

## **Experiment 3**

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### 1. Aim:

1. Generate an employee relation with only one attribute i.e., EMP\_ID. Then, find the max EMP ID, but excluding the duplicates.

- 2. Create two tables, Department(ID, name) and Employees(ID, name, salary, deptID). Then output the highest earners from each department.
- 3. Create two tables A and B with the attributes (EmpID, EmpName, Salary) and output the lowest salary of each employee across the two tables.

# 2. Requirements (Hardware/Software):

Microsoft SQL server

### 3. Procedure:

#### Q.1. Code:

Create Table Tbl\_Employee( Emp\_Id Int

);

Insert Into Tbl Employee Values (2),(4),(4),(6),(6),(7),(8),(8);

Select Max(Emp\_Id) As [Greatest Unique Id] From Tbl\_Employee Where Emp\_Id In (Select Emp\_Id From Tbl\_Employee Group By Emp\_Id Having Count(Emp\_Id)=1);

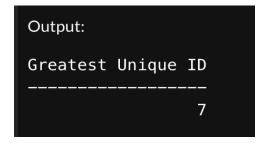
#### Q.2. Code:

```
CREATE TABLE Department (
  Id INT PRIMARY KEY,
  Dept Name VARCHAR(50)
);
-- Create Employee Table
CREATE TABLE Employee (
  Id INT,
  Name VARCHAR(50),
  Salary INT,
  Department Id
  INT,
  FOREIGN KEY (Department Id) REFERENCES Department(Id)
);
-- Insert Into Department Table
INSERT INTO Department (Id, Dept Name) VALUES
(1, 'IT'),
(2, 'SALES');
-- Insert Into Employee Table
INSERT INTO Employee (Id, Name, Salary, Department Id) VALUES
(1, 'JOE', 70000, 1),
(2, 'JIM', 90000, 1),
(3, 'HENRY', 80000, 2),
(4, 'SAM', 60000, 2),
(5, 'MAX', 90000, 1);
Select D.Dept Name, E.Name, E.Salary, D.Id
From
Employee As
E Inner Join
Department As D
On E.Department Id=D.Id
Where E.Salary In (Select Max(Salary) From Employee Group By Department Id);
Q.3. Code:
create table tbl A (
empid int PRIMARY key,
empname varchar(20),
salary int
```

```
insert into tbl_A values (1,'AA',1000), (2, 'BB',300);
create table tbl_B (
empid int PRIMARY key,
empname varchar(20),
salary int
)
insert into tbl_B values (2, 'BB',400), (3,'CC',100);
select empid, min(empname) as empname, min(salary) as min_salary from
(select * FROM
tbl_A
UNION
select * from
tbl_b) as UNI
group by empid;
```

## 4. Output:

Q.1.



Q.2.

Output:			
Dept_Name	Name	Salary	Id
IT	JIM	90000	
IT	MAX	90000	1
SALES	HENRY	80000	2

Q.3.

```
Output:

empid empname min_salary

1 AA 1000
2 BB 300
3 CC 100
```

# 5. Learning Outcome:

- Understand the role of sub-queries in simplifying complex SQL operations.
- Apply sub-queries in SELECT, WHERE, and FROM clauses to retrieve specific data.
- Utilize sub-queries for filtering, aggregation, and conditional logic.
- Analyze query performance implications when using sub-queries versus joins.