EXPERIMENT - 8

Title: Use of different SQL clauses and join

Objective: To understand the use of group by and having clause and execute the SQL commands using JOIN

2.

```sql
--2.
SELECT Student.*
FROM Student
JOIN Play ON Student.sid = Play.sid
WHERE Play.mid = 'B10';
```

Output

sid	sname	age
1	Amit	21
2	Ravi	22

3.

```sql
--3.
SELECT Match.mname
FROM Match
JOIN Play ON Match.mid = Play.mid
JOIN Student ON Student.sid = Play.sid
WHERE Student.sname = 'Amit';
```

Output

mname
Match1
Match2
Match4

4.

```sql
--4.
SELECT DISTINCT Student.sname
FROM Student
JOIN Play ON Student.sid = Play.sid
JOIN Match ON Match.mid = Play.mid
WHERE Match.venue = 'Delhi';
```

Output

sname
Amit
Ravi

5.

```sql
--5.
SELECT DISTINCT Student.sname
FROM Student
JOIN Play ON Student.sid = Play.sid;
```

Output

sname
Amit
Ravi
Sana
Neha

6.

```sql
--6.
SELECT Student.sid, Student.sname
FROM Student
JOIN Play ON Student.sid = Play.sid
GROUP BY Student.sid, Student.sname, Play.day
HAVING COUNT(DISTINCT Play.mid) >= 2;
```

Output

sid	sname
1	Amit

7.

```sql
--7.
SELECT DISTINCT Student.sid
FROM Student
JOIN Play ON Student.sid = Play.sid
JOIN Match ON Match.mid = Play.mid
WHERE Match.venue IN ('Delhi', 'Mumbai');
```

Output

sid
1
2

8.

```sql
--8.
SELECT AVG(age) AS average_age
FROM Student;
```

Output

average_age
21.5

EXPERIMENT - 9

Title: To understand the concepts of Views.

Objective: Students will be able to implement the concept of views.

1.

```sql
-- Create the EMPLOYEES table
CREATE TABLE EMPLOYEES (
    Employee_id CHAR(10) PRIMARY KEY,
    First_Name CHAR(30) NOT NULL,
    Last_Name CHAR(30) NOT NULL,
    DOB DATE,
    Salary NUMBER(25) NOT NULL,
    Department_id CHAR(10)
);

-- Insert 6 rows into the EMPLOYEES table
INSERT INTO EMPLOYEES (Employee_id, First_Name, Last_Name, DOB, Salary, Department_id) VALUES
('E001', 'John', 'Doe', '1985-06-15', 60000, 'D001'),
('E002', 'Jane', 'Smith', '1990-04-10', 75000, 'D002'),
('E003', 'Michael', 'Brown', '1988-09-25', 50000, 'D001'),
('E004', 'Emily', 'Davis', '1992-11-01', 80000, 'D003'),
('E005', 'Chris', 'Wilson', '1987-05-20', 55000, 'D002'),
('E006', 'Anna', 'Taylor', '1995-02-14', 70000, 'D003');
```

Output

SQL query successfully executed. However, the result set is empty.

EMPLOYEES

Employee_id	First_Name	Last_Name	DOB	Salary	Department_id
E001	John	Doe	1985-06-15	60000	D001
E002	Jane	Smith	1990-04-10	75000	D002
E003	Michael	Brown	1988-09-25	50000	D001
E004	Emily	Davis	1992-11-01	80000	D003
E005	Chris	Wilson	1987-05-20	55000	D002
E006	Anna	Taylor	1995-02-14	70000	D003

2.

```sql
-- Create a view named emp_view
CREATE VIEW emp_view AS
SELECT Employee_id, Last_Name, Salary, Department_id
FROM EMPLOYEES;
```

Output

SQL query successfully executed. However, the result set is empty.

3.

```sql
-- Insert data into the emp_view
INSERT INTO emp_view (Employee_id, Last_Name, Salary, Department_id)
VALUES ('E007', 'Clark', 62000, 'D001');
```

Output

Error: cannot modify emp_view because it is a view

4.

```sql
-- Update a record through the view
UPDATE emp_view
SET Salary = 68000
WHERE Employee_id = 'E001';

-- Delete a record through the view
DELETE FROM emp_view
WHERE Employee_id = 'E005';

-- Drop the view
DROP VIEW emp_view;
```

Output

Error: cannot modify emp_view because it is a view

5.

```sql
-- Create a view named salary_view that shows the employees in department 'D002' with their annual salary
CREATE VIEW salary_view AS
SELECT Employee_id, First_Name, Last_Name, Salary * 12 AS Annual_Salary
FROM EMPLOYEES
WHERE Department_id = 'D002';
```