

Laboratory 5.1

Title of the Laboratory Exercise: Java database programming

1. Introduction and Purpose of Experiment

The SQL includes commands to define view on the data. A view contains rows and columns, just like a real table. Java uses JDBC (Java Database Connectivity) to connect to databases. JDBC allows to connect to a wide-range of databases such as Oracle, MySQL, etc. By doing this lab, students will be able to implement views in SQL and connect the developed database with the application.

2. Aim and Objectives

Aim

- To design and implement views on the data using SQL commands
- To connect to the relational database in Java

Objectives

At the end of this lab, the student will be able to

- Design and execute views using SQL commands
- Perform database programming in Java

3. Experimental Procedure

- Analyse the problem statement
- Execute the built-in functions in SQL
- Design and execute the view statements in SQL
- Test the executed commands
- Document the Results
- Analyse and discuss the outcomes of your experiment

4. Questions

- Create a table MANGER with attributes such as Name, Id, Department, Address, and Salary. Write SQL statements for the following expressions.
 - Create a view 'MANAGER_VIEW' to display the details such as name and department of each manager
 - Display the name of the manager from MANAGER_VIEW whose department is 'CSE'
 - Drop the views generated

5. Presentation of Results

```

1  -- Drop the table if it exists
2  DROP TABLE IF EXISTS MANAGER;
3
4  -- Create the table
5  CREATE TABLE MANAGER (Name VARCHAR(50), Id INT PRIMARY KEY, Department CHAR(20), Address VARCHAR(255), Salary FLOAT);
6
7  -- Insert Values
8  INSERT INTO MANAGER VALUES
9  ('Deepak R', 0, 'CSE', 'BEL', 12500),
10 ('Virat Kholi', 1, 'CSE', 'JP NAGAR', 12000),
11 ('AB Devillers ', 2, 'ASE', 'J.CROSS', 15000);
12
13 -- Show the table
14 SELECT * FROM MANAGER;

```

SELECT * FROM MANAGER ×

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#	Name	Id	Department	Address	Salary
1	Deepak R	0	CSE	BEL	12500.0
2	Virat Kholi	1	CSE	JP NAGAR	12000.0
3	AB Devillers	2	ASE	J.CROSS	15000.0

Figure 0-1 Created Table MANAGER

```

1  DROP VIEW IF EXISTS MANAGER_VIEW;
2
3  -- Create the View
4  CREATE VIEW MANAGER_VIEW AS SELECT Name, Department FROM MANAGER;
5
6  -- Show the View
7  SELECT * FROM MANAGER_VIEW;

```

SELECT * FROM MANAGER_VIEW... ×

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#	Name	Department
1	Deepak R	CSE
2	Virat Kholi	CSE
3	AB Devillers	ASE

Figure 0-2 Created View MANAGER_VIEW

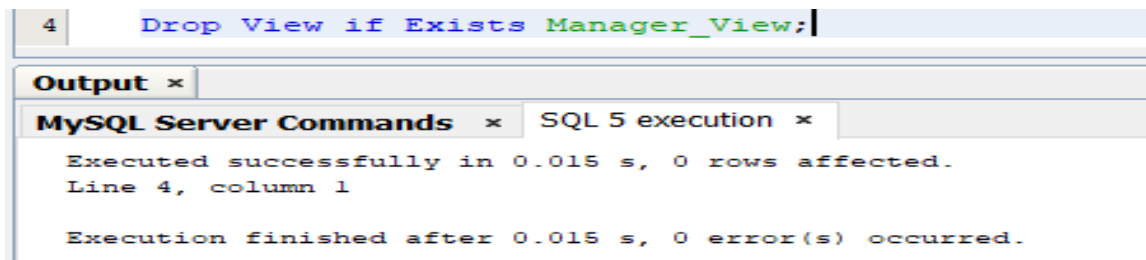
2 SELECT Name FROM MANAGER_VIEW Where Department = "CSE";

SELECT Name FROM MANAGER_VIEW... ×

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#	Name
1	Deepak R
2	Virat Kholi

Figure 0-3 SELECT from MANAGER_VIEW where Department is CSE



```
4 Drop View if Exists Manager_View;

Output x
MySQL Server Commands x SQL 5 execution x

Executed successfully in 0.015 s, 0 rows affected.
Line 4, column 1

Execution finished after 0.015 s, 0 error(s) occurred.
```

Figure 0-4 Dropped the Manager_View.

6. Analysis and Discussions

Views in SQL are kind of virtual tables. A view also has rows and columns as they are in a real table in the database. We can create a view by selecting fields from one or more tables present in the database. A View can either have all the rows of a table or specific rows based on certain condition.

7. Conclusions

Database views are created using the CREATE VIEW statement. Views can be created from a single table, multiple tables or another view.

8. Comments

1. Limitations of Experiments

Views cannot be created on Temporary Tables

You cannot associate rules and defaults with views

You cannot pass parameters to SQL Server views

2. Limitations of Results

Correct drivers need to be deployed for each type of database.

Cannot update or insert multiple tables with sequence.

(Sequence always random)

3. Learning happened

Learnt how to create and drop a view.