

Lab # 8: Database Systems Lab

Time Allowed: 25 minutes

Max. Marks: 50

Obtained Marks:

ID:

Name:

Class: BS-IT (Morning/Afternoon)

Objective: To evaluate proper delivery, authenticity and level of content digestion of the knowledge and ideas conveyed during last lecture. This lab test will also help the students to appraise their current level of preparation of this subject.

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Question 1: Show the two highest (first highest and second highest) and two lowest (first lowest and second lowest) salary. Display the employee's name and department number who earn the same salary as the minimum salary for each department. (Use subquery) (5)

ENAME	DEPTNO
JAMES	30
SMITH	20
MILLER	10

```
select ename, deptno
from emp
where sal IN
      (select min(sal)
       from emp
       group by deptno)
```

Question 2: Display the job with the lowest average salary. (Use subquery) (5)

Lowest Average Salary Job
CLERK

```
select job as "Lowest Average Salary Job"
from emp
group by job
having avg(sal) =
      (select min(avg(sal))
       from emp
       group by job)
```

Question 3: Show the two highest (first highest and second highest) and two lowest (first lowest and second lowest) salary. (Use subquery) (15)

First Highest	Second Highest	First Lowest	Second Lowest
5000	3000	800	950

```
select max(a.sal) as "First Highest",
max(b.sal) as "Second Highest",
min(c.sal) as "First Lowest",
min(d.sal) as "Second Lowest"
from emp a, emp b, emp c, emp d
where b.sal <
      (select max(a.sal)
       from emp)
and d.sal >
      (select min(c.sal)
       from emp)
```

Question 4: Display the last name and salary of every employee who reports to KING. (Use subquery) (5)

ENAME	SAL
CLARK	2450
BLAKE	2850
JONES	2975

```
Select ename, sal
From Emp
Where mgr in
      (Select empno
       From Emp
       Where ename='KING')
```

Question 5: Give employee name, department name, salary greater than SMITH's salary, commission greater than ALLEN's commission, department must be same as WARD's department but job not same as KING's or SMITH's department. **(Use subquery)** **(15)**

ENAME	DNAME	SAL	COMM	JOB
WARD	SALES	1250	500	SALESMAN

Select e.ename, d.dname, e.sal, e.comm, e.job

From emp e, Dept d

Where e.deptno = d.deptno

AND Sal > ANY

(Select Sal

From Emp

Where Ename='SMITH')

AND Comm > ANY

(Select Comm

From Emp

Where Ename='ALLEN')

AND dname = ANY

(Select dname

From dept

Where ename='WARD')

AND job <> ANY

(Select job

From Emp

Where ename='KING' OR ename='SMITH')

Question 6: Write down the difference between IN, ANY, ALL with examples.

(5)

Operator	Meaning
IN	Equal to any member in the list
ANY	Compare value to each value returned by the subquery
ALL	Compare value to every value returned by the subquery