Bismillahhir Rahmanir Rahim

আন্তর্জাতিক ইসলামী বিশ্ববিদ্যালয় চট্টগ্রাম

الجامعة الإسلامية العالمية شيتاغونغ

International Islamic University Chittagong

Assignment

Assignment No. – 03

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Course Title- DBMS (Lab)

Course Code: CSE-2424

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1. **Write a query to display the current date. Label the column Date.**

```
SELECT sysdate "Date"
FROM dual;
```

Date
16-FEB-22

1 rows returned

2. **The HR department needs a report to display the employee number, last_name, salary, and salary increased by 15.5% (expressed as a whole number) for each employee. Label the column New Salary. Place your SQL statement in a text file named lab_03_02.sql.**

```
SELECT employee_id, last_name, salary,
ROUND(salary * 1.155, 0) "New Salary"
FROM employees;
```

EMPLOYEE_ID	LAST_NAME	SALARY	New Salary
100	King	24000	27720
101	Kochhar	17000	19635
102	De Haan	17000	19635
103	Hunold	9000	10395
104	Ernst	6000	6930
105	Austin	4800	5544

107 rows returned

3. **Run your query in the file lab_03_02.sql.**

```
SELECT employee_id, last_name, salary,
ROUND(salary * 1.155, 0) "New Salary"
FROM employees;
```

EMPLOYEE_ID	LAST_NAME	SALARY	New Salary
100	King	24000	27720
101	Kochhar	17000	19635

102	De Haan	17000	19635
103	Hunold	9000	10395
104	Ernst	6000	6930
105	Austin	4800	5544

107 rows returned

4. **Modify your query lab_03_02.sql to add a column that subtracts the old salary from the new salary. Label the column Increase. Save the contents of the file as lab_03_04.sql. Run the revised query.**

```
SELECT employee_id, last_name, salary,
ROUND(salary * 1.155, 0) "New Salary",
ROUND(salary * 1.155, 0) - salary "Increase"
FROM employees;
```

EMPLOYEE_ID	LAST_NAME	SALARY	New Salary	Increase
100	King	24000	27720	3720
101	Kochhar	17000	19635	2635
102	De Haan	17000	19635	2635
103	Hunold	9000	10395	1395
104	Ernst	6000	6930	930

107 rows returned

5. **Write a query that displays the last name (with the first letter uppercase and all other letters lowercase) and the length of the last name for all employees whose name starts with the letters J, A, or M. Give each column an appropriate label. Sort the results by the employees’ last names.**

```
SELECT INITCAP(last_name) "Name",
LENGTH(last_name) "Length"
FROM employees
WHERE last_name LIKE 'J%'
OR last_name LIKE 'M%'
OR last_name LIKE 'A%'
ORDER BY last_name ;
```

Name	Length
Abel	4
Ande	4
Atkinson	8
Austin	6
Johnson	7

16 rows returned

Rewrite the query so that the user is prompted to enter a letter that starts the last name. For example, if the user enters H when prompted for a letter, then the output should show all employees whose last name starts with the letter H.

```
SELECT INITCAP(last_name) "Name",
LENGTH(last_name) "Length"
FROM employees
WHERE last_name LIKE '&start_letter%'
ORDER BY last_name;
```

ResultsExplainDescribeSaved SQLHistory

no data found

6. **The HR department wants to find the length of employment for each employee. For each employee, display the last name and calculate the number of months between today and the date on which the employee was hired. Label the column MONTHS_WORKED. Order your results by the number of months employed. Round the number of months up to the closest whole number.**

```
SELECT last_name, ROUND(MONTHS_BETWEEN( SYSDATE, hire_date)) AS
MONTHS_WORKED
FROM employees
ORDER BY months_worked;
```

LAST_NAME	MONTHS_WORKED
Kumar	262
Banda	262
Ande	263
Markle	263
Geoni	264

107 rows returned

7. **Create a report that produces the following for each employee: <employee last name> earns <salary> monthly but wants <3 times salary>. Label the column Dream Salaries.**

```
SELECT last_name || ' earns '
 || TO_CHAR(salary, 'fm$99,999.00')
 || ' monthly but wants '
 || TO_CHAR(salary * 3, 'fm$99,999.00')
 || '.' "Dream Salaries"
FROM employees;
```

Dream Salaries
King earns $24,000.00 monthly but wants $72,000.00.
Kochhar earns $17,000.00 monthly but wants $51,000.00.
De Haan earns $17,000.00 monthly but wants $51,000.00.
Hunold earns $9,000.00 monthly but wants $27,000.00.
Ernst earns $6,000.00 monthly but wants $18,000.00.
Austin earns $4,800.00 monthly but wants $14,400.00.

107 rows returned

8. **Create a query to display the last name and salary for all employees. Format the salary to be 15 characters long, left-padded with $ symbol. Label the column SALARY.**

```
SELECT last_name,
LPAD(salary, 15, '$') SALARY
FROM employees;
```

LAST_NAME	SALARY
King	$$$$$$$$$$24000
Kochhar	$$$$$$$$$$17000
De Haan	$$$$$$$$$$17000
Hunold	$$$$$$$$$$$9000
Ernst	$$$$$$$$$$$6000
Austin	$$$$$$$$$$$4800

107 rows returned

9. **Display each employee’s last name, hire date, and salary review date, which is the first Monday after six months of service. Label the column REVIEW. Format the dates to appear in the format similar to “Monday, the Thirty-First of July, 2000.”**

```
SELECT last_name, hire_date,
TO_CHAR(NEXT_DAY(ADD_MONTHS(hire_date, 6),'MONDAY'),
'fmDay, "the" Ddspth "of" Month, YYYY') REVIEW
FROM employees;
```

LAST_NAME	HIRE_DATE	REVIEW
King	17-JUN-87	Monday, the Twenty-First of December, 1987
Kochhar	21-SEP-89	Monday, the Twenty-Sixth of March, 1990
De Haan	13-JAN-93	Monday, the Nineteenth of July, 1993
Hunold	03-JAN-90	Monday, the Ninth of July, 1990
Ernst	21-MAY-91	Monday, the Twenty-Fifth of November, 1991
Austin	25-JUN-97	Monday, the Twenty-Ninth of December, 1997

107 rows returned

10. Display the last name, hire date, and day of the week on which the employee started. Label the column DAY. Order the results by the day of the week, starting with Monday.

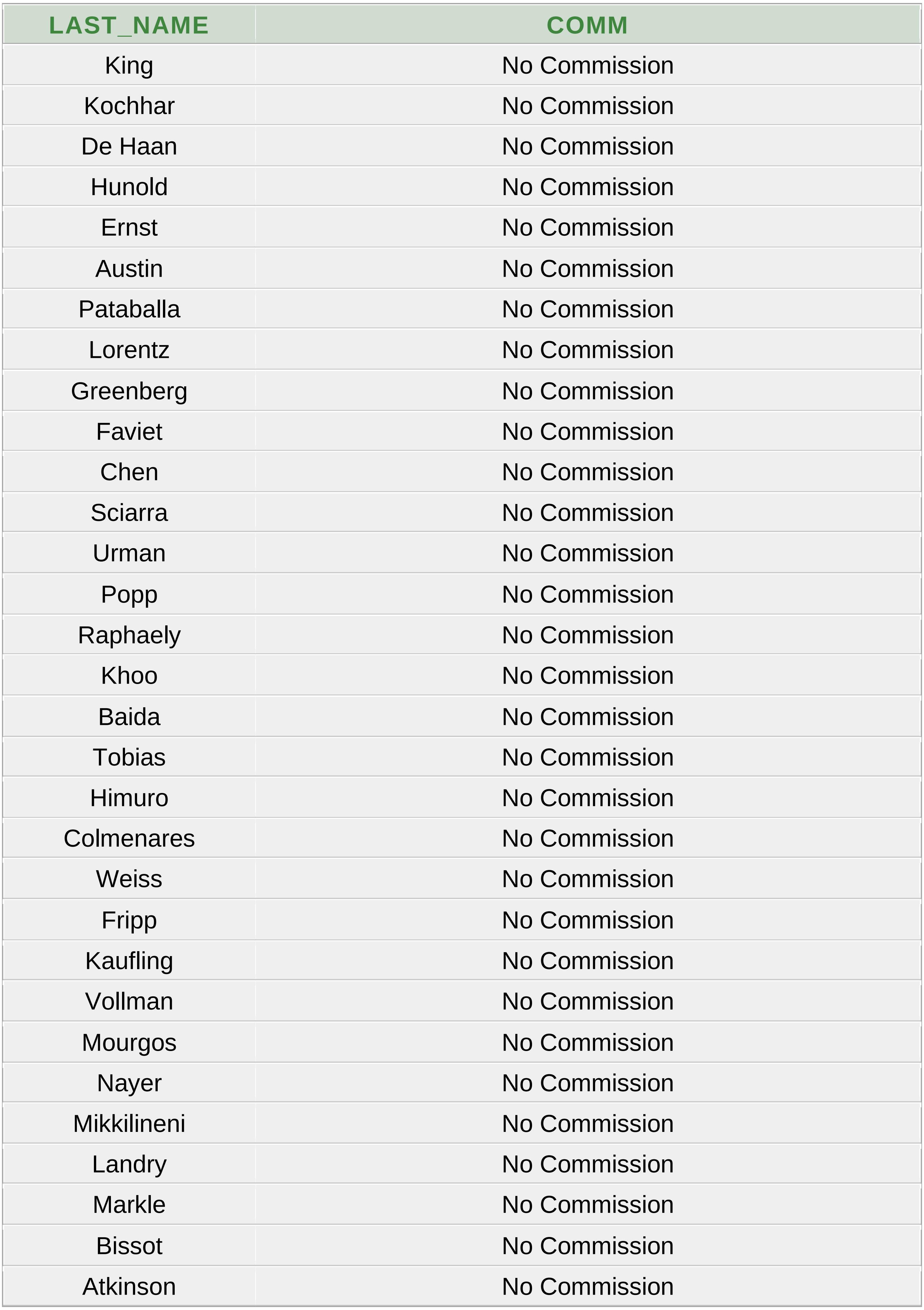
```
SELECT last_name, hire_date,
TO_CHAR(hire_date, 'DAY') DAY
FROM employees
ORDER BY TO_CHAR(hire_date - 1, 'd');
```

LAST_NAME	HIRE_DATE	DAY
Kaufling	01-MAY-95	MONDAY
OConnell	21-JUN-99	MONDAY
Patel	06-APR-98	MONDAY
Errazuriz	10-MAR-97	MONDAY
Bernstein	24-MAR-97	MONDAY

107 rows returned

11. Create a query that displays the employees' last names and commission amounts. If an employee does not earn commission, show "No Commission." Label the column COMM.

```
SELECT last_name,
NVL(TO_CHAR(commission_pct), 'No Commission') COMM
FROM employees;
```



LAST_NAME	COMM
King	No Commission
Kochhar	No Commission
De Haan	No Commission
Hunold	No Commission
Ernst	No Commission
Austin	No Commission
Pataballa	No Commission
Lorentz	No Commission
Greenberg	No Commission
Faviet	No Commission
Chen	No Commission
Sciarra	No Commission
Urman	No Commission
Popp	No Commission
Raphaely	No Commission
Khoo	No Commission
Baida	No Commission
Tobias	No Commission
Himuro	No Commission
Colmenares	No Commission
Weiss	No Commission
Fripp	No Commission
Kaufling	No Commission
Vollman	No Commission
Mourgos	No Commission
Nayer	No Commission
Mikkilineni	No Commission
Landry	No Commission
Markle	No Commission
Bissot	No Commission
Atkinson	No Commission

Marlow	No Commission
Olson	No Commission
Mallin	No Commission
Rogers	No Commission
Gee	No Commission
Philtanker	No Commission
Ladwig	No Commission
Stiles	No Commission
Seo	No Commission
Patel	No Commission
Rajs	No Commission
Davies	No Commission
Matos	No Commission
Vargas	No Commission
Russell	.4
Partners	.3
Errazuriz	.3
Cambrault	.3
Zlotkey	.2
Tucker	.3
Bernstein	.25
Hall	.25
Olsen	.2
Cambrault	.2
Tuvault	.15

107 rows returned

12. Create a query that displays the first eight characters of the employees' last names and indicates the amounts of their salaries with asterisks. Each asterisk signifies a thousand dollars. Sort the data in descending order of salary. Label the column EMPLOYEES_AND_THEIR_SALARIES.

```
SELECT rpad(last_name, 8)||' '|| rpad(' ', salary/1000+1, '*')
AS EMPLOYEES_AND_THEIR_SALARIES
```

```
FROM employees
ORDER BY salary DESC;
```

EMPLOYEES_AND_THEIR_SALARIES
King ************************
Kochhar *****************
De Haan *****************
Russell **************
Partners *************
Hartstei *************
Greenber ************

107 rows returned

13. Using the DECODE function, write a query that displays the grade of all employees based on the value of the column JOB_ID, using the following data:

Job	Grade
AD_PRES	**A**
ST_MAN	**B**
IT_PROG	**C**
SA_REP	**D**
ST_CLERK	**E**
None of the above	**0**

```
SELECT job_id, decode (job_id,
 'ST_CLERK', 'E',
 'SA_REP', 'D',
 'IT_PROG', 'C',
 'ST_MAN', 'B',
 'AD_PRES', 'A',
 '0')GRADE
FROM employees;
```

JOB_ID	GRADE
AC_ACCOUNT	0
AC_MGR	0
AD_ASST	0

AD_PRES	A
AD_VP	0
AD_VP	0

107 rows returned

14. Rewrite the statement in the preceding exercise using the CASE syntax.

```
SELECT job_id, CASE job_id
WHEN 'ST_CLERK' THEN 'E'
WHEN 'SA_REP' THEN 'D'
WHEN 'IT_PROG' THEN 'C'
WHEN 'ST_MAN' THEN 'B'
WHEN 'AD_PRES' THEN 'A'
ELSE '0' END GRADE
FROM employees;
```

JOB_ID	GRADE
AC_ACCOUNT	0
AC_MGR	0
AD_ASST	0
AD_PRES	A
AD_VP	0
AD_VP	0

107 rows returned

Submitted by-

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