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UNIVERSITY INSTITUTE OF ENGINEERING

Advanced Database Management System

Experiment 1.3

23CSP-333

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Aim:

Problem 1 Title: Department Salary Champions

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.

Problem 2 Title: Merging Employee Histories: Who Earned Least?

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.

Objective

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

Code:

Answer 1:

```
---EXPERIMENT 03: (MEDIUM LEVEL)
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),
```

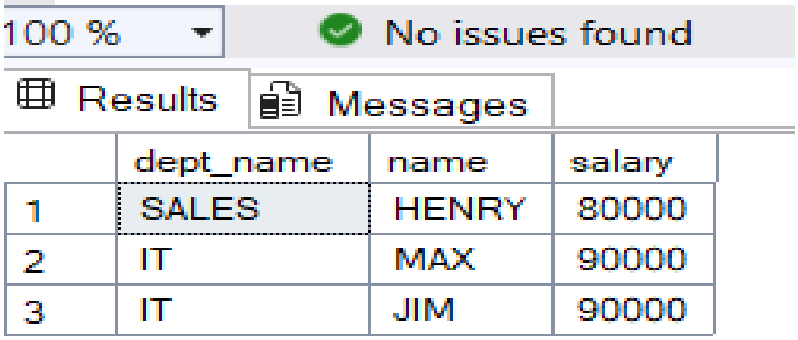
(5, 'MAX', 90000, 1);

```
SELECT d.*, e.*
FROM department as d
INNER JOIN
employee as e
ON D.id = E.department_id;

SELECT d.dept_name, e.name, E.salary
FROM department as d
INNER JOIN
employee as e
ON D.id = E.department_id;

-- SELECT MAX(employee.salary) from  employee where department.id = employee.department_id
SELECT d.dept_name, e.name, E.salary
from department as d
INNER JOIN
employee as e
on d.id = e.department_id
where e.salary
in (Select max(e2.salary) from employee as e2 where e2.department_id = e.department_id);
```

Output 1:



	dept_name	name	salary
1	SALES	HENRY	80000
2	IT	MAX	90000
3	IT	JIM	90000

Answer 2:

```
CREATE Table A(EmpID int primary key, Ename varchar(max), Salary int );
CREATE Table B(EmpID int primary key, Ename varchar(max), Salary int );

-- SET operation approach when all coloums name is same and the data is same
Insert into A values(1, 'AA', 1000)
Insert into A values(2, 'BB', 300)
Insert into B values(2, 'BB', 400)
Insert into B values(3, 'CC', 100)

Select EmpID, Ename, MIN(Salary) AS Salary
FROM
```

```
(
SELECT * from A
UNION ALL
Select * from B
)
as intermediate_result
group  by EmpID, ENAME
```

Output 2:

Results Messages

	EmpID	Ename	Salary
1	1	AA	1000
2	2	BB	300
3	3	CC	100

Conclusion:

In this experiment, we learned how to find the highest-paid employees in each department and how to merge two employee tables to get the lowest salary for each employee. We used SQL queries with joins, subqueries, and aggregation functions to solve these problems effectively.