



Experiment 1.3

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1. Problem Title: Author-Book Relationship Using Joins and Basic SQL Operations

2. Code and Output:

Q.1 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.

Ans:

SELECT

D.DepartmentName,

E.EmployeeName,

E.Salary

FROM

Employees AS E

JOIN

Departments AS D ON E.DepartmentID = D.DepartmentID

WHERE

```
E.Salary = (  
    SELECT MAX(Salary)  
    FROM Employees AS E2  
    WHERE E2.DepartmentID = E.DepartmentID  
)
```

ORDER BY

```
D.DepartmentName,  
E.Salary DESC;
```

Results		Messages	
	DepartmentName	EmployeeName	Salary
1	Human Resources	Alice Johnson	90000.00
2	Information Technology	Charlie Brown	120000.00
3	Marketing	Ivan Clark	80000.00
4	Sales	Frank White	100000.00
5	Sales	Grace Taylor	100000.00

Q2. 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.

Ans:



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SELECT

AllRecords.EmpID,

AllRecords.Ename,

AllRecords.Salary

FROM

(

SELECT EmpID, Ename, Salary FROM SystemA

UNION ALL

SELECT EmpID, Ename, Salary FROM SystemB

) AS AllRecords

JOIN

(

SELECT

EmpID,

MIN(Salary) as MinSalary

FROM (

SELECT EmpID, Salary FROM SystemA

UNION ALL

SELECT EmpID, Salary FROM SystemB

) AS CombinedSalaries

GROUP BY

EmpID

) AS MinSalaries ON AllRecords.EmpID = MinSalaries.EmpID

AND AllRecords.Salary = MinSalaries.MinSalary



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ORDER BY

AllRecords.EmpID;

	EmpID	Ename	Salary
1	101	John Smith	68000.00
2	102	Jane Doe	95000.00
3	103	Peter Jones	80000.00
4	104	Mary Adams	75000.00
5	105	Sam Brown	110000.00
6	105	Samuel Brown	110000.00