOOR         | 1997-01-10 |
| STUTI MISHRA           | 1996-01-10 |
| SURYANSH KUMAR AGARWAL | 2007-08-22 |
| TANI RASTOGI           | 1998-01-15 |
| TANISHK GUPTA          | 1998-04-11 |
| TANMAY AGARWAL         | 1998-06-28 |
| YASH SAXENA            | 1998-03-13 |
| YESH DUBEY             | 1998-04-03 |
+------------------------+------------+
24 rows in set (0.00 sec)
```

3. To display all students' records where percentage is greater or equal to 80 FROM student table.

SELECT * FROM tbl_student WHERE percentage >= 80;

mysql> SELECT * FROM tbl_student WHERE percentage >= 80;

```
+-------+------------------------+--------+------------+--------+------+----------+------------+
| StdId | StdName                | sex    | percentage | sclass | Sec  | Stream   | DOB        |
+-------+------------------------+--------+------------+--------+------+----------+------------+
|  1014 | SWATI MISHRA           | FEMALE |         98 |     11 | A    | Science  | 1997-08-13 |
|  1016 | HARSHIT KUMAR          | MALE   |         98 |     11 | B    | Science  | 2003-05-22 |
|  1019 | SURYANSH KUMAR AGARWAL | MALE   |         85 |     11 | C    | Commerce | 2007-08-22 |
|  1024 | YESH DUBEY             | MALE   |         85 |     12 | C    | Commerce | 1998-04-03 |
+-------+------------------------+--------+------------+--------+------+----------+------------+
```

4. To display student name, stream and percentage where percentage of student is more than 80

SELECT StdName, Stream, Percentage from tbl_student WHERE percentage > 80;

mysql> SELECT StdName, Stream, Percentage from tbl_student WHERE percentage > 80;

```
+------------------------+----------+------------+
| StdName                | Stream   | Percentage |
+------------------------+----------+------------+
| SWATI MISHRA           | Science  |         98 |
| HARSHIT KUMAR          | Science  |         98 |
| SURYANSH KUMAR AGARWAL | Commerce |         85 |
| YESH DUBEY             | Commerce |         85 |
+------------------------+----------+------------+
```

5. To display all records of science students whose percentage is more than 75 form a student table.

SELECT * FROM tbl_student WHERE stream = 'Science' AND percentage > 75;

```
mysql> select * from tbl_student where Stream ='Science' and Percentage >75;
+-------+---------------+--------+------------+--------+------+---------+------------+
| StdId | StdName       | sex    | percentage | sclass | Sec  | Stream  | DOB        |
+-------+---------------+--------+------------+--------+------+---------+------------+
|  1008 | MITALI GUPTA  | FEMALE |         78 |     12 | A    | Science | 1997-11-26 |
|  1014 | SWATI MISHRA  | FEMALE |         98 |     11 | A    | Science | 1997-08-13 |
|  1016 | HARSHIT KUMAR | MALE   |         98 |     11 | B    | Science | 2003-05-22 |
|  1023 | YASH SAXENA   | MALE   |         79 |     11 | C    | Science | 1998-03-13 |
+-------+---------------+--------+------------+--------+------+---------+------------+
4 rows in set (0.00 sec)
```

ACTIVITY -3:

1. To display the STUDENT table structure.

mysql> DESC tbl_student;

```
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| StdId      | int         | NO   | PRI | NULL    |       |
| StdName    | varchar(30) | NO   |     | NULL    |       |
| sex        | varchar(7)  | YES  |     | NULL    |       |
| percentage | int         | YES  |     | NULL    |       |
| sclass     | int         | YES  |     | NULL    |       |
| Sec        | varchar(1)  | YES  |     | NULL    |       |
| Stream     | varchar(10) | YES  |     | NULL    |       |
| DOB        | date        | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

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

```
mysql> alter table tbl_student add TeachedID varchar(20);
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

3. Type the statement

```
mysql> desc tbl_student;
```

```
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| StdId      | int         | NO   | PRI | NULL    |       |
| StdName    | varchar(30) | NO   |     | NULL    |       |
| sex        | varchar(7)  | YES  |     | NULL    |       |
| percentage | int         | YES  |     | NULL    |       |
| sclass     | int         | YES  |     | NULL    |       |
| Sec        | varchar(1)  | YES  |     | NULL    |       |
| Stream     | varchar(10) | YES  |     | NULL    |       |
| DOB        | date        | YES  |     | NULL    |       |
| TeachedID  | varchar(20) | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
9 rows in set (0.00 sec)
```

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

mysql> select * from tbl_student;

```
+-------+------------------------+--------+------------+--------+------+----------+------------+----------+
| StdId | StdName                | sex    | percentage | sclass | Sec  | Stream   | DOB        | TeachedID |
+-------+------------------------+--------+------------+--------+------+----------+------------+----------+
|  1001 | AKSHRA AGARWAL         | FEMALE |         70 |     11 | A    | science  | 1996-11-10 | NULL     |
|  1002 | ANJANI SHARMA          | FEMALE |         75 |     11 | A    | Commerce | 1996-09-18 | NULL     |
|  1003 | ANSHUL SAXENA          | MALE   |         78 |     11 | A    | Commerce | 1996-11-19 | NULL     |
|  1004 | AISHWARIYA SINGH       | FEMALE |         79 |     11 | A    | Commerce | 1996-11-01 | NULL     |
|  1005 | AKRITI SAXENA          | FEMALE |         76 |     11 | A    | Commerce | 1996-09-20 | NULL     |
|  1006 | KHUSHI AGARWAL         | FEMALE |         77 |     11 | A    | Commerce | 1996-09-14 | NULL     |
|  1007 | MAAHI AGARWAL          | FEMALE |         74 |     11 | A    | Science  | 1997-04-21 | NULL     |
|  1008 | MITALI GUPTA           | FEMALE |         78 |     12 | A    | Science  | 1997-11-26 | NULL     |
|  1009 | NIKUNJ AGARWAL         | MALE   |         58 |     12 | A    | Science  | 1997-07-12 | NULL     |
|  1010 | PARKHI                 | FEMALE |         59 |     12 | A    | Commerce | 1997-12-20 | NULL     |
|  1011 | PRAKHAR TIWARI         | MALE   |         43 |     12 | A    | Science  | 1997-04-22 | NULL     |
|  1012 | RAGHAV GANDWAR         | MALE   |         58 |     12 | A    | Commerce | 1997-08-13 | NULL     |
|  1013 | SAHIL SARASWAT         | MALE   |         57 |     12 | A    | Commerce | 1997-08-13 | NULL     |
|  1014 | SWATI MISHRA           | FEMALE |         98 |     11 | A    | Science  | 1997-08-13 | NULL     |
|  1015 | HARSHAGARWAL           | MALE   |         58 |     11 | B    | Science  | 2003-08-28 | NULL     |
|  1016 | HARSHIT KUMAR          | MALE   |         98 |     11 | B    | Science  | 2003-05-22 | NULL     |
|  1017 | JAHANVI KAPOOR         | MALE   |         65 |     11 | B    | Science  | 1997-01-10 | NULL     |
|  1018 | STUTI MISHRA           | MALE   |         66 |     11 | C    | Commerce | 1996-01-10 | NULL     |
|  1019 | SURYANSH KUMAR AGARWAL | MALE   |         85 |     11 | C    | Commerce | 2007-08-22 | NULL     |
|  1020 | TANI RASTOGI           | FEMALE |         75 |     12 | C    | Commerce | 1998-01-15 | NULL     |
|  1021 | TANISHK GUPTA          | MALE   |         55 |     12 | C    | Science  | 1998-04-11 | NULL     |
|  1022 | TANMAY AGARWAL         | MALE   |         57 |     11 | C    | Commerce | 1998-06-28 | NULL     |
|  1023 | YASH SAXENA            | MALE   |         79 |     11 | C    | Science  | 1998-03-13 | NULL     |
|  1024 | YESH DUBEY             | MALE   |         85 |     12 | C    | Commerce | 1998-04-03 | NULL     |
+-------+------------------------+--------+------------+--------+------+----------+------------+----------+
24 rows in set (0.00 sec)
```

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

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

mysql> alter table tbl_student modify TeachedID int ;
Query OK, 24 rows affected (0.03 sec)
Records: 24 Duplicates: 0 Warnings: 0

```
mysql> desc tbl_student;
+------------+-------------+------+-----+---------+-------+
| Field      | Type        | Null | Key | Default | Extra |
+------------+-------------+------+-----+---------+-------+
| StdId      | int         | NO   | PRI | NULL    |       |
| StdName    | varchar(30) | NO   |     | NULL    |       |
| sex        | varchar(7)  | YES  |     | NULL    |       |
| percentage | int         | YES  |     | NULL    |       |
| sclass     | int         | YES  |     | NULL    |       |
| Sec        | varchar(1)  | YES  |     | NULL    |       |
| Stream     | varchar(10) | YES  |     | NULL    |       |
| DOB        | date        | YES  |     | NULL    |       |
| TeachedID  | int         | YES  |     | NULL    |       |
+------------+-------------+------+-----+---------+-------+
9 rows in set (0.00 sec)

mysql> select * from tbl_student;


+-------+----------------------+--------+------------+--------+------+----------+------------+-----------+
| StdId | StdName              | sex    | percentage | sclass | Sec  | Stream   | DOB        | TeachedID |
+-------+----------------------+--------+------------+--------+------+----------+------------+-----------+
| 1001  | AKSHRA AGARWAL       | FEMALE |         70 |     11 | A    | science  | 1996-11-10 | NULL      |
| 1002  | ANJANI SHARMA        | FEMALE |         75 |     11 | A    | Commerce | 1996-09-18 | NULL      |
| 1003  | ANSHUL SAXENA        | MALE   |         78 |     11 | A    | Commerce | 1996-11-19 | NULL      |
| 1004  | AISHWARIYA SINGH     | FEMALE |         79 |     11 | A    | Commerce | 1996-11-01 | NULL      |
| 1005  | AKRITI SAXENA        | FEMALE |         76 |     11 | A    | Commerce | 1996-09-20 | NULL      |
| 1006  | KHUSHI AGARWAL       | FEMALE |         77 |     11 | A    | Commerce | 1996-09-14 | NULL      |
| 1007  | MAAHI AGARWAL        | FEMALE |         74 |     11 | A    | Science  | 1997-04-21 | NULL      |
| 1008  | MITALI GUPTA         | FEMALE |         78 |     12 | A    | Science  | 1997-11-26 | NULL      |
| 1009  | NIKUNJ AGARWAL       | MALE   |         58 |     12 | A    | Science  | 1997-07-12 | NULL      |
| 1010  | PARKHI               | FEMALE |         59 |     12 | A    | Commerce | 1997-12-20 | NULL      |
| 1011  | PRAKHAR TIWARI       | MALE   |         43 |     12 | A    | Science  | 1997-04-22 | NULL      |
| 1012  | RAGHAV GANDWAR       | MALE   |         58 |     12 | A    | Commerce | 1997-08-13 | NULL      |
| 1013  | SAHIL SARASWAT       | MALE   |         57 |     12 | A    | Commerce | 1997-08-13 | NULL      |
| 1014  | SWATI MISHRA         | FEMALE |         98 |     11 | A    | Science  | 1997-08-13 | NULL      |
| 1015  | HARSHAGARWAL         | MALE   |         58 |     11 | B    | Science  | 2003-08-28 | NULL      |
| 1016  | HARSHIT KUMAR        | MALE   |         98 |     11 | B    | Science  | 2003-05-22 | NULL      |
| 1017  | JAHANVI KAPOOR       | MALE   |         65 |     11 | B    | Science  | 1997-01-10 | NULL      |
| 1018  | STUTI MISHRA         | MALE   |         66 |     11 | C    | Commerce | 1996-01-10 | NULL      |
| 1019  | SURYANSH KUMAR AGARWAL | MALE |         85 |     11 | C    | Commerce | 2007-08-22 | NULL      |
| 1020  | TANI RASTOGI         | FEMALE |         75 |     12 | C    | Commerce | 1998-01-15 | NULL      |
| 1021  | TANISHK GUPTA        | MALE   |         55 |     12 | C    | Science  | 1998-04-11 | NULL      |
| 1022  | TANMAY AGARWAL       | MALE   |         57 |     11 | C    | Commerce | 1998-06-28 | NULL      |
| 1023  | YASH SAXENA          | MALE   |         79 |     11 | C    | Science  | 1998-03-13 | NULL      |
| 1024  | YESH DUBEY           | MALE   |         85 |     12 | C    | Commerce | 1998-04-03 | NULL      |
+-------+----------------------+--------+------------+--------+------+----------+------------+-----------+
```

ACTIVITY-4:

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

ALTER TABLE Student DROP TeacherID;

```
mysql> alter table tbl_student drop TeachedID;
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

2. To subtract 5 from all students' percentage and display name and percentage.

SELECT name, percentage - 5 FROM Student;

```
mysql> select StdName ,Percentage -5 from tbl_student;
+------------------------+---------------+
| StdName                | Percentage -5 |
+------------------------+---------------+
| AKSHRA AGARWAL         |            65 |
| ANJANI SHARMA          |            70 |
| ANSHUL SAXENA          |            73 |
| AISHWARIYA SINGH       |            74 |
| AKRITI SAXENA          |            71 |
| KHUSHI AGARWAL         |            72 |
| MAAHI AGARWAL          |            69 |
| MITALI GUPTA           |            73 |
| NIKUNJ AGARWAL         |            53 |
| PARKHI                 |            54 |
| PRAKHAR TIWARI         |            38 |
| RAGHAV GANDWAR         |            53 |
| SAHIL SARASWAT         |            52 |
| SWATI MISHRA           |            93 |
| HARSHAGARWAL           |            53 |
| HARSHIT KUMAR          |            93 |
| JAHANVI KAPOOR         |            60 |
| STUTI MISHRA           |            61 |
| SURYANSH KUMAR AGARWAL |            80 |
| TANI RASTOGI           |            70 |
| TANISHK GUPTA          |            50 |
| TANMAY AGARWAL         |            52 |
| YASH SAXENA            |            74 |
| YESH DUBEY             |            80 |
+------------------------+---------------+
```

24 rows in set (0.00 sec)

3. Using column alias 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;

mysql> select StdName as "Student Name" , DOB as "Date of Birth" from tbl_student;

```
+-------------------------+---------------+
| Student Name            | Date of Birth |
+-------------------------+---------------+
| AKSHRA AGARWAL          | 1996-11-10    |
| ANJANI SHARMA           | 1996-09-18    |
| ANSHUL SAXENA           | 1996-11-19    |
| AISHWARIYA SINGH        | 1996-11-01    |
| AKRITI SAXENA           | 1996-09-20    |
| KHUSHI AGARWAL          | 1996-09-14    |
| MAAHI AGARWAL           | 1997-04-21    |
| MITALI GUPTA            | 1997-11-26    |
| NIKUNJ AGARWAL          | 1997-07-12    |
| PARKHI                  | 1997-12-20    |
| PRAKHAR TIWARI          | 1997-04-22    |
| RAGHAV GANDWAR          | 1997-08-13    |
| SAHIL SARASWAT          | 1997-08-13    |
| SWATI MISHRA            | 1997-08-13    |
| HARSHAGARWAL            | 2003-08-28    |
| HARSHIT KUMAR           | 2003-05-22    |
| JAHANVI KAPOOR          | 1997-01-10    |
| STUTI MISHRA            | 1996-01-10    |
| SURYANSH KUMAR AGARWAL  | 2007-08-22    |
| TANI RASTOGI            | 1998-01-15    |
| TANISHK GUPTA           | 1998-04-11    |
| TANMAY AGARWAL          | 1998-06-28    |
| YASH SAXENA             | 1998-03-13    |
| YESH DUBEY              | 1998-04-03    |
+-------------------------+---------------+
24 rows in set (0.00 sec)
```

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

mysql> select StdName from tbl_student where Stream!="Science";

```
+------------------------+
| StdName                |
+------------------------+
| ANJANI SHARMA          |
| ANSHUL SAXENA          |
| AISHWARIYA SINGH       |
| AKRITI SAXENA          |
| KHUSHI AGARWAL         |
| PARKHI                 |
| RAGHAV GANDWAR         |
| SAHIL SARASWAT         |
| STUTI MISHRA           |
| SURYANSH KUMAR AGARWAL |
| TANI RASTOGI           |
| TANMAY AGARWAL         |
| YESH DUBEY             |
+------------------------+
13 rows in set (0.00 sec)
```

mysql> select StdName from tbl_student where Stream<>"Science";

```
+------------------------+
| StdName                |
+------------------------+
| ANJANI SHARMA          |
| ANSHUL SAXENA          |
| AISHWARIYA SINGH       |
| AKRITI SAXENA          |
| KHUSHI AGARWAL         |
| PARKHI                 |
| RAGHAV GANDWAR         |
| SAHIL SARASWAT         |
| STUTI MISHRA           |
| SURYANSH KUMAR AGARWAL |
| TANI RASTOGI           |
| TANMAY AGARWAL         |
| YESH DUBEY             |
+------------------------+
13 rows in set (0.00 sec)
```

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

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

```
mysql> select StdName ,Percentage from tbl_student where Percentage
>=60 and percentage  <=80;
+------------------+------------+
| StdName          | Percentage |
+------------------+------------+
| AKSHRA AGARWAL   |         70 |
| ANJANI SHARMA    |         75 |
| ANSHUL SAXENA    |         78 |
| AISHWARIYA SINGH |         79 |
| AKRITI SAXENA    |         76 |
| KHUSHI AGARWAL   |         77 |
| MAAHI AGARWAL    |         74 |
| MITALI GUPTA     |         78 |
| JAHANVI KAPOOR   |         65 |
| STUTI MISHRA     |         66 |
| TANI RASTOGI     |         75 |
| YASH SAXENA      |         79 |
+------------------+------------+
12 rows in set (0.00 sec)
```

ACTIVITY-5:

1.To change a student name from SWATIMISHRA to SWATIVERMA whose StdID is 1014 and also change percentage 86.

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

```
mysql> update tbl_student set StdName='SWATI VERMA',Percentage =86
where StdId=1014;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

2. To delete the records form student table where StdId is 1016.
DELETE FROM Student WHERE StdID = 1016;

```
mysql> delete from tbl_student where StdId=1016;
Query OK, 1 row affected (0.00 sec)
```

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

a.SELECT * FROM tbl_student WHERE StdName LIKE 'G_' ;

```
mysql> SELECT * FROM tbl_student WHERE StdName LIKE 'G_' ;
Empty set (0.00 sec)
```

b.SELECT * FROM tbl_Student WHERE StdName='G';

```
mysql> SELECT * FROM tbl_Student WHERE StdName='G';
Empty set (0.00 sec)
```

c.SELECT * FROM tbl_Student WHERE StdName LIKE 'A%' ;

```
mysql> SELECT * FROM tbl_Student WHERE StdName LIKE 'A%' ;
```

```
+-------+-----------------+--------+------------+--------+------+----------+------------+
| StdId | StdName         | sex    | percentage | sclass | Sec  | Stream   | DOB        |
+-------+-----------------+--------+------------+--------+------+----------+------------+
|  1001 | AKSHRA AGARWAL  | FEMALE |         70 |     11 | A    | science  | 1996-11-10 |
|  1002 | ANJANI SHARMA   | FEMALE |         75 |     11 | A    | Commerce | 1996-09-18 |
|  1003 | ANSHUL SAXENA   | MALE   |         78 |     11 | A    | Commerce | 1996-11-19 |
|  1004 | AISHWARIYA SINGH| FEMALE |         79 |     11 | A    | Commerce | 1996-11-01 |
|  1005 | AKRITI SAXENA   | FEMALE |         76 |     11 | A    | Commerce | 1996-09-20 |
+-------+-----------------+--------+------------+--------+------+----------+------------+
5 rows in set (0.00 sec)
```

d.SELECT * from tbl_student WHERE StdName='%A%' ;

```
mysql> SELECT * from tbl_student WHERE StdName='%A%' ;
Empty set (0.00 sec)
```

4. Display all the streams in the student table.

```
SELECT DISTINCT Stream FROM tbl_student;

mysql> SELECT DISTINCT Stream FROM tbl_student;
+----------+
| Stream   |
+----------+
| science  |
| Commerce |
+----------+
2 rows in set (0.00 sec)
```

5. Note the output of the following statement.
SELECT StdName, Sex, Stream FROM tbl_student WHERE percentage BETWEEN 70 AND 80;

```
mysql> SELECT StdName, Sex, Stream FROM tbl_student WHERE percentage
BETWEEN 70 AND 80;
+------------------+--------+----------+
| StdName          | Sex    | Stream   |
+------------------+--------+----------+
| AKSHRA AGARWAL   | FEMALE | science  |
| ANJANI SHARMA    | FEMALE | Commerce |
| ANSHUL SAXENA    | MALE   | Commerce |
| AISHWARIYA SINGH | FEMALE | Commerce |
| AKRITI SAXENA    | FEMALE | Commerce |
| KHUSHI AGARWAL   | FEMALE | Commerce |
| MAAHI AGARWAL    | FEMALE | Science  |
| MITALI GUPTA     | FEMALE | Science  |
| TANI RASTOGI     | FEMALE | Commerce |
| YASH SAXENA      | MALE   | Science  |
+------------------+--------+----------+
10 rows in set (0.00 sec)
```

Do Yourself:

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

1. Consider the Empl table and write SQL command to get the following.

```
mysql> select * from tbl_employee;
+-------+----------+-----------+------+------------+---------+---------+--------+
| 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 |
+-------+----------+-----------+------+------------+---------+---------+--------+
10 rows in set (0.00 sec)
```

a. Write a query to display EName and Sal of employees whose salary are greater than
or equal to 2200?

```
mysql> select ename,sal from tbl_employee where sal>=2200;
+-----------+---------+
| ename     | sal     |
+-----------+---------+
| MAHADEVAN | 2985.00 |
| BINA      | 2850.00 |
| SHIVANSH  | 2450.00 |
| SCOTT     | 3000.00 |
| AMIR      | 5000.00 |
+-----------+---------+
5 rows in set (0.00 sec)
```

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

mysql> select * from tbl_employee where comm=0 or comm is null;

```
+-------+----------+-----------+------+------------+---------+------+--------+
| empno | ename    | job       | mgr  | hiredate   | sal     | comm | deptno |
+-------+----------+-----------+------+------------+---------+------+--------+
|  8369 | SMITH    | CLERK     | 8902 | 1990-12-18 |  800.00 | NULL |     20 |
|  8566 | MAHADEVAN| MANAGER   | 8839 | 1991-04-02 | 2985.00 | NULL |     20 |
|  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 |
+-------+----------+-----------+------+------------+---------+------+--------+
7 rows in set (0.00 sec)
```

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?

mysql> select * from tbl_employee where sal between 2500 and 4000;

```
+-------+----------+---------+------+------------+---------+------+--------+
| empno | ename    | job     | mgr  | hiredate   | sal     | comm | deptno |
+-------+----------+---------+------+------------+---------+------+--------+
|  8566 | MAHADEVAN| MANAGER | 8839 | 1991-04-02 | 2985.00 | NULL |     20 |
|  8698 | BINA     | MANAGER | 8839 | 1991-05-01 | 2850.00 | NULL |     30 |
|  8888 | SCOTT    | ANALYST | 8566 | 1992-12-09 | 3000.00 | NULL |     20 |
+-------+----------+---------+------+------------+---------+------+--------+
3 rows in set (0.00 sec)
```

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

mysql> select ename,job,sal from tbl_employee where mgr is NULL;

```
+-------+-----------+---------+
| ename | job       | sal     |
+-------+-----------+---------+
| AMIR  | PRESIDENT | 5000.00 |
+-------+-----------+---------+
1 row in set (0.00 sec)
```

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

```
mysql> select * from tbl_employee where ename like '__a%';
Empty set (0.00 sec)
```

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

```
mysql> select * from tbl_employee where ename like '%T';

+-------+-------+---------+------+------------+---------+------+--------+
| empno | ename | job     | mgr  | hiredate   | sal     | comm | deptno |
+-------+-------+---------+------+------------+---------+------+--------+
|  8888 | SCOTT | ANALYST | 8566 | 1992-12-09 | 3000.00 | NULL |     20 |
+-------+-------+---------+------+------------+---------+------+--------+
1 row in set (0.00 sec)
```

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

```
mysql> select * from tbl_employee where ename like 'm_l';
Empty set (0.00 sec)
```

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

```
mysql> select * from tbl_employee where comm is null and
job='Not given';
Empty set (0.00 sec)
```