

**NEPAL COLLEGE OF INFORMATION TECHNOLOGY**

**BALKUMARI LALITPUR**



**(Affiliated To Pokhara University)**

**SUBJECT : Database Management System**

**LAB REPORT # 5**

**TITLE : Views**

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**Semester : 4<sup>th</sup>**

**Submitted To :**

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## OBJECTIVE

To create and manipulate various database objects of table using views.

### LAB EXERCISE :

➔ Creating a Database named 'lab5'.

= create database lab5;

= use lab5;

### **OUTPUT :**

```
MariaDB [(none)]> show databases;
+-----+
| Database |
+-----+
| information_schema |
| lab4          |
| mysql         |
| performance_schema |
| sys           |
+-----+
5 rows in set (0.013 sec)

MariaDB [(none)]> create database lab5;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> use lab5;
Database changed
MariaDB [lab5]> █
```

➔ Creating Tables and Inserting data.

#### **1) Customer Table :**

= CREATE TABLE customer ( cid INT, name VARCHAR(50), age INT, address VARCHAR(50), salary DECIMAL(10, 2) );

#### **2) Order Table :**

= CREATE TABLE `order` ( oid INT, order\_date DATETIME, cid INT, amount DECIMAL(10, 2) );

#### **3) Employee Table :**

= CREATE TABLE employee ( eid INT, ename VARCHAR(50), job VARCHAR(50), did INT, salary DECIMAL(10, 2) );

#### **4) Department Table :**

=CREATE TABLE department ( did INT, dname VARCHAR(50), location VARCHAR(50) );

### **OUTPUT :**

```
MariaDB [lab4]> CREATE TABLE customer ( cid INT, name VARCHAR(50), age INT, address VARCHAR(50), salary DECIMAL(10, 2) );
Query OK, 0 rows affected (0.004 sec)

MariaDB [lab4]> CREATE TABLE `order` ( oid INT, order_date DATETIME, cid INT, amount DECIMAL(10, 2) );
Query OK, 0 rows affected (0.041 sec)

MariaDB [lab4]> CREATE TABLE employee ( eid INT, ename VARCHAR(50), job VARCHAR(50), did INT, salary DECIMAL(10, 2) );
Query OK, 0 rows affected (0.015 sec)

2 MariaDB [lab4]> CREATE TABLE department ( did INT, dname VARCHAR(50), location VARCHAR(50) );
Query OK, 0 rows affected (0.040 sec)
```

## INSERTING DATA :

**“As the tables and data used in lab5 are the same as those used in lab4, they are used here.”**

### **1) Customer Table :**

```
= INSERT INTO customer VALUES (1, 'ram', 32, 'kathmandu', 2000.00), (2, 'shyam', 25, 'patan', 1500.00), (3, 'hari', 23, 'dharan', 2000.00), (4, 'gopal', 25, 'pokhara', 6500.00), (5, 'sita', 27, 'bhaktapur', 8500.00), (6, 'gita', 22, 'illam', 4500.00), (7, 'rita', 24, 'banepa', 10000.00);
```

### **2) Order Table :**

```
= INSERT INTO order VALUES (102, '2015-10-08 00:00:00', 3, 3000), (100, '2014-10-08 00:00:00', 3, 1500), (101, '2014-11-20 00:00:00', 2, 1560), (103, '2013-05-20 00:00:00', 4, 2060);
```

### **3) Employee Table :**

```
= INSERT INTO employee VALUES (1, 'arjun', 'AP', 1, 10000.00), (2, 'rabi', 'JP', 2, 12000.00), (3, 'rohan', 'AP', 2, 15000.00), (4, 'krishna', 'AP', 1, 20000.00);
```

### **4) Department Table :**

```
= INSERT INTO department VALUES (1, 'accounting', 'kathmandu'), (2, 'sales', 'patan'), (3, 'research', 'banepa'), (4, 'operations', 'bhaktapur');
```

## **OUTPUT :**

```
MariaDB [lab4]> INSERT INTO customer VALUES (1, 'ram', 32, 'kathmandu', 2000.00), (2, 'shyam', 25, 'patan', 1500.00), (3, 'hari', 23, 'dharan', 2000.00), (4, 'gopal', 25, 'pokhara', 6500.00), (5, 'sita', 27, 'bhaktapur', 8500.00), (6, 'gita', 22, 'illam', 4500.00), (7, 'rita', 24, 'banepa', 10000.00);
Query OK, 7 rows affected (0.012 sec)
Records: 7 Duplicates: 0 Warnings: 0

MariaDB [lab4]> INSERT INTO employee VALUES (1, 'arjun', 'AP', 1, 10000.00), (2, 'rabi', 'JP', 2, 12000.00), (3, 'rohan', 'AP', 2, 15000.00), (4, 'krishna', 'AP', 1, 20000.00);
Query OK, 4 rows affected (0.001 sec)
Records: 4 Duplicates: 0 Warnings: 0

MariaDB [lab4]>
MariaDB [lab4]> INSERT INTO department VALUES (1, 'accounting', 'kathmandu'), (2, 'sales', 'patan'), (3, 'research', 'banepa'), (4, 'operations', 'bhaktapur');
Query OK, 4 rows affected (0.001 sec)
Records: 4 Duplicates: 0 Warnings: 0

MariaDB [lab4]> INSERT INTO order VALUES (102, '2015-10-08 00:00:00', 3, 3000), (100, '2014-10-08 00:00:00', 3, 1500), (101, '2014-11-20 00:00:00', 2, 1560), (103, '2013-05-20 00:00:00', 4, 2060);
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MariaDB server version for the right syntax to use near 'order VALUES (102, '2015-10-08 00:00:00', 3, 3000), (100, '2014-10-08 00:00:00...' at line 1
MariaDB [lab4]> INSERT INTO `order` VALUES (102, '2015-10-08 00:00:00', 3, 3000), (100, '2014-10-08 00:00:00', 3, 1500), (101, '2014-11-20 00:00:00', 2, 1560), (103, '2013-05-20 00:00:00', 4, 2060);
Query OK, 4 rows affected (0.011 sec)
Records: 4 Duplicates: 0 Warnings: 0
```

1) Use view to display only the details of employees who are AP.

```
= CREATE VIEW view1 as (SELECT * FROM employee WHERE job='AP');  
= SELECT * FROM view1 WHERE job = 'AP';
```

OUTPUT :

```
Database changed  
MariaDB [lab4]> CREATE VIEW view1 as (SELECT * FROM employee WHERE job='AP');  
Query OK, 0 rows affected (0.013 sec)  
  
MariaDB [lab4]> SELECT * FROM view1 WHERE job = 'AP';  
+-----+-----+-----+-----+-----+  
| eid | ename | job | did | salary |  
+-----+-----+-----+-----+-----+  
| 1 | arjun | AP | 1 | 10000.00 |  
| 3 | rohan | AP | 2 | 15000.00 |  
| 4 | krishna | AP | 1 | 20000.00 |  
+-----+-----+-----+-----+-----+  
3 rows in set (0.002 sec)
```

2) Use view to display only name, salary and department of employee whose salary is greater than 10000.

```
= CREATE VIEW view2 as (SELECT ename,salary,did FROM employee WHERE  
salary>10000);  
= SELECT * FROM view2;
```

OUTPUT :

```
MariaDB [lab4]> SELECT * FROM view2;  
+-----+-----+-----+  
| ename | salary | did |  
+-----+-----+-----+  
| rabi | 12000.00 | 2 |  
| rohan | 15000.00 | 2 |  
| krishna | 20000.00 | 1 |  
+-----+-----+-----+  
3 rows in set (0.001 sec)
```

3) Use view to display name, age of customer as well as order date and amount.

```
= CREATE VIEW view3 as (SELECT name,age,order_date,amount FROM customer INNER  
JOIN `order` ON customer.cid=order.cid);  
= SELECT * FROM view3;
```

## OUTPUT :

```
MariaDB [lab4]> CREATE VIEW view3 as (SELECT name,age,order_date,amount FROM customer INNER JOIN `order` ON customer.c
id=order.cid);
Query OK, 0 rows affected (0.013 sec)

MariaDB [lab4]> SELECT * FROM view3;
+-----+-----+-----+-----+
| name | age | order_date | amount |
+-----+-----+-----+-----+
| shyam | 25 | 2014-11-20 00:00:00 | 1560.00 |
| hari | 23 | 2015-10-08 00:00:00 | 3000.00 |
| hari | 23 | 2014-10-08 00:00:00 | 1500.00 |
| gopal | 25 | 2013-05-20 00:00:00 | 2060.00 |
+-----+-----+-----+-----+
4 rows in set (0.001 sec)

MariaDB [lab4]> 
```

4) Update view of Q.N.3 to include address and salary of customer.

= SELECT customer.cid, customer.name FROM customer INNER JOIN `order` ON customer.cid  
= order.cid;

= SELECT \* FROM view3;

## OUTPUT:

```
MariaDB [lab4]> ALTER VIEW view3 as (SELECT name,age,order_date,amount,address,salary FROM customer INNER JOIN `order`
ON customer.cid=order.cid);
Query OK, 0 rows affected (0.039 sec)

MariaDB [lab4]> SELECT * FROM view3;
+-----+-----+-----+-----+-----+-----+
| name | age | order_date | amount | address | salary |
+-----+-----+-----+-----+-----+-----+
| shyam | 25 | 2014-11-20 00:00:00 | 1560.00 | patan | 1500.00 |
| hari | 23 | 2015-10-08 00:00:00 | 3000.00 | dharan | 2000.00 |
| hari | 23 | 2014-10-08 00:00:00 | 1500.00 | dharan | 2000.00 |
| gopal | 25 | 2013-05-20 00:00:00 | 2060.00 | pokhara | 6500.00 |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.000 sec)
```

5) Again update view of Q.N.4 to include only salary greater than 5000.

= ALTER VIEW view3 as (SELECT name,age,order\_date,amount,address,salary FROM  
customer INNER JOIN `order` ON customer.cid=order.cid WHERE salary>5000);

= SELECT \* FROM view3;

## OUTPUT :

```
MariaDB [lab4]> ALTER VIEW view3 as (SELECT name,age,order_date,amount,address,salary FROM customer INNER JOIN `order`
ON customer.cid=order.cid WHERE salary>5000);
Query OK, 0 rows affected (0.013 sec)

MariaDB [lab4]> SELECT * FROM view3;
+-----+-----+-----+-----+-----+-----+
| name | age | order_date | amount | address | salary |
+-----+-----+-----+-----+-----+-----+
| gopal | 25 | 2013-05-20 00:00:00 | 2060.00 | pokhara | 6500.00 |
+-----+-----+-----+-----+-----+-----+
1 row in set (0.001 sec)

MariaDB [lab4]> 
```