

Creating and Using SQL Views in Database Operations

Objective

To create a database, define tables, insert data, and utilize SQL views to display specific query results as per the requirements.

Question

(From IMG_20250721_091627.jpg)

Lab Exercise:

1. Creating a Database named lab6.
2. Creating Tables and Inserting data.
 - a. Customer Table
 - b. Order Table
 - c. Employee Table
 - d. Department Table
3. Use view to display only the details of employees who are AP.
4. Use view to display only name, salary and department of employee whose salary is greater than 10000.
5. Use view to display name, age of customer as well as order date and amount.
6. Update view of Q.N.5 to include address and salary of customer.
7. Again update view of Q.N.6 to include only salary greater than 5000.

SQL Queries and Outputs

```
CREATE DATABASE lab6; USE lab6;
```

```
CREATE TABLE CUSTOMER ( C_ID INT, NAME VARCHAR(50), AGE INT, ADDRESS VARCHAR(50),  
SALARY DECIMAL(10,2) ); CREATE TABLE `ORDER` ( O_ID INT, ORDER_DATE DATETIME,  
C_ID INT, AMOUNT DECIMAL(10,2) ); CREATE TABLE EMPLOYEE ( E_ID INT, E_NAME  
VARCHAR(50), JOB VARCHAR(50), DID INT, SALARY DECIMAL(10,2) ); CREATE TABLE  
DEPARTMENT ( DID INT, DNAME VARCHAR(50) );
```

```
INSERT INTO CUSTOMER (C_ID, NAME, AGE, ADDRESS, SALARY) VALUES (1, 'Santosh', 32,  
'Kathmandu', 12000.00), (2, 'Phura', 28, 'Pokhara', 9000.00), (3, 'Surya', 35,  
'Lalitpur', 4000.00), (4, 'Salim', 30, 'Bhaktapur', 15000.00), (5, 'Gaurab', 27,  
'Butwal', 7000.00); INSERT INTO `ORDER` (O_ID, ORDER_DATE, C_ID, AMOUNT) VALUES  
(101, '2025-07-01 10:00:00', 1, 5000.00), (102, '2025-07-02 12:30:00', 2,  
7000.00), (103, '2025-07-03 09:45:00', 3, 2000.00), (104, '2025-07-04 14:15:00',  
4, 10000.00), (105, '2025-07-05 16:20:00', 5, 3000.00); INSERT INTO EMPLOYEE  
(E_ID, E_NAME, JOB, DID, SALARY) VALUES (1, 'Santosh', 'AP', 1, 12000.00), (2,  
'Phura', 'Designer', 2, 9000.00), (3, 'Surya', 'Manager', 3, 20000.00), (4,  
'Salim', 'AP', 1, 15000.00), (5, 'Gaurab', 'Assistant', 2, 7000.00); INSERT INTO  
DEPARTMENT (DID, DNAME) VALUES (1, 'IT'), (2, 'Design'), (3, 'Management');
```

```
CREATE VIEW view_AP AS SELECT * FROM EMPLOYEE WHERE JOB = 'AP';
```

E_ID	E_NAME	JOB	DID	SALARY
1	Santosh	AP	1	12000.00
4	Salim	AP	1	15000.00

```
CREATE VIEW view_high_salary AS SELECT E_NAME, SALARY, DID FROM EMPLOYEE WHERE SALARY > 10000;
```

E_NAME	SALARY	DID
Santosh	12000.00	1
Surya	20000.00	3
Salim	15000.00	1

```
CREATE VIEW view_customer_orders AS SELECT C.NAME, C.AGE, O.ORDER_DATE, O.AMOUNT FROM CUSTOMER C JOIN `ORDER` O ON C.C_ID = O.C_ID;
```

NAME	AGE	ORDER_DATE	AMOUNT
Santosh	32	2025-07-01 10:00:00	5000.00
Phura	28	2025-07-02 12:30:00	7000.00
Surya	35	2025-07-03 09:45:00	2000.00
Salim	30	2025-07-04 14:15:00	10000.00
Gaurab	27	2025-07-05 16:20:00	3000.00

```
CREATE OR REPLACE VIEW view_customer_orders AS SELECT C.NAME, C.AGE, C.ADDRESS, C.SALARY, O.ORDER_DATE, O.AMOUNT FROM CUSTOMER C JOIN `ORDER` O ON C.C_ID = O.C_ID;
```

NAME	AGE	ADDRESS	SALARY	ORDER_DATE	AMOUNT
Santosh	32	Kathmandu	12000.00	2025-07-01 10:00:00	5000.00
Phura	28	Pokhara	9000.00	2025-07-02 12:30:00	7000.00
Surya	35	Lalitpur	4000.00	2025-07-03 09:45:00	2000.00
Salim	30	Bhaktapur	15000.00	2025-07-04 14:15:00	10000.00
Gaurab	27	Butwal	7000.00	2025-07-05 16:20:00	3000.00

```
CREATE OR REPLACE VIEW view_customer_orders AS SELECT C.NAME, C.AGE, C.ADDRESS, C.SALARY, O.ORDER_DATE, O.AMOUNT FROM CUSTOMER C JOIN `ORDER` O ON C.C_ID = O.C_ID WHERE C.SALARY > 5000;
```

NAME	AGE	ADDRESS	SALARY	ORDER_DATE	AMOUNT
Santosh	32	Kathmandu	12000.00	2025-07-01 10:00:00	5000.00
Phura	28	Pokhara	9000.00	2025-07-02 12:30:00	7000.00
Salim	30	Bhaktapur	15000.00	2025-07-04 14:15:00	10000.00
Gaurab	27	Butwal	7000.00	2025-07-05 16:20:00	3000.00

Conclusion

In this lab, we created the lab6 database, defined multiple related tables, inserted representative sample data, and executed SQL view queries as per the requirements. All queries produced the expected non-empty outputs, demonstrating filtering, joining, and view-updating capabilities. This confirms that the SQL logic meets the conditions of the lab exercise.