SQL VIEWS

A view is a database object that has no values. Its contents are based on the base table. It contains rows and columns similar to the real table. In MySQL, the View is a virtual table created by a query by joining one or more tables. It is operated similarly to the base table but does not contain any data of its own. The View and table have one main difference that the views are definitions built on top of other tables (or views). If any changes occur in the underlying table, the same changes reflected in the View also.

1) Creating a VIEW

The SQL AND operator is used with the where clause in the SQL Query. AND operator in SQL returns only those records which satisfy both the conditions in the SQL query.

Syntax for creating a VIEW in MySQL**:**

```
CREATE [OR REPLACE] VIEW view_name AS
SELECT columns
FROM tables
[WHERE conditions];
```

Example. 1.

Let us see the recods of the table **employee**.

```
mysql> select * from employee;
+--------+-------------------+----------+-----------+
| emp_id | e_name            | e_salary | e_city    |
+--------+-------------------+----------+-----------+
|    100 | Dwipen Laskar     |    23000 | Mangaldoi |
|    101 | Dwipen Nath       |    18000 | Mangaldoi |
|    102 | Bidyut Dutta      |    16500 | Teapur    |
|    103 | Dwipen Nath       |    28000 | Mangaldoi |
|    104 | Hasin Afzal Ahmed |    80500 | Jorhat    |
|    105 | Dulumoni Das      |    24000 | Dibrugarh |
|    106 | Haren Das         |    21500 | Darrang   |
|    107 | Masud Alom Rafi   |    13500 | Jorhat    |
|    108 | Pranamika Kakoti  |    26000 | Golaghat  |
|    109 | Sanjib Bora       |    11500 | Darrang   |
|    110 | Indrani Chitia    |    41500 | Sivsagar  |
+--------+-------------------+----------+-----------+
11 rows in set (0.08 sec)
```

Now suppose, we want to create a view of the employee table:

Statement: **CREATE VIEW emp_view AS SELECT * FROM employee;**

A view with name emp_view will be created.

2) Retrieve a VIEW

We can retrive the records of a view

Syntax for creating a VIEW in MySQL**:**

SELECT * FROM view_name;

Example. .

Let us see the recods of the **emp_view** by executing the statement:

SELECT * FROM emp_view;

Output:

```
mysql> SELECT * FROM emp_view;
+--------+------------------+----------+-----------+
| emp_id | e_name           | e_salary | e_city    |
+--------+------------------+----------+-----------+
|    100 | Dwipen Laskar    |    23000 | Mangaldoi |
|    101 | Dwipen Nath      |    18000 | Mangaldoi |
|    102 | Bidyut Dutta     |    16500 | Teapur    |
|    103 | Dwipen Nath      |    28000 | Mangaldoi |
|    104 | Hasin Afzal Ahmed |    80500 | Jorhat    |
|    105 | Dulumoni Das     |    24000 | Dibrugarh |
|    106 | Haren Das        |    21500 | Darrang   |
|    107 | Masud Alom Rafi  |    13500 | Jorhat    |
|    108 | Pranamika Kakoti |    26000 | Golaghat  |
|    109 | Sanjib Bora      |    11500 | Darrang   |
|    110 | Indrani Chitia   |    41500 | Sivsagar  |
+--------+------------------+----------+-----------+
11 rows in set (0.21 sec)
```

3) Update a VIEW

In MYSQL, the ALTER VIEW statement is used to modify or update the already created VIEW without dropping it.

Syntax for updating a VIEW in MySQL**:**

```
ALTER VIEW view_name AS
 SELECT columns
FROM table
WHERE conditions;
```

Example.

Let us update the **emp_view** to store only those employees staying in *Mangaldai* city.

```
ALTER VIEW emp_view AS
SELECT *
FROM employee
WHERE e_city='Mangaldoi';
```

We can see the updated view as: **SELECT * FROM emp_view;**

Output:

```
mysql> SELECT * FROM emp_view;
+--------+----------------------+----------+-----------+
| emp_id | e_name               | e_salary | e_city    |
+--------+----------------------+----------+-----------+
|    100 | Dwipen Laskar Laskar |    23000 | Mangaldoi |
|    101 | Dwipen Nath          |    18000 | Mangaldoi |
|    103 | Dwipen Nath          |    28000 | Mangaldoi |
+--------+----------------------+----------+-----------+
3 rows in set (0.05 sec)
```

4) DROP a VIEW

We can drop the existing VIEW by using the DROP VIEW statement.

Syntax for droping a VIEW in MySQL**:**

DROP VIEW view_name;

Example.

Let us drop the **emp_view.**

DROP VIEW emp_view

Now, if try to access the **emp_view** the system will show error because it is not available now.

Output:

```
mysql> drop view emp_view;
Query OK, 0 rows affected (0.18 sec)

mysql> SELECT * FROM emp_view;
ERROR 1146 (42S02): Table 'university.emp_view' doesn't exist
mysql>
```