UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
DEHRADUN

DBMS LAB - 9

Understand the concepts of Views

MTECH-COMPUTER SCIENCE
ENGINEERING
CYBER SECURITY AND FORENSICS

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Objective: : To understand the concepts of Views.

Create table of table name: EMPLOYEES and add 6 rows.

```
1      -- Lab 9 Database Management Systems
2      -- Autor: Jigesh Sheoran
3
4    • CREATE DATABASE Lab9DB;
5    • USE Lab9DB;
6
7    • ⊖ CREATE TABLE EMPLOYEES (
8          Employee_id INT PRIMARY KEY,
9          First_Name VARCHAR(20),
10         Last_Name VARCHAR(20),
11         Salary DECIMAL(10,2),
12         Department_id INT
13      );
14
100%  ⇕  3:13
```

		Time	Action	Response	Duration / Fetch Time
✓	1	13:36:19	CREATE DATABASE Lab9DB	1 row(s) affected	0.0036 sec
✓	2	13:36:19	USE Lab9DB	0 row(s) affected	0.00045 sec
✓	3	13:36:19	CREATE TABLE EMPLOYEES (Employee_id INT PRIMARY KEY, First_Name VARCHAR(20), Last_Name VARCH…	0 row(s) affected	0.010 sec

```
1      -- Lab 9 Database Management Systems
2      -- Autor: Jigesh Sheoran
3
4    • INSERT INTO EMPLOYEES VALUES
5      (101, 'Amit',    'Sharma',    45000, 10),
6      (102, 'Priya',   'Verma',     50000, 20),
7      (103, 'Rohit',   'Singh',     55000, 20),
8      (104, 'Neha',    'Patel',     60000, 30),
9      (105, 'Karan',   'Iyer',      65000, 20),
10     (106, 'Meera',   'Joshi',     70000, 10);
11
12
```

Query 1: Create View of name emp_view and the column would be Employee_id, Last_Name, salary and department_id only.

```
1      -- Lab 9 Database Management Systems
2      -- Autor: Jigesh Sheoran
3
4    • CREATE VIEW emp_view AS
5      SELECT Employee_id, Last_Name, Salary, Department_id
6      FROM EMPLOYEES;
7
```

Now, to verify this emp_view query we can check this using another query.

```
8 •    SELECT * FROM emp_view;
9
```
100%   24:8

Result Grid | Filter Rows: | Q Search | Export:

Employee_id	Last_Name	Salary	Department_id
101	Sharma	45000.00	10
102	Verma	50000.00	20
103	Singh	55000.00	20
104	Patel	60000.00	30
105	Iyer	65000.00	20
106	Joshi	70000.00	10

Query 2: Insert values into view(remove the NOT NULL constraint and then insert values).

```
4      -- Query 2
5 •    INSERT INTO emp_view (Employee_id, Last_Name, Salary, Department_id)
6      VALUES (107, 'Khan', 52000, 30);
7
8 •    SELECT * FROM emp_view;
9
```
100%   11:4

Result Grid | Filter Rows: | Q Search | Export:

Employee_id	Last_Name	Salary	Department_id
101	Sharma	45000.00	10
102	Verma	50000.00	20
103	Singh	55000.00	20
104	Patel	60000.00	30
105	Iyer	65000.00	20
106	Joshi	70000.00	10
107	Khan	52000.00	30

As you can see a New Value has been added directly to emp_view.

Query 3: Modify, delete and drop operations are performed on view.

UPDATE

```
4      -- Query 3 / Update
5 •    UPDATE emp_view
6      SET Salary = 90000
7      WHERE Employee_id = 103;
8
9 •    SELECT * FROM emp_view WHERE Employee_id = 103;
10
```
100%   48:9

Result Grid | Filter Rows: | Q Search | Export:

Employee_id	Last_Name	Salary	Department_id
103	Singh	90000.00	20

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DELETE

```
4       -- Query 3 / Delete
5   *   DELETE FROM emp_view
6       WHERE Employee_id = 102;
7
8   *   SELECT * FROM emp_view WHERE Employee_id = 102;
9
```

`100%` `20:4`

Result Grid	Filter Rows:	Q Search	Export:
Employee_id	Last_Name	Salary	Department_id

As you can observer that Employee_id = 102 has been deleted so it doesn't show when we try to run SHOW * FROM emp_view query on it.

DROP

```
4       -- Query 3 / DROP
5   *   DROP VIEW emp_view;
6   *   SELECT * FROM emp_view;
7
```

As you can observe after using DROP VIEW the emp_view has been deleted. That's why when we try to view emp_view after the DROP query we encounter the following error.

13:55:14   SELECT * FROM emp_view LIMIT 0, 1000   Error Code: 1146. Table 'lab9db.emp_view' doesn't exist0.0099 sec

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Query 4: **Create a view named "salary_view". The view shows the employees in department 20 and their annual salary.**

```
 4      -- Query 4
 5  *   CREATE VIEW salary_view AS
 6      SELECT
 7          Employee_id,
 8          First_Name,
 9          Last_Name,
10          Salary,
11          (Salary * 12) AS Annual_Salary
12      FROM EMPLOYEES
13      WHERE Department_id = 20;
14
15  *   SELECT * FROM salary_view;
16
17
```

100%   ⬍   27:15

Result Grid | Filter Rows: Q Search | Export:

Employee_id	First_Name	Last_Name	Salary	Annual_Salary
103	Rohit	Singh	90000.00	1080000.00
105	Karan	Iyer	65000.00	780000.00

—-------------------------------END OF DOCUMENT —-----------------------------

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