Experiment 3

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Branch: BE CSE Section/Group: KRG_1-A

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Subject Name: ADBMS Subject Code: 23CSP-333

1. Aim:

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

- **Q.2.** Create two tables, Department(ID, name) and Employees(ID, name, salary, deptID). Then output the highest earners from each department.
- **Q.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);
```

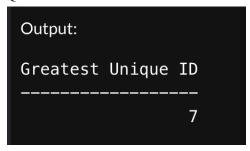
```
Q.2. Code:
CREATE TABLE department (
  id INT PRIMARY KEY,
  dept name VARCHAR(50)
);
-- Create Employee Table
CREATE TABLE employee (
  id INT,
  name VARCHAR(50),
  salary INT,
  department id INT,
  FOREIGN KEY (department id) REFERENCES department(id)
);
-- Insert into Department Table
INSERT 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.

Q.3.

Output:		
empid	empname	min_salary
1	AA	1000
2	ВВ	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.