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DEPARTMENT OF COMPUTER SCIENCES

CSL-220: Database Management System

Semester 04 (Fall 2024)

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Exercises

Now by using the student information system, formulate the following queries in SQL

1. Display the Job and maximum salary of all designations using teachers table.

Query:

```
select Job,max(BasicSalary) as 'MaxSalary' from Teacher group by Job
```

Results | Messages

	Job	MaxSalary
1	J. Assist Prof	225000.00
2	J. Associate Prof	200000.00
3	J. Lecturer	100000.00
4	S. Lecturer	80000.00
5	Sr. Associate Prof	280000.00

2. Display Sum and Average Salary of each job type from employees table.

Query:

```
select Job,sum(BasicSalary) as 'SumOfBasicSalary',avg(BasicSalary) as 'AVGBasicSalary' from
Teacher group by Job
```

Results | Messages

	Job	SumOfBasicSalary	AVGBasicSalary
1	J. Assist Prof	325000.00	162500.00
2	J. Associate Prof	200000.00	200000.00
3	J. Lecturer	100000.00	100000.00
4	S. Lecturer	80000.00	80000.00
5	Sr. Associate Prof	280000.00	280000.00

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3. Display Job Titles where average salary (basic + commission) of employees is greater than 1400. Use employee table.

Query:

```
select Job,avg(sal + isnull(comm,0)) as 'AVGSalary' from emp group by Job having avg(sal + isnull(comm,0))>1400
```

Results | Messages

	Job	AVGSalary
1	ANALYST	3000.000000
2	MANAGER	2758.333333
3	NETWORK ADMIN	4000.000000
4	PRESIDENT	5000.000000
5	SALESMAN	2050.000000

4. Display the Total Number of teachers who have no house rent.

Query:

```
select count(*) as 'NoHouseRent' from Teacher where HouseRent is null
```

Results | Messages

	NoHouseRent
1	2

5. Select designation, maximum salary of that designation from teacher's table where maximum salary is greater than 230 K. Show records in descending order with respect to salary.

Query:

```
select Job,max(BasicSalary) as 'MaxSalary' from Teacher group by Job having max(BasicSalary)>230000 order by 'MaxSalary' desc
```

Results | Messages

	Job	MaxSalary
1	Sr. Associate Prof	280000.00

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6. Write a query to display Job Title and number of faculty where job title is “J. Assist Prof”.

Query:

```
select Job,count(*) as NoOfEmployees from Teacher where Job like 'J. Assist Prof' group by Job
```

Results Messages

	Job	NoOfEmployees
1	J. Assist Prof	2

7. Write a query that displays employee names and their salaries who joined company before January 1, 1984. Format the date in the given manner and then display.

Query:

```
select TeacherName,BasicSalary,format(TeacherDOJ,'mmm-dd-yyyy') as NewTeacherDOJ from Teacher
where TeacherDOJ < '1984-01-01' group by TeacherName,BasicSalary,TeacherDOJ
```

Results Messages

TeacherName	BasicSalary	NewTeacherDOJ

8. Write a query to display job title, number of employees and average salary (basic + commission) of all employees in that particular job title. Label columns as job title, Number of Employees, and Average Salary respectively. Round the average salary to three decimal places.

Query:

```
select Job as 'JobTitle',count(*) as 'NumberOfEmp', round(avg(sal),3) as 'AvgSalary' from emp
group by job
```

Results Messages

	JobTitle	NumberOfEmp	AvgSalary
1	ANALYST	2	3000.000000
2	CLERK	4	1037.500000
3	MANAGER	3	2758.333000
4	NETWORK ADMIN	1	4000.000000
5	PRESIDENT	1	5000.000000
6	SALESMAN	4	1400.000000