EXPERIMENT NO: 6

TITLE: Create two databases either on single DBMS and Design Database to fragment and share the fragments from both database and write single query for creating view

OBJECTIVES: On completion of this experiment student will able to…

- learn view,
- create view,

THEORY: Introduction of View:

A VIEW is a virtual table in the database whose contents are defined by a query it can represent. A view holds no data at all, until a specific call to the view is made. This reduces redundant data on a HDD to a very large extent.

Creation of views:

Syntax: CREATE VIEW AS SELECT ,

FROM WHERE =expression list

GROUP BY HAVING ;

Note:

The ORDER BY clause cannot be used while creating a view. Example: Create view on the emp table for the Department 10 which access for the columns empno,ename,sal.

Answer: create view vw_emp10 as select empno,ename,sal from emp where deptno = 10;

Selecting a data set from a view: Once a view has been created, it can be queried exactly like a base table. The select statement can have the clause like WHERE, ORDER BY etc.

Syntax: **SELECT** <ColumnName1>, <ColumnName2> **FROM** <ViewName>;
Example: select * from vw_emp10 where sal < 35000 order by empno;

EXCERCISE:

1. Create view on the emp table for the job “Clerk” which access for the columns empno, ename, job, sal and rename the column empno as “empnumber”. And access the data of view.

MySQL Code:

Step 1: Create Two Databases

```
CREATE DATABASE db1;

CREATE DATABASE db2;
```

Step 2: Create the `emp` Table in Both Databases

In db1.

```
USE db1;


CREATE TABLE emp (
    empno INT PRIMARY KEY,
    ename VARCHAR(50),
    job VARCHAR(50),
    mgr INT,
    hiredate DATE,
    sal DECIMAL(10, 2),
    comm DECIMAL(10, 2),
    deptno INT,
    FOREIGN KEY (mgr) REFERENCES emp(empno)
);
```

In `db2`

```
USE db2;


CREATE TABLE emp (
    empno INT PRIMARY KEY,
    ename VARCHAR(50),
    job VARCHAR(50),
    mgr INT,
    hiredate DATE,
    sal DECIMAL(10, 2),
    comm DECIMAL(10, 2),
```

```
    deptno INT,
    FOREIGN KEY (mgr) REFERENCES emp(empno)
);
```

Step 3: Insert Sample Data

In db1

```
USE db1;

-- Insert managers first
INSERT INTO emp (empno, ename, job, mgr, hiredate, sal, comm, deptno) VALUES
(101, 'Md. Ashique Hussain', 'Manager', NULL, '2022-01-15', 60000.00, 5000.00, 10);

-- Insert other employees
INSERT INTO emp (empno, ename, job, mgr, hiredate, sal, comm, deptno) VALUES
(102, 'Fatima Begum', 'Clerk', 101, '2023-03-21', 25000.00, NULL, 20),
(103, 'Aamir Khan', 'Clerk', 101, '2023-05-10', 23000.00, NULL, 20),
(104, 'Zara Sheikh', 'Salesman', 101, '2023-07-11', 27000.00, 3000.00, 30),
(105, 'Rahul Sharma', 'Clerk', 101, '2023-08-12', 22000.00, NULL, 20);
```

In db2

```
USE db2;

-- Insert managers first
INSERT INTO emp (empno, ename, job, mgr, hiredate, sal, comm, deptno) VALUES
(106, 'Sara Ali', 'Analyst', NULL, '2022-11-09', 45000.00, NULL, 30);

-- Insert other employees
INSERT INTO emp (empno, ename, job, mgr, hiredate, sal, comm, deptno) VALUES
(107, 'Imran Sheikh', 'Clerk', 106, '2023-02-23', 24000.00, NULL, 20),
(108, 'Anisha Bano', 'Salesman', 106, '2022-12-14', 29000.00, 2000.00, 30);
```

Step 4: Fragment the Tables

For simplicity, we will treat each database as a fragment.

Step 5: Create a View for "Clerk" Job and Rename Column

Create View in db1

```
USE db1;


CREATE VIEW ClerkView1 AS

SELECT empno AS empnumber, ename, job, sal

FROM emp

WHERE job = 'Clerk';
```

Create View in `db2`

```
USE db2;


CREATE VIEW ClerkView2 AS

SELECT empno AS empnumber, ename, job, sal

FROM emp

WHERE job = 'Clerk';
```

Step 6: Access Data from the Views

From `db1`

```
USE db1;


SELECT * FROM ClerkView1;
```

From `db2`

```
USE db2;


SELECT * FROM ClerkView2;
```

Combined View Query

```
-- Combine results from both views

SELECT * FROM db1.ClerkView1

UNION ALL

SELECT * FROM db2.ClerkView2;
```

-:OUTPUTS:-

ClerkView1 from DB1.

```
mysql> USE db1;
Database changed
mysql>
mysql> SELECT * FROM ClerkView1;
+-----------+--------------+-------+----------+
| empnumber | ename        | job   | sal      |
+-----------+--------------+-------+----------+
|       102 | Fatima Begum | Clerk | 25000.00 |
|       103 | Aamir Khan   | Clerk | 23000.00 |
|       105 | Rahul Sharma | Clerk | 22000.00 |
+-----------+--------------+-------+----------+
3 rows in set (0.00 sec)
```

ClerkView1 from DB2.

```
mysql> USE db2;
Database changed
mysql>
mysql> SELECT * FROM ClerkView2;
+-----------+--------------+-------+----------+
| empnumber | ename        | job   | sal      |
+-----------+--------------+-------+----------+
|       107 | Imran Sheikh | Clerk | 24000.00 |
+-----------+--------------+-------+----------+
1 row in set (0.00 sec)
```

Combined ClerkView from

```
mysql> -- Combine results from both views
mysql> SELECT * FROM db1.ClerkView1
    -> UNION ALL
    -> SELECT * FROM db2.ClerkView2;
+----------+-------------+-------+----------+
| empnumber | ename       | job   | sal      |
+----------+-------------+-------+----------+
|       102 | Fatima Begum | Clerk | 25000.00 |
|       103 | Aamir Khan   | Clerk | 23000.00 |
|       105 | Rahul Sharma | Clerk | 22000.00 |
|       107 | Imran Sheikh | Clerk | 24000.00 |
+----------+-------------+-------+----------+
4 rows in set (0.00 sec)
```