Day 4 assignment.
Name : Gayathri Devi Kuppusamy
ID : 11954
Date : 04.10.2023

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

```
mysql> create database day4assignment;
Query OK, 1 row affected (0.01 sec)

mysql> use day4assignment;
Database changed
mysql> create table tbl_student(
    -> sId int primary key auto_increment,
    -> sName varchar(30) not null,
    -> sSex char(1),
    -> sPercent int,
    -> sClass char(1),
    -> sSec char(1),
    -> sStream varchar(10),
    -> sDob date);
Query OK, 0 rows affected (0.04 sec)

mysql> desc tbl_student;
+----------+-------------+------+-----+---------+----------------+
| Field    | Type        | Null | Key | Default | Extra          |
+----------+-------------+------+-----+---------+----------------+
| sId      | int         | NO   | PRI | NULL    | auto_increment |
| sName    | varchar(30) | NO   |     | NULL    |                |
| sSex     | char(1)     | YES  |     | NULL    |                |
| sPercent | int         | YES  |     | NULL    |                |
| sClass   | char(1)     | YES  |     | NULL    |                |
| sSec     | char(1)     | YES  |     | NULL    |                |
| sStream  | varchar(10) | YES  |     | NULL    |                |
| sDob     | date        | YES  |     | NULL    |                |
+----------+-------------+------+-----+---------+----------------+
8 rows in set (0.01 sec)
```

```
mysql> alter table tbl_student modify column sClass int;
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> desc tbl_student;
+----------+-------------+------+-----+---------+----------------+
| Field    | Type        | Null | Key | Default | Extra          |
+----------+-------------+------+-----+---------+----------------+
| sId      | int         | NO   | PRI | NULL    | auto_increment |
| sName    | varchar(30) | NO   |     | NULL    |                |
| sSex     | char(1)     | YES  |     | NULL    |                |
| sPercent | int         | YES  |     | NULL    |                |
| sClass   | int         | YES  |     | NULL    |                |
| sSec     | char(1)     | YES  |     | NULL    |                |
| sStream  | varchar(10) | YES  |     | NULL    |                |
| sDob     | date        | YES  |     | NULL    |                |
+----------+-------------+------+-----+---------+----------------+
8 rows in set (0.00 sec)
```

Insert record

```
mysql> insert into tbl_student values(1001,"Gayathri","F",100,12,"B","Science",'2001/08/05');
Query OK, 1 row affected, 1 warning (0.00 sec)
```

```
mysql> insert into tbl_student (sName,sSex,sPercent,sClass,sSec,sStream,sDob) values("Naveen","M",90,11,"C","Commerce",'2002/08/05');
Query OK, 1 row affected, 1 warning (0.00 sec)

mysql> insert into tbl_student (sName,sSex,sPercent,sClass,sSec,sStream,sDob) values("Pravina","F",80,12,"A","Science",'2000/07/16');
Query OK, 1 row affected, 1 warning (0.00 sec)

mysql> insert into tbl_student (sName,sSex,sPercent,sClass,sSec,sStream,sDob) values("Raji","F",99,12,"A","Commerce",'2001/11/10');
Query OK, 1 row affected, 1 warning (0.00 sec)

mysql> insert into tbl_student (sName,sSex,sPercent,sClass,sSec,sStream,sDob) values("Kumar","M",89,11,"B","science",'2001/12/12');
Query OK, 1 row affected, 1 warning (0.00 sec)

mysql> commit;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from tbl_student;
+------+----------+------+----------+--------+------+----------+------------+
| sId  | sName    | sSex | sPercent | sClass | sSec | sStream  | sDob       |
+------+----------+------+----------+--------+------+----------+------------+
| 1001 | Gayathri | F    |      100 |     12 | B    | Science  | 2001-08-05 |
| 1002 | Naveen   | M    |       90 |     11 | C    | Commerce | 2002-08-05 |
| 1003 | Pravina  | F    |       80 |     12 | A    | Science  | 2000-07-16 |
| 1004 | Raji     | F    |       99 |     12 | A    | Commerce | 2001-11-10 |
| 1005 | Kumar    | M    |       89 |     11 | B    | science  | 2001-12-12 |
+------+----------+------+----------+--------+------+----------+------------+
5 rows in set (0.00 sec)
```

Lab Activity 2:

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

```
mysql> select sName as "Student Name" ,sDob as "Date of Birth" from tbl_student;
+--------------+---------------+
| Student Name | Date of Birth |
+--------------+---------------+
| Gayathri     | 2001-08-05    |
| Naveen       | 2002-08-05    |
| Pravina      | 2000-07-16    |
| Raji         | 2001-11-10    |
| Kumar        | 2001-12-12    |
+--------------+---------------+
5 rows in set (0.00 sec)
```

3. To display all students record where percentage is greater of equal to 80 FROM student table.

```
mysql> select * from tbl_student where sPercent>=80;
+------+----------+------+----------+--------+------+----------+------------+
| sId  | sName    | sSex | sPercent | sClass | sSec | sStream  | sDob       |
+------+----------+------+----------+--------+------+----------+------------+
| 1001 | Gayathri | F    |      100 |     12 | B    | Science  | 2001-08-05 |
| 1002 | Naveen   | M    |       90 |     11 | C    | Commerce | 2002-08-05 |
| 1003 | Pravina  | F    |       80 |     12 | A    | Science  | 2000-07-16 |
| 1004 | Raji     | F    |       99 |     12 | A    | Commerce | 2001-11-10 |
| 1005 | Kumar    | M    |       89 |     11 | B    | science  | 2001-12-12 |
+------+----------+------+----------+--------+------+----------+------------+
5 rows in set (0.00 sec)
```

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

```
mysql> select sName as "Student Name",sStream as "Stream", sPercent as "Percent" from tbl_student where sPercent>80;
+--------------+----------+---------+
| Student Name | Stream   | Percent |
+--------------+----------+---------+
| Gayathri     | Science  |     100 |
| Naveen       | Commerce |      90 |
| Raji         | Commerce |      99 |
| Kumar        | science  |      89 |
+--------------+----------+---------+
4 rows in set (0.00 sec)
```

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

```
mysql> select * from tbl_student where sPercent>75 AND sStream="Science";
+------+----------+------+----------+--------+------+---------+------------+
| sId  | sName    | sSex | sPercent | sClass | sSec | sStream | sDob       |
+------+----------+------+----------+--------+------+---------+------------+
| 1001 | Gayathri | F    |      100 |     12 | B    | Science | 2001-08-05 |
| 1003 | Pravina  | F    |       80 |     12 | A    | Science | 2000-07-16 |
| 1005 | Kumar    | M    |       89 |     11 | B    | science | 2001-12-12 |
+------+----------+------+----------+--------+------+---------+------------+
3 rows in set (0.00 sec)
```

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.

```
mysql> desc tbl_student;
+----------+-------------+------+-----+---------+----------------+
| Field    | Type        | Null | Key | Default | Extra          |
+----------+-------------+------+-----+---------+----------------+
| sId      | int         | NO   | PRI | NULL    | auto_increment |
| sName    | varchar(30) | NO   |     | NULL    |                |
| sSex     | char(1)     | YES  |     | NULL    |                |
| sPercent | int         | YES  |     | NULL    |                |
| sClass   | int         | YES  |     | NULL    |                |
| sSec     | char(1)     | YES  |     | NULL    |                |
| sStream  | varchar(10) | YES  |     | NULL    |                |
| sDob     | 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 teacherId varchar(20);
Query OK, 0 rows affected (0.01 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

3. Note the difference in table structure.

```
mysql> desc tbl_student;
+-----------+-------------+------+-----+---------+----------------
| Field     | Type        | Null | Key | Default | Extra
+-----------+-------------+------+-----+---------+----------------
| sId       | int         | NO   | PRI | NULL    | auto_increment
| sName     | varchar(30) | NO   |     | NULL    |
| sSex      | char(1)     | YES  |     | NULL    |
| sPercent  | int         | YES  |     | NULL    |
| sClass    | int         | YES  |     | NULL    |
| sSec      | char(1)     | YES  |     | NULL    |
| sStream   | varchar(10) | YES  |     | NULL    |
| sDob      | date        | YES  |     | NULL    |
| teacherId | 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;
+------+----------+------+----------+--------+------+----------+------------+-----------+
| sId  | sName    | sSex | sPercent | sClass | sSec | sStream  | sDob       | teacherId |
+------+----------+------+----------+--------+------+----------+------------+-----------+
| 1001 | Gayathri | F    |      100 |     12 | B    | Science  | 2001-08-05 | NULL      |
| 1002 | Naveen   | M    |       90 |     11 | C    | Commerce | 2002-08-05 | NULL      |
| 1003 | Pravina  | F    |       80 |     12 | A    | Science  | 2000-07-16 | NULL      |
| 1004 | Raji     | F    |       99 |     12 | A    | Commerce | 2001-11-10 | NULL      |
| 1005 | Kumar    | M    |       89 |     11 | B    | science  | 2001-12-12 | NULL      |
+------+----------+------+----------+--------+------+----------+------------+-----------+
5 rows in set (0.00 sec)
```

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

```
mysql> alter table tbl_student modify teacherId int;
Query OK, 5 rows affected (0.04 sec)
Records: 5  Duplicates: 0  Warnings: 0
```

Lab Activity 4

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

```
mysql> alter table tbl_student drop teacherId;
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.

```
mysql> update tbl_student set sPercent = sPercent-5;
Query OK, 5 rows affected (0.01 sec)
Rows matched: 5  Changed: 5  Warnings: 0

mysql> select sName as "Name", sPercent as "Percent" from tbl_student;
+----------+---------+
| Name     | Percent |
+----------+---------+
| Gayathri |      95 |
| Naveen   |      85 |
| Pravina  |      75 |
| Raji     |      94 |
| Kumar    |      84 |
+----------+---------+
5 rows in set (0.00 sec)
```

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

```
mysql> select sName as "Student Name", sDob as "Date of Birth" from tbl_student;
+--------------+---------------+
| Student Name | Date of Birth |
+--------------+---------------+
| Gayathri     | 2001-08-05    |
| Naveen       | 2002-08-05    |
| Pravina      | 2000-07-16    |
| Raji         | 2001-11-10    |
| Kumar        | 2001-12-12    |
+--------------+---------------+
5 rows in set (0.00 sec)
```

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

```
mysql> select sName from tbl_student where sStream!="Science";
+--------+
| sName  |
+--------+
| Naveen |
| Raji   |
+--------+
2 rows in set (0.00 sec)
```

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

```
mysql> select sName,sPercent from tbl_student where sPercent>=60 AND sPercent <=80;
+---------+----------+
| sName   | sPercent |
+---------+----------+
| Pravina |       75 |
+---------+----------+
1 row in set (0.00 sec)
```

Lab Activity 5:

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

```
mysql> update  tbl_student set sName = "Raje" where sID=1004;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> update tbl_student set sPercent = 86 where sID=1004;
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

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

```
mysql> delete  from tbl_student where sId=1005;
Query OK, 1 row affected (0.00 sec)
```

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%' ;

```
mysql> select * from tbl_student where sName like 'G_';
Empty set (0.00 sec)

mysql> select * from tbl_student where sName = 'G';
Empty set (0.00 sec)

mysql> select * from tbl_student where sName like 'G%';
+------+----------+------+----------+--------+------+---------+------------+
| sId  | sName    | sSex | sPercent | sClass | sSec | sStream | sDob       |
+------+----------+------+----------+--------+------+---------+------------+
| 1001 | Gayathri | F    |       95 |     12 | B    | Science | 2001-08-05 |
+------+----------+------+----------+--------+------+---------+------------+
1 row in set (0.00 sec)

mysql> select * from tbl_student where sName like '%G%';
+------+----------+------+----------+--------+------+---------+------------+
| sId  | sName    | sSex | sPercent | sClass | sSec | sStream | sDob       |
+------+----------+------+----------+--------+------+---------+------------+
| 1001 | Gayathri | F    |       95 |     12 | B    | Science | 2001-08-05 |
+------+----------+------+----------+--------+------+---------+------------+
1 row in set (0.00 sec)
```

4. Display all the streams in student table.

```
mysql> select sStream from tbl_student;
+----------+
| sStream  |
+----------+
| Science  |
| Commerce |
| Science  |
| Commerce |
+----------+
4 rows in set (0.00 sec)
```

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

```
mysql> select sName,sSex,sStream,sPercent from tbl_student where sPercent>=70 AND sPercent<=80;
+---------+------+---------+----------+
| sName   | sSex | sStream | sPercent |
+---------+------+---------+----------+
| Pravina | F    | Science |       75 |
+---------+------+---------+----------+
1 row in set (0.00 sec)
```

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?

```
mysql> select ename as "Employee Name", sal as "Salary" from tbl_employee where sal>=2200;
+---------------+---------+
| Employee Name | Salary  |
+---------------+---------+
| Mahadevan     | 2985.00 |
| Bina          | 2850.00 |
| Sivanesh      | 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;
+-------+---------+----------+------+------------+---------+------+--------+
| empno | ename   | job      | mgr  | hiredate   | sal     | comm | deptno |
+-------+---------+----------+------+------------+---------+------+--------+
|  8844 | Kuldeep | Salesman | 8698 | 1991-09-08 | 1500.00 | 0.00 |     30 |
+-------+---------+----------+------+------------+---------+------+--------+
1 row in set (0.00 sec)

mysql> select * from tbl_employee where 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 | Sivanesh  | 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 |
+-------+-----------+-----------+------+------------+---------+------+--------+
6 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 ename as "Employee Name", sal as "Salary" from tbl_employee where sal not between 2500 AND 4000;
+---------------+---------+
| Employee Name | Salary  |
+---------------+---------+
| Smith         |  800.00 |
| Anya          | 1600.00 |
| Seth          | 1250.00 |
| Momin         | 1250.00 |
| Sivanesh      | 2450.00 |
| Amir          | 5000.00 |
| Kuldeep       | 1500.00 |
+---------------+---------+
7 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 as "Employee Name", job, sal as "Salary" from tbl_employee where mgr is null;
+---------------+-----------+---------+
| Employee Name | job       | Salary  |
+---------------+-----------+---------+
| 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 ename 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 ename from tbl_employee where ename like'%T';
+-------+
| ename |
+-------+
| Scott |
+-------+
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 ename 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 = 'No
t given';
Empty set (0.00 sec)
```