

# Experiment No. 1

## Aim:

Introduction to SQL using DDL and DML Commands for tables, views, various data types.

## Theory:

### **Basic Types:**

The SQL standard supports a variety of built-in types, including:

- **char(n):** A fixed-length character string with user-specified length n. The full form, **character**, can be used instead.
- **varchar(n):** A variable-length character string with user-specified maximum length n. The full form, **character varying**, is equivalent.
- **int:** An integer (a finite subset of the integers that is machine dependent). The full form, **integer**, is equivalent.
- **smallint:** A small integer (a machine-dependent subset of the integer type).
- **numeric(p, d):** A fixed-point number with user-specified precision. The number consists of p digits (plus a sign), and d of the p digits are to the right of the decimal point. Thus, **numeric(3,1)** allows 44.5 to be stored exactly, but neither 444.5 or 0.32 can be stored exactly in a field of this type.
- **real, double precision:** Floating-point and double-precision floating-point numbers with machine-dependent precision.
- **float(n):** A floating-point number, with precision of at least n digits

### **DDL Commands:**

DDL is the short form of Data Definition languages

- **CREATE:**

Create Table statement is used to create a table in database. Tables are organized into rows and columns, and each table must have a name.

**Syntax:**

```
CREATE TABLE table_name
(
    column_name1 data_type(size),
    column_name2 data_type(size),
    column_name3 data_type(size),
    ....
);
```

- **ALTER:**

Alter Command is used to modify the structure of the table. Using this command you can perform four different operations. This command contains four sub commands that is;

1. Alter modify:

Using this command you can increase or decrease the size of data type and also you can change the data type from old data type to new data type.

**Syntax:**

```
ALTER TABLE table_name MODIFY
```

```
(
    column 1 datatype(size),
    column 2 datatype(size),
    .....
);
```

2. Alter add:

This command is used to add a new column in the table. Using this command you can add more than one column to the existing.

Note: You can not add the new column at required position in the table.

**Syntax:**

```
ALTER TABLE table_name ADD
(
    column 1 datatype(size),
    column 2 datatype(size),
    .....
);
```

3. Alter rename:

This command is used to change the column name from old column name to new column name.

**Syntax:**

```
ALTER TABLE table_name RENAME COLUMN old_column_name TO
    new_column_name;
```

4. Alter drop:

This command is used to remove the column from existing table.

**Syntax:**

```
ALTER TABLE table_name DROP column_name;
```

- **DROP:**

1. Drop index:

The DROP INDEX statement is used to delete an index in a table.

**Syntax:**

```
ALTER TABLE table_name DROP INDEX index_name;
```

2. Drop table:

The DROP TABLE statement is used to delete a table.

**Syntax:**

```
DROP TABLE table_name;
```

3. Drop database:

The DROP DATABASE statement is used to delete a database.

**Syntax:**

```
DROP DATABASE database_name;
```

- **TRUNCATE:**

What if we only want to delete the data inside the table, and not the table itself? Then, use the TRUNCATE TABLE statement:

**Syntax:**

```
TRUNCATE TABLE table_name;
```

- **RENAME:**

Used to change the name of the table:

**Syntax:**

```
RENAME table <OldTableName> TO <NewTableName>;
```

## DML Commands:

- **SELECT** – The SELECT statement is used to select data from a database. The result is stored in a result table, called the result-set.

**Syntax:**

```
SELECT column_name, column_name  
FROM table_name;
```

and

```
SELECT * FROM table_name;
```

- **INSERT INTO** – The INSERT INTO statement is used to insert new records in a table.

**Syntax:**

It is possible to write the INSERT INTO statement in two forms. The first form does not specify the column names where the data will be inserted, only their values:

```
INSERT INTO table_name  
VALUES (value1, value2, value3, ...);
```

The second form specifies both the column names and the values to be inserted:

```
INSERT INTO table_name (column1, column2, column3, ...)  
VALUES (value1, value2, value3, ...);
```

- **UPDATE** – The UPDATE statement is used to update existing records in a table.

**Syntax:**

```
UPDATE table_name  
SET column1=value1, column2=value2, ...  
WHERE some_column=some_value;
```

- **DELETE** –  
The DELETE statement is used to delete rows in a table.

**Syntax:**

```
DELETE FROM table_name WHERE some_column=some_value;
```

- **MERGE-UPSERT** – Insert or update, or perform both using the merge command.
- **CALL** – call a PL/SQL or Java subprogram.
- **EXPLAIN PLAN** – interpretation of data access path.
- **Lock Table** – concurrency control.

## View:

In SQL, a view is a virtual table based on the result-set of an SQL statement.

A view contains rows and columns, just like a real table. The fields in a view are fields from one or more real tables in the database. You can add SQL functions, WHERE, and JOIN statements to a view and present the data as if the data were coming from one single table.

**Syntax:**

```
CREATE VIEW view_name AS  
SELECT column_name(s)  
FROM table_name  
WHERE condition
```

Views, which are kind of virtual tables, allow users to do the following:

- Structure data in a way that users or classes of users find natural or intuitive.
- Restrict access to the data such that a user can see and (sometimes) modify exactly what they need and no more.
- Summarize data from various tables which can be used to generate reports.

### Update in view:

A view can be updated under certain conditions:

- The SELECT clause may not contain the keyword DISTINCT.
- The SELECT clause may not contain summary functions.
- The SELECT clause may not contain set functions.
- The SELECT clause may not contain set operators.
- The SELECT clause may not contain an ORDER BY clause.
- The FROM clause may not contain multiple tables.
- The WHERE clause may not contain subqueries.
- The query may not contain GROUP BY or HAVING.
- Calculated columns may not be updated.
- All NOT NULL columns from the base table must be included in the view in order for the INSERT query to function.

So, if a view satisfies all the above-mentioned rules then you can update a view.

Following is an example to update the age of Ramesh:

```
SQL > UPDATE CUSTOMERS_VIEW  
      SET AGE = 35  
      WHERE name='Ramesh';
```

This would ultimately update the base table CUSTOMERS and same would reflect in the view itself. Now, try to query base table, and SELECT statement would produce the following result:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	35	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
6	Komal	22	MP	4500.00
7	Muffy	24	Indore	10000.00

### Insert into view:

Rows of data can be inserted into a view. The same rules that apply to the UPDATE command also apply to the INSERT command.

Here we cannot insert rows in CUSTOMERS\_VIEW because we have not included all the NOT NULL columns in this view, otherwise you can insert rows in a view in similar way as you insert them in a table.

### Delete row from view:

Rows of data can be deleted from a view. The same rules that apply to the UPDATE and INSERT commands apply to the DELETE command.

Following is an example to delete a record having AGE= 22.

```
SQL > DELETE FROM CUSTOMERS_VIEW
      WHERE age = 22;
```

This would ultimately delete a row from the base table CUSTOMERS and same would reflect in the view itself. Now, try to query base table, and SELECT statement would produce the following result:

ID	NAME	AGE	ADDRESS	SALARY
1	Ramesh	35	Ahmedabad	2000.00
2	Khilan	25	Delhi	1500.00
3	kaushik	23	Kota	2000.00
4	Chaitali	25	Mumbai	6500.00
5	Hardik	27	Bhopal	8500.00
7	Muffy	24	Indore	10000.00

### Drop in view:

Obviously, where you have a view, you need a way to drop the view if it is no longer needed. The syntax is very simple as given below:

```
DROP VIEW view_name;
```

Following is an example to drop CUSTOMERS\_VIEW from CUSTOMERS table:

```
DROP VIEW CUSTOMERS_VIEW;
```

## Code:

```
151070031@ltsp97:~$ mysql -h172.18.61.59 -u151070031 -p151070031
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 246
Server version: 5.5.44-0ubuntu0.14.04.1 (Ubuntu)
```

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

```
mysql> create database mycollege;
Query OK, 1 row affected (0.00 sec)
mysql> use mycollege;
Database changed
mysql> create table student ( id int ,name varchar(10));
Query OK, 0 rows affected (0.03 sec)
mysql> insert into student(id,name) values(151070031,"tushar");
Query OK, 1 row affected (0.01 sec)
mysql> select * from student;
+-----+-----+
| id      | name  |
+-----+-----+
| 151070031 | tushar|
+-----+-----+
1 row in set (0.00 sec)
mysql> insert into student (id,name)values (151070054,"aagam");
Query OK, 1 row affected (0.01 sec)
mysql> insert into student (id,name)values (151070055,"viral");
Query OK, 1 row affected (0.01 sec)
mysql> select * from student;
+-----+-----+
| id      | name  |
+-----+-----+
| 151070031 | tushar|
| 151070054 | aagam |
| 151070055 | viral |
+-----+-----+
3 rows in set (0.00 sec)
mysql> insert into student (id,name)values (151070049,"viral"),(151070015,"jjjjj");
Query OK, 2 rows affected (0.00 sec)
Records: 2  Duplicates: 0  Warnings: 0
mysql> select * from student;
+-----+-----+
| id      | name  |
+-----+-----+
| 151070031 | tushar|
| 151070054 | aagam |
| 151070055 | viral |
| 151070049 | viral |
| 151070015 | jjjjj |
+-----+-----+
5 rows in set (0.00 sec)

mysql> insert into student(id,name) values(151070055,"viral");
```

Query OK, 1 row affected (0.00 sec)

mysql> select \* from student;

id	name
151070031	tushar
151070054	aagam
151070055	viral
151070049	viral
151070015	jjjjj
151070055	viral

6 rows in set (0.00 sec)

mysql> update student set name="Dev" where id=151070055;

Query OK, 2 rows affected (0.01 sec)

Rows matched: 2 Changed: 2 Warnings: 0

mysql> select \* from student;

id	name
151070031	tushar
151070054	aagam
151070055	Dev
151070049	viral
151070015	jjjjj
151070055	Dev

6 rows in set (0.01 sec)

mysql> delete from student where id=151070055;

Query OK, 2 rows affected (0.01 sec)

mysql> delete from student where name="jjjjj";

Query OK, 1 row affected (0.01 sec)

mysql> select \* from student;

id	name
151070031	tushar
151070054	aagam
151070049	viral

3 rows in set (0.01 sec)

mysql> alter table student add dob date;

Query OK, 3 rows affected (0.02 sec)

Records: 3 Duplicates: 0 Warnings: 0

mysql> select \* from student;

id	name	dob
151070031	tushar	NULL
151070054	aagam	NULL
151070049	viral	NULL

3 rows in set (0.01 sec)

mysql> alter table student drop dob;

Query OK, 3 rows affected (0.03 sec)

Records: 3 Duplicates: 0 Warnings: 0

```
mysql> select * from student;
```

id	name
151070031	tushar
151070054	aagam
151070049	viral

3 rows in set (0.00 sec)

```
mysql> alter table student add dob int;
```

Query OK, 3 rows affected (0.04 sec)

Records: 3 Duplicates: 0 Warnings: 0

```
mysql> select * from student;
```

id	name	dob
151070031	tushar	NULL
151070054	aagam	NULL
151070049	viral	NULL

3 rows in set (0.01 sec)

```
mysql> insert into student (dob)values(0809) where name="tushar";
```

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'where name="tushar"' at line 1

```
mysql> update student set dob=0809 where name="tushar";
```

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> select * from student;
```

id	name	dob
151070031	tushar	0809
151070054	aagam	NULL
151070049	viral	NULL

3 rows in set (0.00 sec)

```
mysql> update student set dob=108 where id=151070054;
```

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> update student set dob=2612 where id=151070054,name="viral";
```

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'name="viral"' at line 1

```
mysql> update student set dob=2612 where id=151070049,name="viral";
```

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'name="viral"' at line 1

```
mysql> update student set dob=2612 where id=151070049;
```

Query OK, 1 row affected (0.00 sec)

Rows matched: 1 Changed: 1 Warnings: 0



```
mysql> select * from student;
```

id	name	dob
151070031	tushar	0809
151070054	aagam	108
151070049	viral	2612

3 rows in set (0.01 sec)

```
mysql> alter table student change name firstname varchar(100);
```

Query OK, 3 rows affected (0.03 sec)

Records: 3 Duplicates: 0 Warnings: 0

```
mysql> select * from student;
```

id	firstname	dob
151070031	tushar	0809
151070054	aagam	108
151070049	viral	2612

3 rows in set (0.00 sec)

```
mysql> alter table student drop dob;
```

Query OK, 3 rows affected (0.03 sec)

Records: 3 Duplicates: 0 Warnings: 0

```
mysql> select * from student;
```

id	firstname
151070031	tushar
151070054	aagam
151070049	viral

3 rows in set (0.01 sec)

```
mysql> alter table student add column DOB date;
```

Query OK, 3 rows affected (0.02 sec)

Records: 3 Duplicates: 0 Warnings: 0

```
mysql> select * from student;
```

id	firstname	DOB
151070031	tushar	NULL
151070054	aagam	NULL
151070049	viral	NULL

3 rows in set (0.00 sec)

```
mysql> update student set DOB="1997-09-08" where id=151070031;
```

Query OK, 1 row affected (0.01 sec)

Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> select * from student;
```

id	firstname	DOB
151070031	tushar	1997-09-08

151070054	aagam	NULL
151070049	viral	NULL

3 rows in set (0.00 sec)

```
mysql> update student set DOB="1997-10-16" where firstname="aagam";
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from student;
+-----+-----+-----+
| id      | firstname | DOB      |
+-----+-----+-----+
| 151070031 | tushar    | 1997-09-08 |
| 151070054 | aagam     | 1997-10-16 |
| 151070049 | viral     | NULL       |
+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> update student set DOB="1997-11-26" where firstname="viral";
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from student;
+-----+-----+-----+
| id      | firstname | DOB      |
+-----+-----+-----+
| 151070031 | tushar    | 1997-09-08 |
| 151070054 | aagam     | 1997-10-16 |
| 151070049 | viral     | 1997-11-26 |
+-----+-----+-----+
3 rows in set (0.01 sec)
```

```
mysql> alter table student set firstname="dev" where id=151070049;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual
that corresponds to your MySQL server version for the right syntax to use
near 'set firstname="dev" where id=151070049' at line 1
```

```
mysql> update student set firstname="dev" where firstname="viral";
Query OK, 1 row affected (0.00 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from student;
+-----+-----+-----+
| id      | firstname | DOB      |
+-----+-----+-----+
| 151070031 | tushar    | 1997-09-08 |
| 151070054 | aagam     | 1997-10-16 |
| 151070049 | dev       | 1997-11-26 |
+-----+-----+-----+
3 rows in set (0.01 sec)
```

```
mysql> create view v as select firstname, DOB from student ;
Query OK, 0 row affected (0.00 sec)
```

```
mysql> select * from v;
+-----+-----+
| firstname | DOB      |
+-----+-----+
| tushar    | 1997-09-08 |
| aagam     | 1997-10-16 |
| dev       | 1997-11-26 |
+-----+-----+
```

```
mysql> rename column firstname to name;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual
that corresponds to your MySQL server version for the right syntax to use
near 'column firstname to name' at line 1
mysql> rename table student to students;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> select * from student;
ERROR 1146 (42S02): Table 'mycollege.student' doesn't exist
mysql> drop students;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual
that corresponds to your MySQL server version for the right syntax to use
near 'students' at line 1
mysql> drop table students;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> select * from student;
ERROR 1146 (42S02): Table 'mycollege.student' doesn't exist
```

### **View:**

```
151070031@ltsp107:~$ mysql -h172.18.61.59 -u151070032 -p151070032
ERROR 1045 (28000): Access denied for user '151070032'@'172.18.39.107'
(using password: YES)
151070031@ltsp107:~$ mysql -h172.18.61.59 -u151070031 -p151070031
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 974
Server version: 5.5.44-0ubuntu0.14.04.1 (Ubuntu)
```

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Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

```
mysql> create database expla;
Query OK, 1 row affected (0.01 sec)
mysql> use expla
Database changed
mysql> create table student(id int,name varchar(50),age int,dob date);
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> insert into student(id,name,age,dob) values
(151070031,"Tushar",19,"1997-09-08"),(151070049,"Viral",19,"1997-09-
22"),(151070035,"Vatsal",19,"1997-04-15");Query OK, 3 rows affected (0.00
sec)
Records: 3  Duplicates: 0  Warnings: 0
```

```
mysql> insert into student(id,name,age,dob) values (151070039,"Vi-
rat",19,"1997-02-18");
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from student;
```

```

+-----+-----+-----+-----+
| id      | name   | age  | dob      |
+-----+-----+-----+-----+
| 151070031 | Tushar | 19   | 1997-09-08 |
| 151070049 | Viral  | 19   | 1997-09-22 |
| 151070035 | Vatsal | 19   | 1997-04-15 |
| 151070039 | Virat  | 19   | 1997-02-18 |
+-----+-----+-----+-----+
4 rows in set (0.01 sec)

```

```
mysql> create view student_view as select id,name,dob from student;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> select * from student_view;
+-----+-----+-----+
| id      | name   | dob      |
+-----+-----+-----+
| 151070031 | Tushar | 1997-09-08 |
| 151070049 | Viral  | 1997-09-22 |
| 151070035 | Vatsal | 1997-04-15 |
| 151070039 | Virat  | 1997-02-18 |
+-----+-----+-----+
4 rows in set (0.01 sec)

```

```
mysql> insert into student_view(id,name)values(124578,"Agam");
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from student_view;
+-----+-----+-----+
| id      | name   | dob      |
+-----+-----+-----+
| 151070031 | Tushar | 1997-09-08 |
| 151070049 | Viral  | 1997-09-22 |
| 151070035 | Vatsal | 1997-04-15 |
| 151070039 | Virat  | 1997-02-18 |
| 124578   | Agam   | NULL      |
+-----+-----+-----+
5 rows in set (0.00 sec)

```

```
mysql> select * from student;
+-----+-----+-----+-----+
| id      | name   | age  | dob      |
+-----+-----+-----+-----+
| 151070031 | Tushar | 19   | 1997-09-08 |
| 151070049 | Viral  | 19   | 1997-09-22 |
| 151070035 | Vatsal | 19   | 1997-04-15 |
| 151070039 | Virat  | 19   | 1997-02-18 |
| 124578   | Agam   | NULL  | NULL      |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)

```

```
mysql> delete from student_view where name="Agam";
Query OK, 1 row affected (0.01 sec)
```

```
mysql> select * from student;
```

```

+-----+-----+-----+-----+
| id      | name   | age  | dob      |
+-----+-----+-----+-----+
| 151070031 | Tushar | 19   | 1997-09-08 |
| 151070049 | Viral  | 19   | 1997-09-22 |
| 151070035 | Vatsal | 19   | 1997-04-15 |
| 151070039 | Virat  | 19   | 1997-02-18 |
+-----+-----+-----+-----+
4 rows in set (0.00 sec)

```

```

mysql> select * from student_view;
+-----+-----+-----+
| id      | name   | dob      |
+-----+-----+-----+
| 151070031 | Tushar | 1997-09-08 |
| 151070049 | Viral  | 1997-09-22 |
| 151070035 | Vatsal | 1997-04-15 |
| 151070039 | Virat  | 1997-02-18 |
+-----+-----+-----+
4 rows in set (0.01 sec)

```

```

mysql> insert into student_view(id,name)values(124578,"Agam");
Query OK, 1 row affected (0.01 sec)

```

```

mysql> delete from student where name=
-> "Agam";
Query OK, 1 row affected (0.01 sec)

```

```

mysql> select * from student_view;
+-----+-----+-----+
| id      | name   | dob      |
+-----+-----+-----+
| 151070031 | Tushar | 1997-09-08 |
| 151070049 | Viral  | 1997-09-22 |
| 151070035 | Vatsal | 1997-04-15 |
| 151070039 | Virat  | 1997-02-18 |
+-----+-----+-----+
4 rows in set (0.00 sec)

```

```

mysql> select * from student;
+-----+-----+-----+-----+
| id      | name   | age  | dob      |
+-----+-----+-----+-----+
| 151070031 | Tushar | 19   | 1997-09-08 |
| 151070049 | Viral  | 19   | 1997-09-22 |
| 151070035 | Vatsal | 19   | 1997-04-15 |
| 151070039 | Virat  | 19   | 1997-02-18 |
+-----+-----+-----+-----+
4 rows in set (0.01 sec)

```

```

mysql> alter view student_name add column address varchar(50);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'add column address varchar(50)' at line 1
mysql> alter table student_name add column address varchar(50);
ERROR 1146 (42S02): Table 'expla.student_name' doesn't exist
mysql> alter view student_name add column age int;

```

ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'add column age int' at line 1  
mysql> insert into student\_view(id,name)values(124578,"Agam");  
Query OK, 1 row affected (0.00 sec)

```
mysql> select * from student;
+-----+-----+-----+-----+
| id      | name   | age  | dob      |
+-----+-----+-----+-----+
| 151070031 | Tushar | 19   | 1997-09-08 |
| 151070049 | Viral  | 19   | 1997-09-22 |
| 151070035 | Vatsal | 19   | 1997-04-15 |
| 151070039 | Virat  | 19   | 1997-02-18 |
| 124578   | Agam   | NULL | NULL      |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

mysql> delete from student where age =NULL;  
Query OK, 0 rows affected (0.00 sec)

```
mysql> select * from student;
+-----+-----+-----+-----+
| id      | name   | age  | dob      |
+-----+-----+-----+-----+
| 151070031 | Tushar | 19   | 1997-09-08 |
| 151070049 | Viral  | 19   | 1997-09-22 |
| 151070035 | Vatsal | 19   | 1997-04-15 |
| 151070039 | Virat  | 19   | 1997-02-18 |
| 124578   | Agam   | NULL | NULL      |
+-----+-----+-----+-----+
5 rows in set (0.00 sec)
```

mysql> delete from student where dob =NULL;  
Query OK, 0 rows affected (0.01 sec)

mysql> update student\_view set age=20 where name="agam";  
ERROR 1054 (42S22): Unknown column 'age' in 'field list'  
mysql> update student\_view set dob="1997-02-29" where name="Agam";  
Query OK, 1 row affected, 1 warning (0.00 sec)  
Rows matched: 1 Changed: 1 Warnings: 1

```
mysql> select * from student_view;
+-----+-----+-----+
| id      | name   | dob      |
+-----+-----+-----+
| 151070031 | Tushar | 1997-09-08 |
| 151070049 | Viral  | 1997-09-22 |
| 151070035 | Vatsal | 1997-04-15 |
| 151070039 | Virat  | 1997-02-18 |
| 124578   | Agam   | 0000-00-00 |
+-----+-----+-----+
5 rows in set (0.00 sec)
```

mysql> update student\_view set dob="1997-02-28" where name="Agam";  
Query OK, 1 row affected (0.01 sec)  
Rows matched: 1 Changed: 1 Warnings: 0

```
mysql> select * from student_view;
+-----+-----+-----+
| id      | name   | dob      |
+-----+-----+-----+
| 151070031 | Tushar | 1997-09-08 |
| 151070049 | Viral  | 1997-09-22 |
| 151070035 | Vatsal | 1997-04-15 |
| 151070039 | Virat  | 1997-02-18 |
| 124578    | Agam   | 1997-02-28 |
+-----+-----+-----+
5 rows in set (0.01 sec)
```

```
mysql> update student_view set id=151070051 where name="Agam";
Query OK, 1 row affected (0.01 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

```
mysql> select * from student_view;
+-----+-----+-----+
| id      | name   | dob      |
+-----+-----+-----+
| 151070031 | Tushar | 1997-09-08 |
| 151070049 | Viral  | 1997-09-22 |
| 151070035 | Vatsal | 1997-04-15 |
| 151070039 | Virat  | 1997-02-18 |
| 151070051 | Agam   | 1997-02-28 |
+-----+-----+-----+
5 rows in set (0.00 sec)
```

```
mysql> alter view student_view drop column dob;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'drop column dob' at line 1
mysql> create or replace view student_view as select * from student where id<151070050;
Query OK, 0 rows affected (0.00 sec)
```

```
mysql> select * from student_view;
+-----+-----+-----+-----+
| id      | name   | age | dob      |
+-----+-----+-----+-----+
| 151070031 | Tushar | 19  | 1997-09-08 |
| 151070049 | Viral  | 19  | 1997-09-22 |
| 151070035 | Vatsal | 19  | 1997-04-15 |
| 151070039 | Virat  | 19  | 1997-02-18 |
+-----+-----+-----+-----+
4 rows in set (0.01 sec)
```

```
mysql> show tables;
+-----+
| Tables_in_expla |
+-----+
| student          |
| student_view     |
+-----+
2 rows in set (0.01 sec)
```

```
mysql> insert into student_view(id,name,age,dob) values (151070057,"Pranav",20,"1996-10-12");
```

Query OK, 1 row affected (0.01 sec)

```
mysql> select * from student_view;
```

id	name	age	dob
151070031	Tushar	19	1997-09-08
151070049	Viral	19	1997-09-22
151070035	Vatsal	19	1997-04-15
151070039	Virat	19	1997-02-18

4 rows in set (0.00 sec)

```
mysql> select * from student;
```

id	name	age	dob
151070031	Tushar	19	1997-09-08
151070049	Viral	19	1997-09-22
151070035	Vatsal	19	1997-04-15
151070039	Virat	19	1997-02-18
151070051	Agam	NULL	1997-02-28
151070057	Prafull	20	1996-10-12

6 rows in set (0.00 sec)

```
mysql> drop view student_view;
```

Query OK, 0 rows affected (0.00 sec)

```
mysql> show tables;
```

Tables_in_expla
student

1 row in set (0.01 sec)

## Conclusion:

Thus, the basic syntax, working and the data types involved in sql were learned and executed over the terminal. Also, the errors taught the various facts such as varchar is used instead of string, single quote (or double quote) is used to represent them, and many more such know-how were gained through this practical.

Also, the concept of views, their creation, various queries that can be fired over a view, their constraints, etc. were learnt in detail and implemented over the terminal.