EXPERIMENT - 3

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Branch: BE-CSE Section/Group: KRG 2A

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Subject Name: ADBMS Subject Code: 23CSP-333

1. AIM: Ques 1:- Create a table dept (id, Dept_Name) and a table MyEmployees (Empld, EmpName, Gender, Salary, City, Dept_id with foreign key referencing dept). Insert suitable records into both tables. Write an SQL query to find the second highest salary from the MyEmployees table without using TOP or LIMIT(Easy Level)

2. TOOLS USED:- MS SSMS & Microsoft SQL Server

3. SQL CODE:

```
create table dept (
  id int primary key,
  dept_name varchar(100)
);

create table myemployees (
  empid int primary key,
  empname varchar(100),
  gender varchar(10),
  salary int,
  city varchar(100),
  dept_id int,
```

foreign key (dept_id) references dept(id)
);

insert into dept (id, dept_name) values

- (1, 'HR'),
- (2, 'IT'),
- (3, 'Sales');

insert into myemployees (empid, empname, gender, salary, city, dept id) values

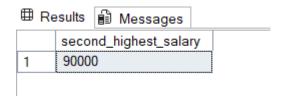
- (1, 'Alice', 'Female', 70000, 'New York', 2),
- (2, 'Bob', 'Male', 80000, 'Los Angeles', 1),
- (3, 'Charlie', 'Male', 75000, 'Chicago', 3),
- (4, 'David', 'Male', 95000, 'Houston', 2),
- (5, 'Eve', 'Female', 90000, 'San Francisco', 1);

select max(salary) as second highest salary

from myemployees

where salary < (select max(salary) from myemployees);

4. OUTPUT:



5. Ques 2: -

-In a bustling corporate organization, each department strives to retain the most talented (and well-compensated) employees. You have access to two key records: one lists every employee along with their salary and department, while the other details the names of each department. Your

task is to identify the top earners in every department.

If multiple employees share the same highest salary within a department, all of them should be celebrated equally. The final result should present the department name, employee name, and salary of these top-tier professionals arranged by department. (Medium Level)

Employee Table

Department table

ID	NAME	SALARY	DEPT_ID	ID	DEPT_NAME
1	JOE	70000	1		
2	JIM	90000	1	1	IT
3	HENRY	80000	2		
4	SAM	60000	2	2	SALES
4	MAX	90000	1	_	

6. SQL CODE:-

```
create table departments (
 dept_id int primary key,
 dept_title varchar(100)
);
create table employees (
 employee_id int primary key,
 employee_name varchar(100),
 gender varchar(10),
 salary_amount int,
 city varchar(100),
 department_id int,
 foreign key (department id) references departments(dept id)
);
insert into departments (dept_id, dept_title) values
 (1, 'Finance'),
 (2, 'Marketing'),
```

(3, 'Engineering');

```
insert into employees (employee id, employee name, gender, salary amount, city,
department_id) values
 (101, 'Anna', 'Female', 85000, 'Boston', 3),
 (102, 'Brian', 'Male', 92000, 'Seattle', 1),
 (103, 'Cara', 'Female', 92000, 'Austin', 1),
 (104, 'David', 'Male', 75000, 'Denver', 2),
 (105, 'Eva', 'Female', 80000, 'San Diego', 3);
select d.dept title as department name,
   e.employee name as employee name,
   e.salary_amount as salary
from employees e
inner join departments d on e.department_id = d.dept_id
where e.salary amount = (
 select max(salary amount)
 from employees
 where department_id = e.department_id
)
order by d.dept title;
```

7. OUTPUT

☐ Results ☐ Messages			
	department_name	employee_name	salary
1	Engineering	Anna	85000
2	Finance	Brian	92000
3	Finance	Cara	92000
4	Marketing	David	75000

8. Ques 3:- Two legacy HR systems (A and B) have separate records of employee salaries. These records may overlap. Management wants to merge these datasets and identify each unique

employee (by EmpID) along with their lowest recorded salary across both systems. (Hard Level) Objective

- 1. Combine two tables A and B.
- 2. Return each EmpID with their lowest salary, and the corresponding Ename.

Table A Table B

EmplD	Ename	Salary	EmpID	Ename	Salary
1	AA	1000	2	ВВ	400
2	ВВ	300	3	CC	100

9. SQL Code:-

```
create table table_a (
 empid int primary key,
 ename varchar(100),
 salary int
);
create table table b (
 empid int primary key,
 ename varchar(100),
 salary int
);
insert into table_a (empid, ename, salary) values
 (1, 'John', 3000),
 (2, 'Jane', 4500),
(3, 'Doe', 4000);
insert into table b (empid, ename, salary) values
 (2, 'Jane', 4300),
(3, 'Doe', 4200),
 (4, 'Smith', 3500);
select empid, ename, salary
from (
```

```
select empid, ename, salary,
    row_number() over (partition by empid order by salary asc) as rn
from (
    select * from table_a
    union all
    select * from table_b
) combined
) ranked
where rn = 1
order by empid;
```

10. OUTPUT:-

⊞ Results 📳 Messages				
	empid	ename	salary	
1	1	John	3000	
2	2	Jane	4300	
3	3	Doe	4000	
4	4	Smith	3500	