Autonomous University of Zacatecas

Academic Unit of Electrical Engineering

Academic Program of Software Engineering

Database Systems Laboratory II Practice 8
-Restricting and Sorting Data

Professor:
Aldonso Becerra Sánchez

Student:
Daniel Alejandro Morales Castillo

1 Introduction

SQL language allows the realization of projection and selection of data to satisfy the needs of reports that may be required for a programmer, developer or end user.

In the week of theory class we saw some interesting topics in chapter 2, they were all about data queries but in a more complex but at the same time effective way, we already used some search parameters and complex sentences, we can do calculations, search with specific strings among other things.

2 Development

Activity 1

Write the section that describes the work developed in the following activities. Read all the choices carefully because there might be more than one correct answer. Choose all the correct answers for each question. Explain the reason for your answer.

LIMIT THE ROWS RETRIEVED BY A QUERY

1. Which two clauses of the SELECT statement facilitate selection and projection?

A. SELECT, FROM
B. ORDER BY, WHERE
C. SELECT, WHERE
D. SELECT, ORDER BY

Answer: A, C

The letter A because that is the basic form to retrieve all the columns and you also can specify which columns you want to see and that is projection, the letter C because you need to use a WHERE in a SELECT statement to filter rows and that is selection.

2. Choose the query that extracts the LASTNAME, JOBID, and SALARY values from the EMPLOYEES table for records having JOBID values of either SAREP or MKMAN and having SALARY values in the range of $1000 to$ **4000. The SELECT and FROM clauses are SELECT LASTNAME, JOBID, SALARY FROM EMPLOYEES:**

A. WHERE JOBID IN ('SAREP','MKMAN') AND SALARY ¿ 1000 AND SALARY ¡ 4000;
B. WHERE JOBID IN ('SAREP','MKMAN') AND SALARY BETWEEN 1000 AND 4000;
C. WHERE JOBID LIKE 'SAREPAND SALARY ¡ 4000;
D. WHERE JOBID = 'SAREP' AND SALARY BETWEEN 1000 AND 4000 OR JOBID='MKMAN';

Answer: B

There are more statements that can do it but the letter B is the most complete, the letter B statement retrieve all the records with a job id 'SA REP' or 'MK MAN' and with a salary between 1000 and 4000 (1000 and 4000 also are included).

3. Which of the following WHERE clauses contains an error? The SELECT and FROM clauses are SELECT * FROM EMPLOYEES:

A. WHERE HIREDATE IN ('02-JUN-2004');
B. WHERE SALARY IN ('1000','4000','2000');
C. WHERE JOBID IN (SAREP,MKMAN);
D. WHERE COMMISSIONPCT BETWEEN 0.1 AND 0.5;

Answer: A and C

The letter B contains an error because you need to use simple quotation marks with the job id,the letter A depends of the date format, you need to use your system format or specify format.

4. Choose the WHERE clause that extracts the DEPARTMENTNAME values containing the character literal "er" from the DEPARTMENTS table. The SELECT and FROM clauses are SELECT DEPARTMENTNAME FROM DEPARTMENTS:

A. WHERE DEPARTMENT NAME IN ('
B. WHERE DEPARTMENT NAME LIKE "
C. WHERE DEPARTMENT NAME BETWEEN 'e' AND 'r';
D. WHERE DEPARTMENT NAME CONTAINS "e

Answer:B

The letter B statement means select the department names that have "er" like sub-string in the department name, it can have 0 or more characters before the "er" and it can have 0 o more characters after the "er"

5. Which two of the following conditions are equivalent to each other?

A. WHERE COMMISSIONPCT IS NULL
B. WHERE COMMISSIONPCT = NULL
C. WHERE COMMISSIONPCT IN (NULL)
D. WHERE NOT(COMMISSIONPCT IS NOT NULL)

Answer: B, C

These two statements retrieve an empty table, use IN it is like use "=" but also OR because you can write one or more parameters.

6. Which three of the following conditions are equivalent to each other?

A. WHERE SALARY ¡=5000 AND SALARY ¿=2000
B. WHERE SALARY IN (2000,3000,4000,5000)
C. WHERE SALARY BETWEEN 2000 AND 5000
D. WHERE SALARY ¿ 1999 AND SALARY ¡ 5001
E. WHERE SALARY ¿=2000 AND ¡=5000

Answer: A, C, D

When you use BETWEEN it is like use ¿= and ¡= because the limits are included too, so i selected all the statements that include all the values between 2000 and 5000 (2000 and 5000 are included too).

SORT THE ROWS RETRIEVED BY A QUERY

7. Choose one false statement about the ORDER BY clause.

A. When using the ORDER BY clause, it always appears as the last clause in a SELECT statement.

B. The ORDER BY clause may appear in a SELECT statement that does not contain a WHERE clause.

C. The ORDER BY clause specifies one or more terms by which the retrieved rows are sorted. These terms can only be column names.

D. Positional sorting is accomplished by specifying the numeric position of a column as it appears in the SELECT list, in the ORDER BY clause

Answer: C

The terms that you specify in the order by can be also ALIAS not only column names.

8. The following query retrieves the LASTNAME, SALARY, and COMMISSIONPCT values for employees whose LASTNAME begins with the letter R. Based on the following query, choose the ORDER BY clause that first sorts the results by the COMMISSIONPCT column, listing highest commission earners first, and then sorts the results in ascending order by the SALARY column. Any records with NULL COMMISSIONPCT must appear last: SELECT LASTNAME, SALARY, COMMISSIONPCT FROM EMPLOYEES WHERE LASTNAME LIKE 'R

A. ORDER BY COMMISSIONPCT DESC, 2;
B. ORDER BY 3 DESC, 2 ASC NULLS LAST;
C. ORDER BY 3 DESC NULLS LAST, 2 ASC;
D. ORDER BY COMMISSIONPCT DESC, SALARY ASC;

Answer: D, B

The letter D statement order by commission first in descendent way and later order by salary in ascended way, the letter B do the same just it is wrote differently.

AMPERSAND SUBSTITUTION

9. The DEFINE command explicitly declares a session-persistent substitution variable with a specific value. How is this variable referenced in an SQL statement? Consider an expression that calculates tax on an employee's SALARY based on the current tax rate. For the following session-persistent substitution variable, which statement correctly references the TAXRATE variable? DEFINE TAXRATE=0.14

A. SELECT SALARY * :TAXRATE TAX FROM EMPLOYEES;
B. SELECT SALARY * TAXRATE TAX FROM EMPLOYEES;
C. SELECT SALARY * :TAX TAX FROM EMPLOYEES;
D. SELECT SALARY * TAXRATE TAX FROM EMPLOYEES;

Answer:B

Following the knowledge learned in theory class the correct form to reference a session-persistent substitution variable is using variableName, that is why i chose the letter B.

10. When using ampersand substitution variables in the following query, how many times will you be prompted to input a value for the variable called JOB the first time this query is executed? SELECT FIRSTNAME, 'JOB' FROM EMPLOYEES WHERE JOBID LIKE 'AND 'JOB' BETWEEN 'A' AND 'Z';

A. 0
B. 1
C. 2
D. 3

Answer: D

When you use the simple ampersand it is only to do a substitution but the variable is not permanent until you define it, that is why every time it is asked to you to input something, because you are not defined a persistent variable yet.

Activity 2:

Propose an answer to the following issues:

a) The SELECT list of a query contains a single column. Is it possible to sort the results retrieved by this query by another column? Yes, the results can

be sorted by another column, for example, you can query only the employee id form employees table and sort it by the salary using ORDER BY SALARY, the SALARY column is not showed but it exist;

b) Ampersand substitution variables support reusability of repetitively executed SQL statements. If a substituted value is to be used multiple times at different parts of the same statement, is it possible to be prompted to submit a substitution value just once and for that value to automatically be substituted during subsequent references to the same variable?

Yes, using the double ampersand only one time for a variable and when you need to use the same value you only use a simple ampersand with the same name and it will be replaced with the value of the first substitution, that is because the double ampersand created an persistent variable

c) You have been tasked to retrieve the LASTNAME and DEPARTMENTID values for all rows in the EMPLOYEES table. The output must be sorted by the nullable DEPARTMENTID column, and all rows with NULL DEPARTMENTID values must be listed last. Is it possible to provide the results as requested?

Yes, it is simple, you can use the ORDER BY and the DESC option, that will sort and the null values will be first because NULL is not a value to order and are putted last, but it is a descendent sort that is why the null values are first.

d) You have a complex query with multiple conditions. Is there a restriction on the number of conditions you can specify in the WHERE clause? Is there a limit to the number of comparison operators you can use in a single query?

I do not know, i think there is a limit because the memory and the capacity of the work sheets are not infinite, but i do not know the limits, maybe the limit is the memory to process the query.

e) You have been tasked to locate rows in the EMPLOYEES table where the SALARY values contain the numbers 8 and 0 adjacent to each other. The SALARY column has a NUMBER data type. Is it possible to use the LIKE

comparison operator with numeric data?

No, in the theory class we learned about the LIKE clause, and LIKE is used by strings to find sub strings.

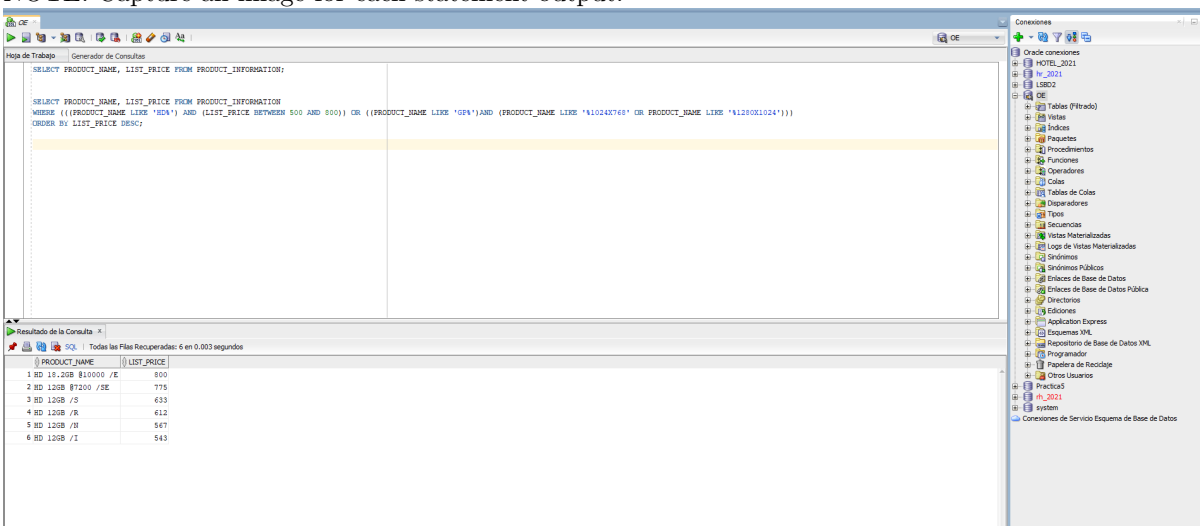
f) By restricting the rows returned from the JOBS table to those which contain the value SAREP in the JOBID column, is a projection, selection or join performed?

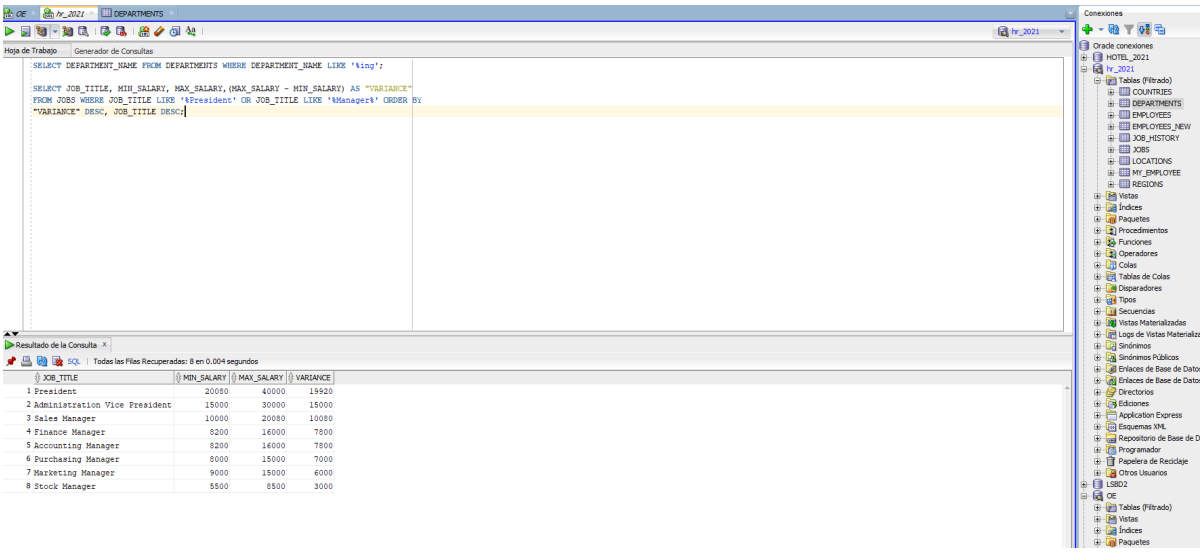
It is a selection because you are restricting the rows, if you will only show the column JOB ID it also is a projection because you are restricting the columns.

Activity 3:

Connect to the OE schema and complete the following tasks. A customer requires a hard disk drive and a graphics card for her personal computer. She is willing to spend between $500 and 800$ on the disk drive but is unsure about the cost of a graphics card. Her only requirement is that the resolution supported by the graphics card should be either 1024×768 or 1280×1024. As the sales representative, you have been tasked to write one query that searches the PRODUCTINFORMATION table where the PRODUCTNAME value begins with HD (hard disk) or GP (graphics processor) and their list prices. Remember the hard disk list prices must be between $500 and 800$ and the graphics processors need to support either 1024×768 or 1280×1024. Sort the results in descending LISTPRICE order.

NOTE: Capture an image for each statement output.



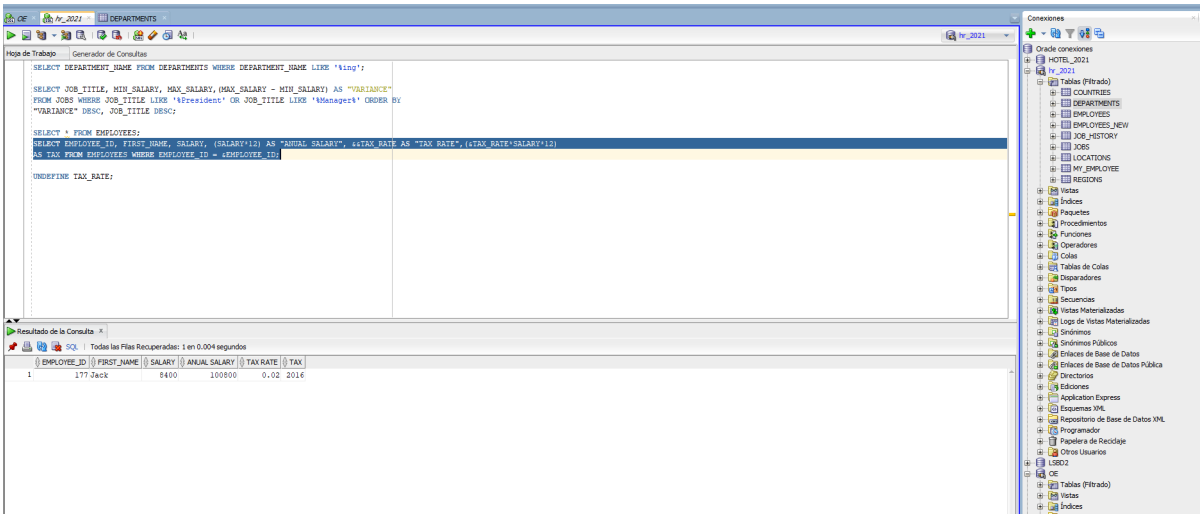


```
SELECT DEPARTMENT_NAME FROM DEPARTMENTS WHERE DEPARTMENT_NAME LIKE '%ing';

SELECT JOB_TITLE, MIN_SALARY, MAX_SALARY,(MAX_SALARY - MIN_SALARY) AS "VARIANCE"
FROM JOBS WHERE JOB_TITLE LIKE '%President' OR JOB_TITLE LIKE '%Manager%' ORDER BY
"VARIANCE" DESC, JOB_TITLE DESC;
```

Resultado de la Consulta — Todas las Filas Recuperadas: 8 en 0.004 segundos

	JOB_TITLE	MIN_SALARY	MAX_SALARY	VARIANCE
1	President	20080	40000	19920
2	Administration Vice President	15000	30000	15000
3	Sales Manager	10000	20080	10080
4	Finance Manager	8200	16000	7800
5	Accounting Manager	8200	16000	7800
6	Purchasing Manager	8000	15000	7000
7	Marketing Manager	9000	15000	6000
8	Stock Manager	5500	8500	3000



```
SELECT DEPARTMENT_NAME FROM DEPARTMENTS WHERE DEPARTMENT_NAME LIKE '%ing';

SELECT JOB_TITLE, MIN_SALARY, MAX_SALARY,(MAX_SALARY - MIN_SALARY) AS "VARIANCE"
FROM JOBS WHERE JOB_TITLE LIKE '%President' OR JOB_TITLE LIKE '%Manager%' ORDER BY
"VARIANCE" DESC, JOB_TITLE DESC;

SELECT * FROM EMPLOYEES;
SELECT EMPLOYEE_ID, FIRST_NAME, SALARY, (SALARY*12) AS "ANUAL SALARY", &&TAX_RATE AS "TAX RATE",(&TAX_RATE*SALARY*12)
AS TAX FROM EMPLOYEES WHERE EMPLOYEE_ID = &EMPLOYEE_ID;

UNDEFINE TAX_RATE;
```

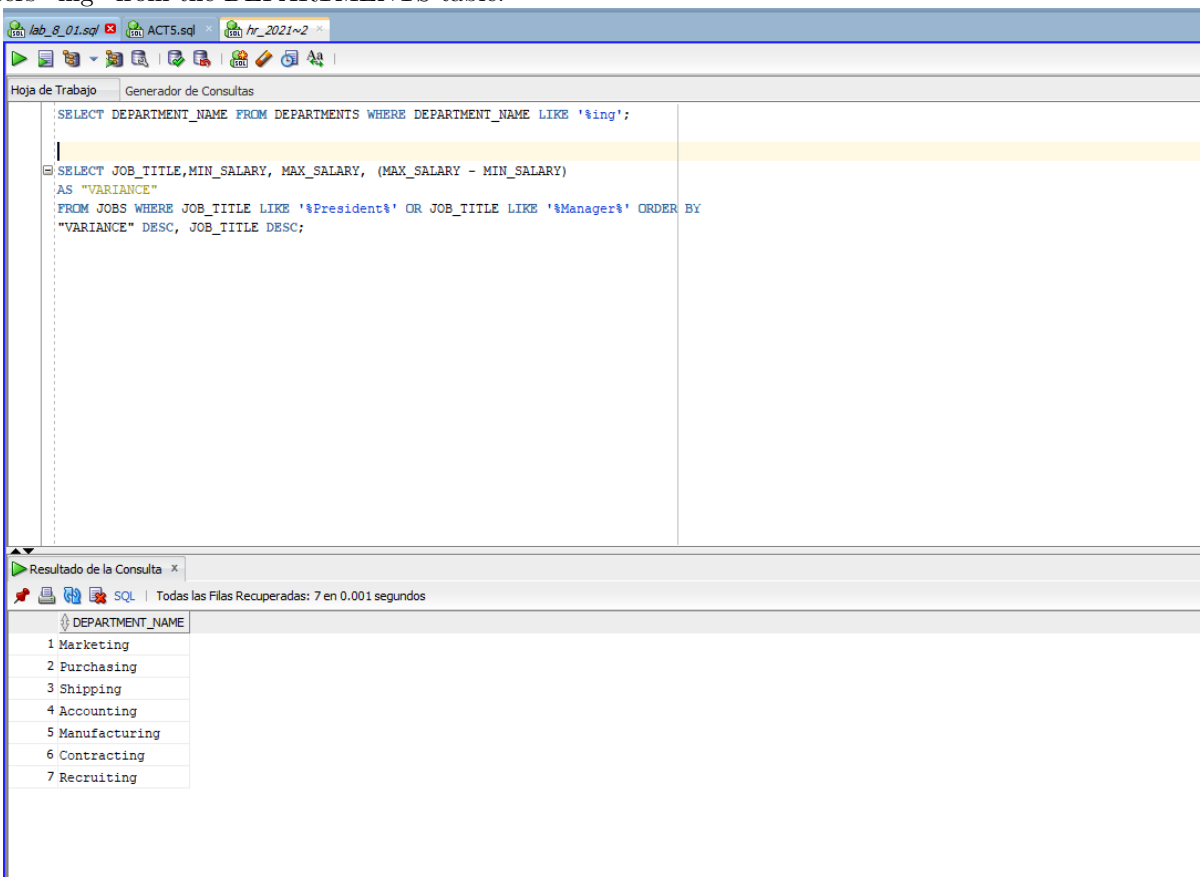
Resultado de la Consulta — Todas las Filas Recuperadas: 1 en 0.004 segundos

	EMPLOYEE_ID	FIRST_NAME	SALARY	ANUAL SALARY	TAX RATE	TAX
1	177	Jack	8400	100800	0.02	2016

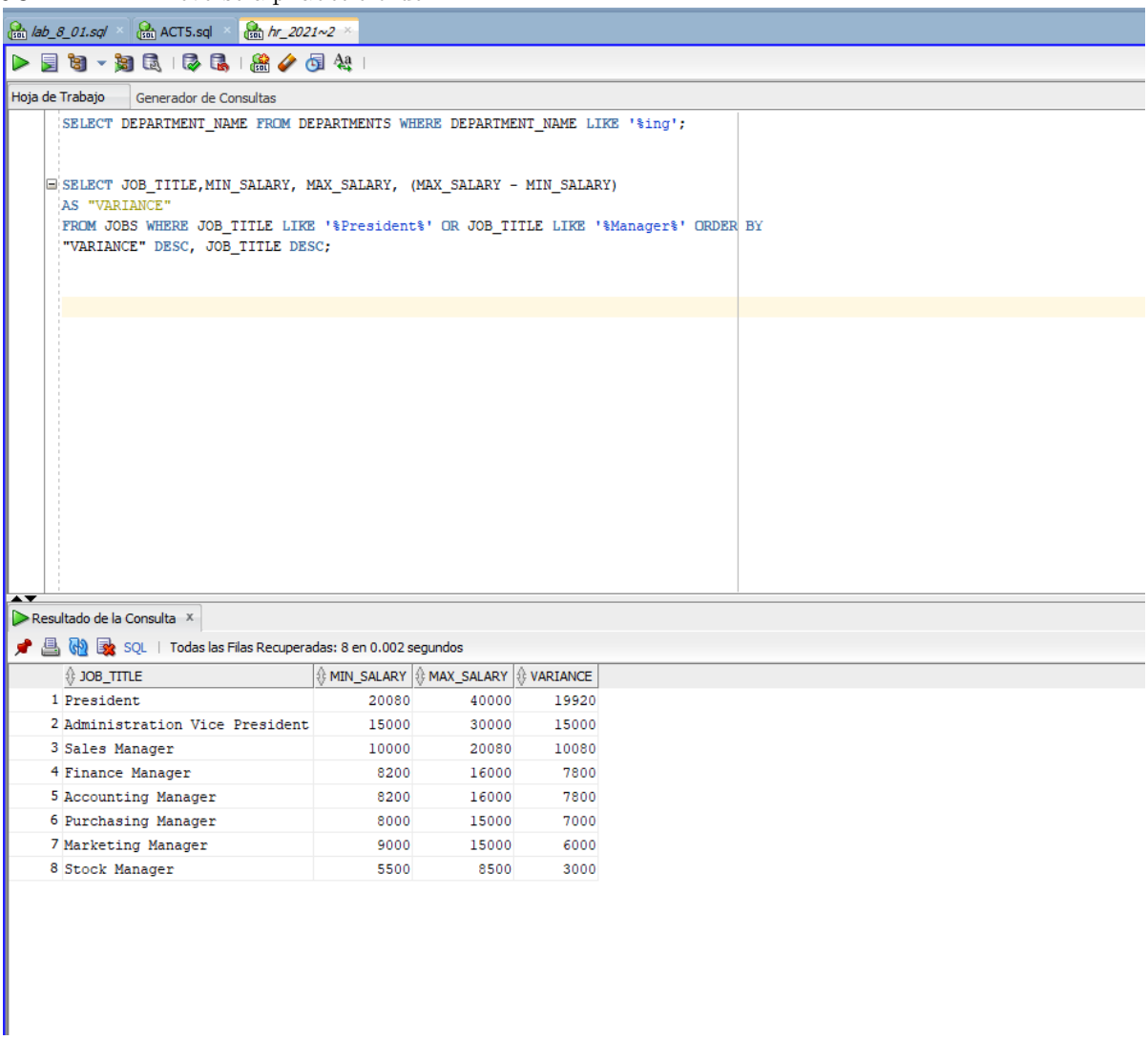
Activity 4:

This exercise must be performed using HR schema.

• Retrieve a list of DEPARTMENTNAME values that end with the three letters “ing” from the DEPARTMENTS table.

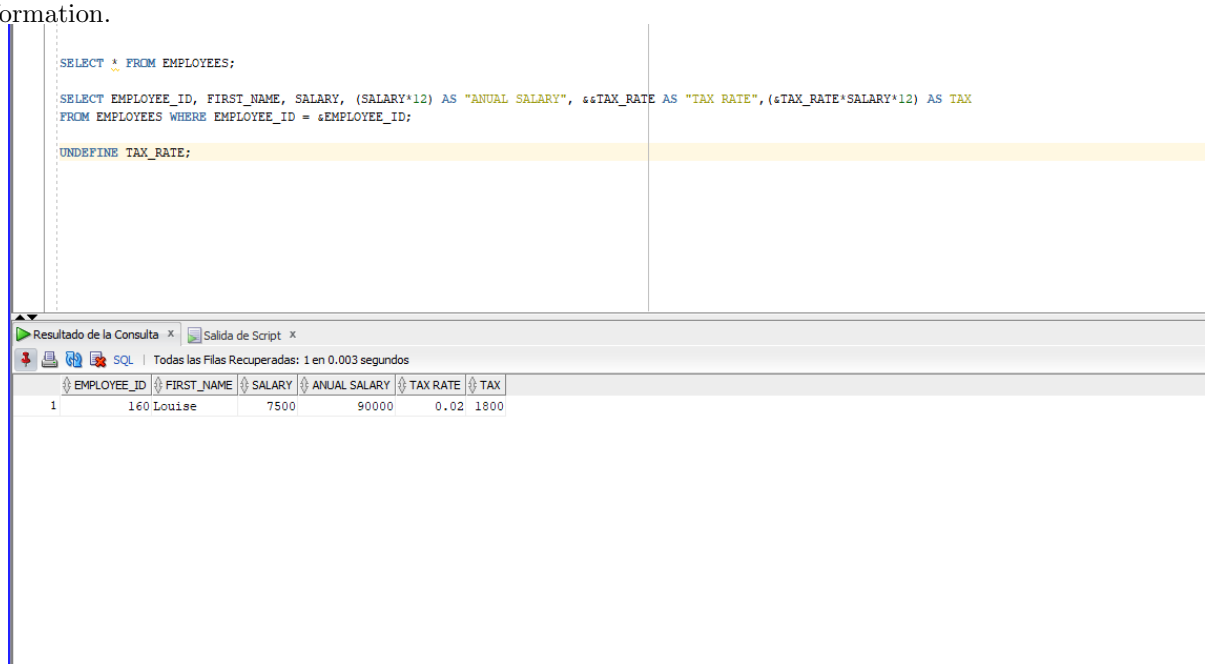


• The JOBS table contains descriptions of different types of jobs an employee in the organization may occupy. It contains the JOBID, JOBTITLE, MINSALARY, and MAXSALARY columns. You are required to write a query that extracts the JOBTITLE, MINSALARY, and MAXSALARY columns, as well as an expression called VARIANCE, which is the difference between the MAXSALARY and MINSALARY values, for each row. The results must include only JOBTITLE values that contain either the word "President" or "Manager." Sort the list in descending order based on the VARIANCE expression. If more than one row has the same VARIANCE value, then, in addition, sort these rows by JOBTITLE in reverse alphabetic order.



	JOB_TITLE	MIN_SALARY	MAX_SALARY	VARIANCE
1	President	20080	40000	19920
2	Administration Vice President	15000	30000	15000
3	Sales Manager	10000	20080	10080
4	Finance Manager	8200	16000	7800
5	Accounting Manager	8200	16000	7800
6	Purchasing Manager	8000	15000	7000
7	Marketing Manager	9000	15000	6000
8	Stock Manager	5500	8500	3000

• A common calculation performed by the Human Resources department relates to the calculation of taxes levied upon an employee. Although, this is done for all employees, there are always a few staff members who dispute the tax deducted from their income. The tax deducted per employee is calculated by obtaining the annual salary for the employee and multiplying this by the current tax rate, which may vary from year to year. You are required to write a reusable query using the current tax rate and the EMPLOYEEID number as inputs and return the EMPLOYEEID, FIRSTNAME, SALARY, ANNUAL SALARY (SALARY * 12), TAXRATE, and TAX (TAXRATE * ANNUAL SALARY) information.

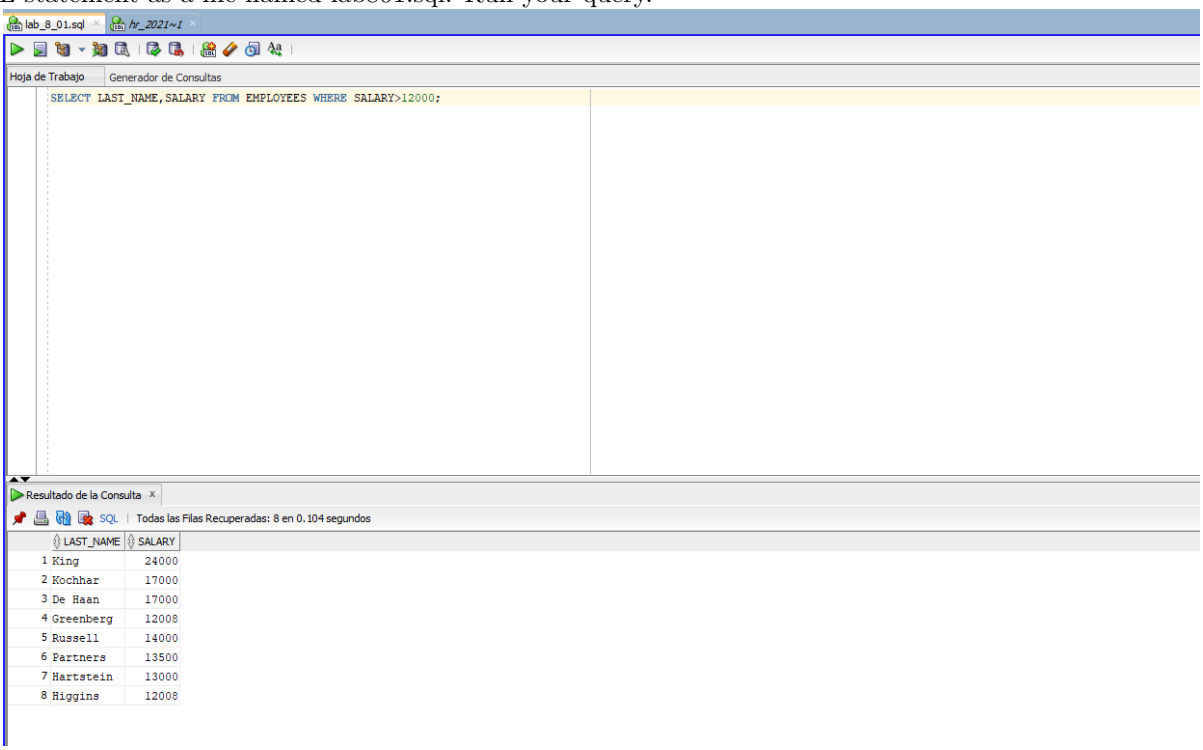


Activity 5:

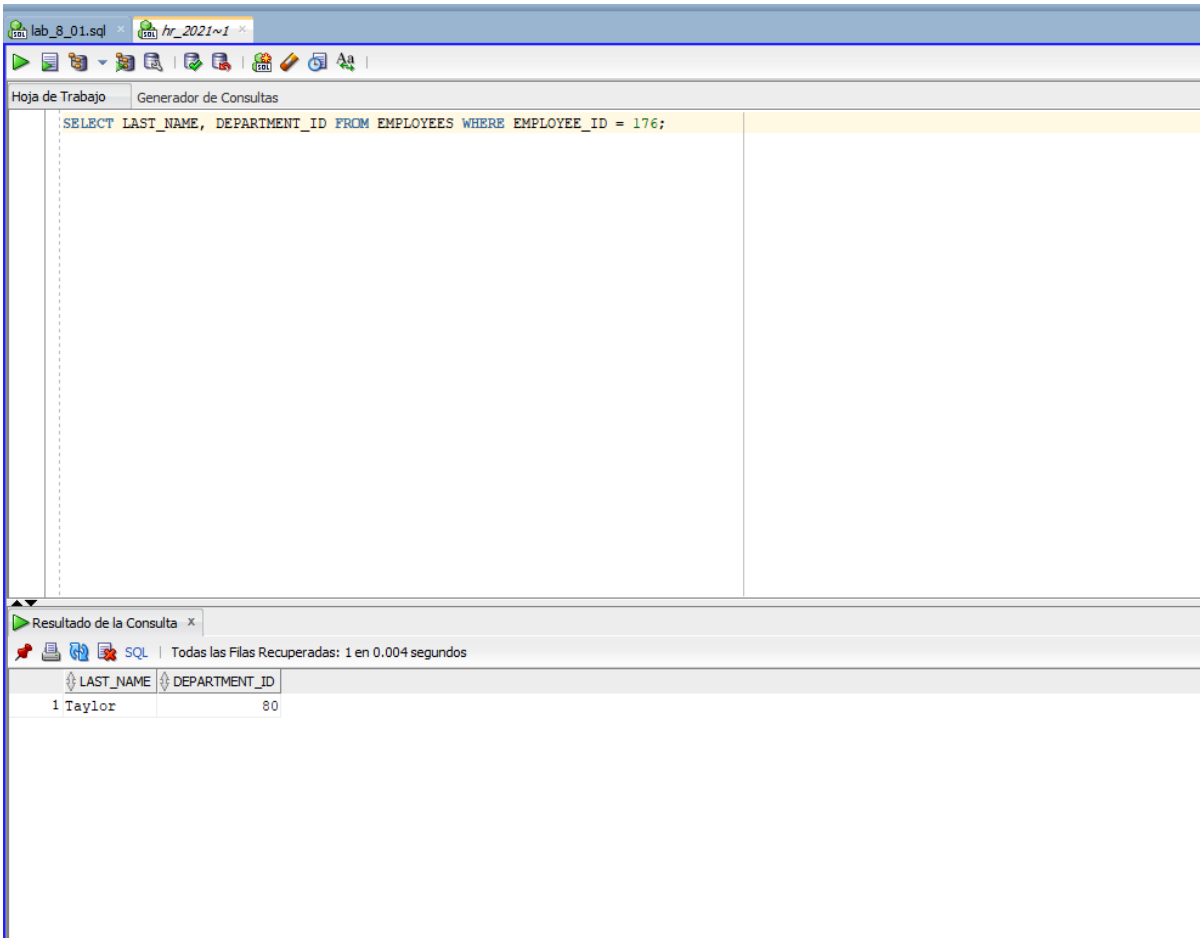
In this practice, you build more reports, including statements that use the WHERE clause and the ORDER BY clause. You make the SQL statements more reusable and generic by including the ampersand substitution

The HR department needs your assistance in creating some queries

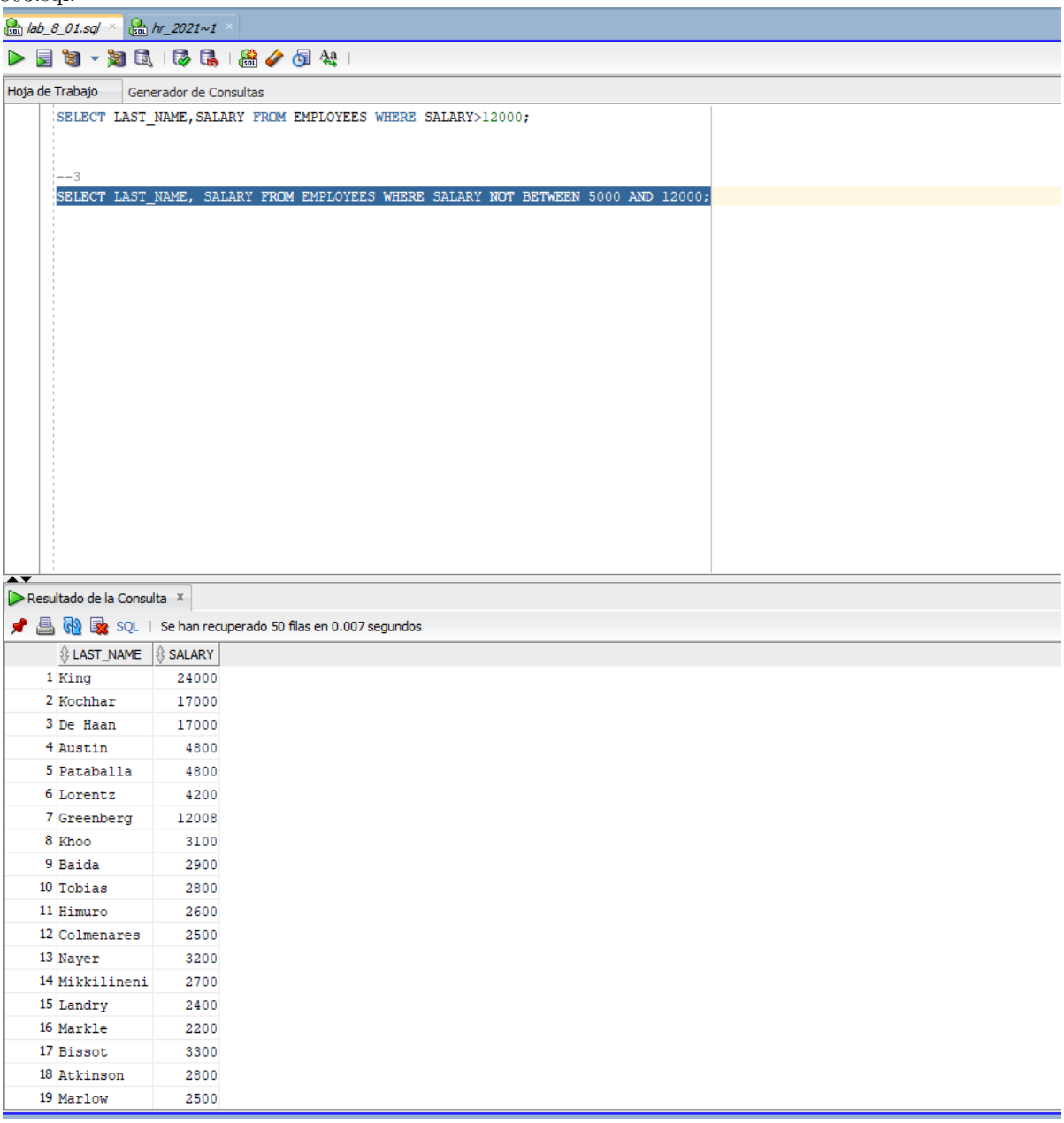
1. Because of budget issues, the HR department needs a report that displays the last name and salary of employees who earn more than 12,000. Save your SQL statement as a file named lab801.sql. Run your query.



2. Open a new SQL Worksheet. Create a report that displays the last name and department number for employee number 176. Run the query.



3. The HR department needs to find high-salary and low-salary employees. Modify lab801.sql to display the last name and salary for any employee whose salary is not in the range of 5,000 to 12,000. Save your SQL statement as lab803.sql.



4. Create a report to display the last name, job ID, and hire date for employees with the last names of Matos and Taylor. Order the query in ascending order by the hire date.

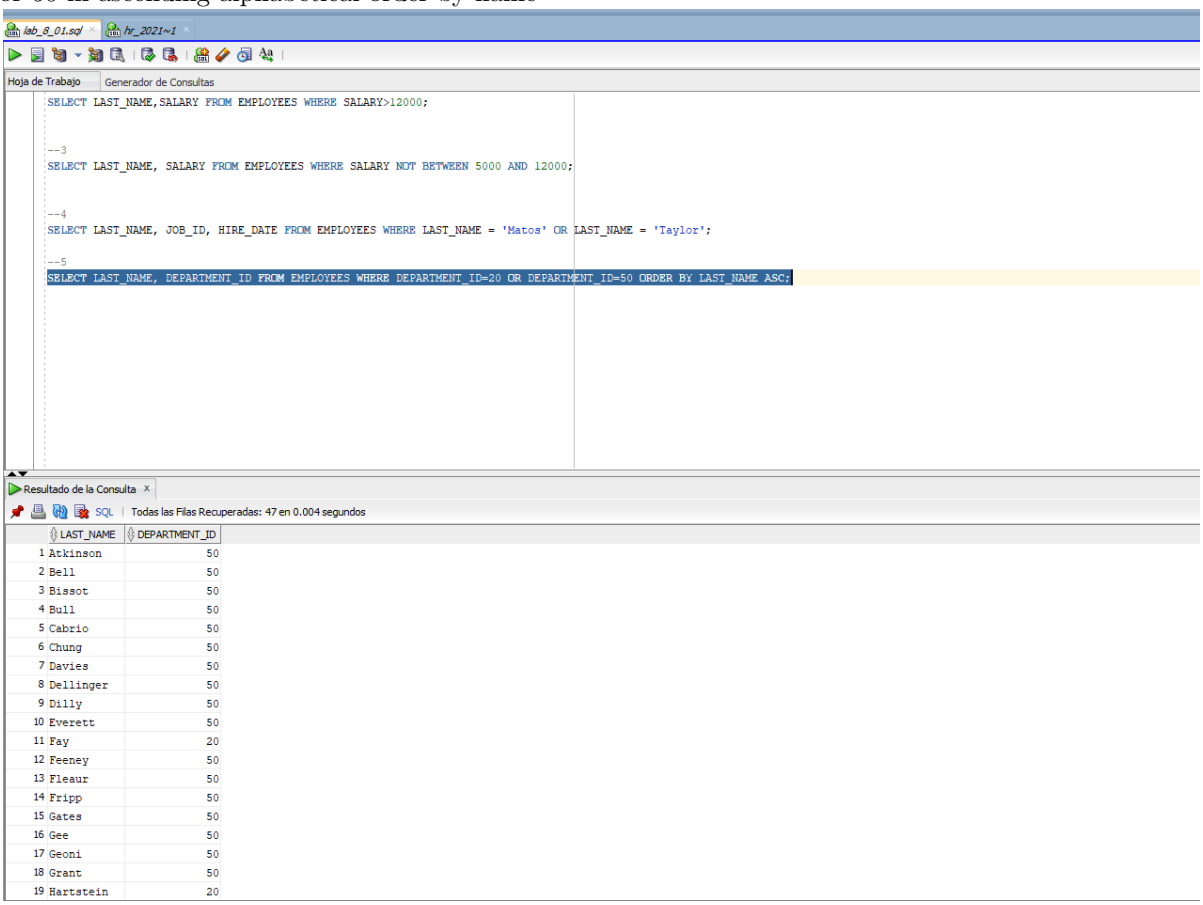
```
--4
SELECT LAST_NAME, JOB_ID, HIRE_DATE FROM EMPLOYEES WHERE LAST_NAME = 'Matos' OR LAST_NAME = 'Taylor';
```

Resultado de la Consulta

SQL | Todas las Filas Recuperadas: 3 en 0.005 segundos

	LAST_NAME	JOB_ID	HIRE_DATE
1	Matos	ST_CLERK	15/03/06
2	Taylor	SA_REP	24/03/06
3	Taylor	SH_CLERK	24/01/06

5. Display the last name and department ID of all employees in departments 20 or 50 in ascending alphabetical order by name



6. Modify lab1303.sqlto display the last name and salary of employees who earn between 5,000 and 12,000, and are in department 20 or 50. Label the columns Employee and Monthly Salary, respectively. Resave lab1303.sql as la$_1$306.*sql*.*Runthestatementinlab*806.*sql*.

```
--6
SELECT LAST_NAME AS "EMPLOYEE", SALARY AS "MONTHLY SALARY" FROM EMPLOYEES
WHERE (SALARY BETWEEN 5000 AND 12000) AND (DEPARTMENT_ID=20 OR DEPARTMENT_ID=50);
```

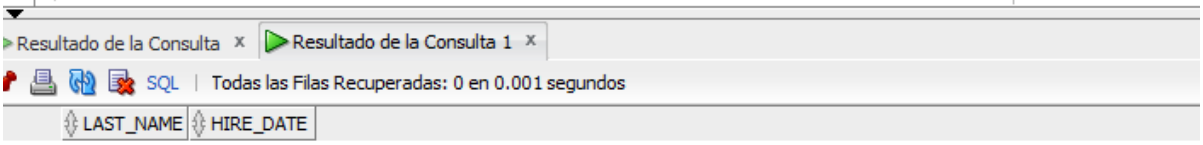
Resultado de la Consulta

SQL | Todas las Filas Recuperadas: 6 en 0.003 segundos

	EMPLOYEE	MONTHLY SALARY
1	Weiss	8000
2	Fripp	8200
3	Kaufling	7900
4	Vollman	6500
5	Mourgos	5800
6	Fay	6000

7. The HR department needs a report that displays the last name and hire date for all employees who were hired in 1994.

```
--7
SELECT * FROM EMPLOYEES;
SELECT LAST_NAME, HIRE_DATE FROM EMPLOYEES WHERE HIRE_DATE = '07/06/94';
```



8. Create a report to display the last name and job title of all employees who do not have manager.

```
--8
SELECT * FROM EMPLOYEES;
SELECT LAST_NAME, JOB_ID FROM EMPLOYEES WHERE MANAGER_ID IS NULL;
```

Resultado de la Consulta | Resultado de la Consulta 1

SQL | Todas las Filas Recuperadas: 1 en 0.003 segundos

	LAST_NAME	JOB_ID
1	King	AD_PRES

9. Create a report to display the last name, salary, and commission of all employees who earn commissions. Sort data in descending order of salary and commissions. Use the column's numeric position in the ORDERBYclause

```
--9
SELECT LAST_NAME, SALARY, COMMISSION_PCT FROM EMPLOYEES ORDER BY SALARY DESC,COMMISSION_PCT DESC;
```

Resultado de la Consulta | Resultado de la Consulta 1

SQL | Se han recuperado 50 filas en 0.004 segundos

	LAST_NAME	SALARY	COMMISSION_PCT
1	King	24000	(null)
2	Kochhar	17000	(null)
3	De Haan	17000	(null)
4	Russell	14000	0.4
5	Partners	13500	0.3
6	Hartstein	13000	(null)
7	Greenberg	12008	(null)
8	Higgins	12008	(null)
9	Errazuriz	12000	0.3
10	Ozer	11500	0.25
11	Raphaely	11000	(null)
12	Cambrault	11000	0.3
13	Abel	11000	0.3
14	Vishney	10500	0.25
15	Zlotkey	10500	0.2
16	Baer	10000	(null)
17	King	10000	0.35
18	Tucker	10000	0.3
19	Bloom	10000	0.2

10. Members of the HR department want to have more flexibility with the queries that you are writing. They would like a report that displays the last name and salary of employees who earn more than an amount that the user specifies after a prompt. Save this query to a file named lab810.sql. If you enter 12000 when prompted, the report displays the following results:

```
--10
SELECT LAST_NAME, SALARY FROM EMPLOYEES WHERE SALARY > &SALARIOPORTECLADO;
```

Resultado de la Consulta | Resultado de la Consulta 1

SQL | Todas las Filas Recuperadas: 15 en 0.003 segundos

	LAST_NAME	SALARY
1	King	24000
2	Kochhar	17000
3	De Haan	17000
4	Greenberg	12008
5	Raphaely	11000
6	Russell	14000
7	Partners	13500
8	Errazuriz	12000
9	Cambrault	11000
10	Zlotkey	10500
11	Vishney	10500
12	Ozer	11500
13	Abel	11000
14	Hartstein	13000
15	Higgins	12008

11. The HR department wants to run reports based on a manager. Create a query that prompts the user for a manager ID and generates the employee ID, last name, salary, and department for that manager's employees. The HR department wants the ability to sort the report on a selected column. You can test the data with the following values: managerid = 103, sorted by lastname:

```
--11
SELECT EMPLOYEE_ID, LAST_NAME, SALARY, DEPARTMENT_ID FROM EMPLOYEES WHERE MANAGER_ID = &INTRODUCCIRMANAGER;
```

esultado de la Consulta x | Resultado de la Consulta 1 x

SQL | Todas las Filas Recuperadas: 4 en 0.008 segundos

	EMPLOYEE_ID	LAST_NAME	SALARY	DEPARTMENT_ID
1	104	Ernst	6000	60
2	105	Austin	4800	60
3	106	Pataballa	4800	60
4	107	Lorentz	4200	60

managerid = 201, sorted by salary:

```
--11
SELECT EMPLOYEE_ID, LAST_NAME, SALARY, DEPARTMENT_ID FROM EMPLOYEES WHERE MANAGER_ID = &INTRODUCCIRMANAGER;
```

Resultado de la Consulta | Resultado de la Consulta 1

SQL | Todas las Filas Recuperadas: 1 en 0.002 segundos

	EMPLOYEE_ID	LAST_NAME	SALARY	DEPARTMENT_ID
1	202	Fay	6000	20

managerid = 124, sorted by employeeid:

```
--11
SELECT EMPLOYEE_ID, LAST_NAME, SALARY, DEPARTMENT_ID FROM EMPLOYEES WHERE MANAGER_ID = &INTRODUCCIRMANAGER;
```

Resultado de la Consulta | Resultado de la Consulta 1

SQL | Todas las Filas Recuperadas: 8 en 0.002 segundos

	EMPLOYEE_ID	LAST_NAME	SALARY	DEPARTMENT_ID
1	141	Rajs	3500	50
2	142	Davies	3100	50
3	143	Matos	2600	50
4	144	Vargas	2500	50
5	196	Walsh	3100	50
6	197	Feeney	3000	50
7	198	OConnell	2600	50
8	199	Grant	2600	50

12. Display all employee last names in which the third letter of the name is "a."

```
--12
SELECT LAST_NAME FROM EMPLOYEES WHERE LAST_NAME LIKE '__a%';
```

Resultado de la Consulta | Resultado de la Consulta 1

SQL | Todas las Filas Recuperadas: 3 en 0.002 segundos

	LAST_NAME
1	Grant
2	Grant
3	Whalen

13. Display the last names of all employees who have both an “a” and an “e” in their last name.

```
--13

SELECT LAST_NAME FROM EMPLOYEES WHERE LAST_NAME LIKE '%a%' AND LAST_NAME LIKE '%e%';
```

Resultado de la Consulta | Resultado de la Consulta 1

SQL | Todas las Filas Recuperadas: 17 en 0.004 segundos

	LAST_NAME
1	Baer
2	Bates
3	Colmenares
4	Davies
5	De Haan
6	Faviet
7	Fleaur
8	Gates
9	Hartstein
10	Markle
11	Nayer
12	Partners
13	Patel
14	Philtanker
15	Raphaely
16	Sewall
17	Whalen

14. Display the last name, job, and salary for all employees whose jobs are either those of a sales representative or of a stock clerk, and whose salaries are not equal to 2,500, 3,500, or 7,000

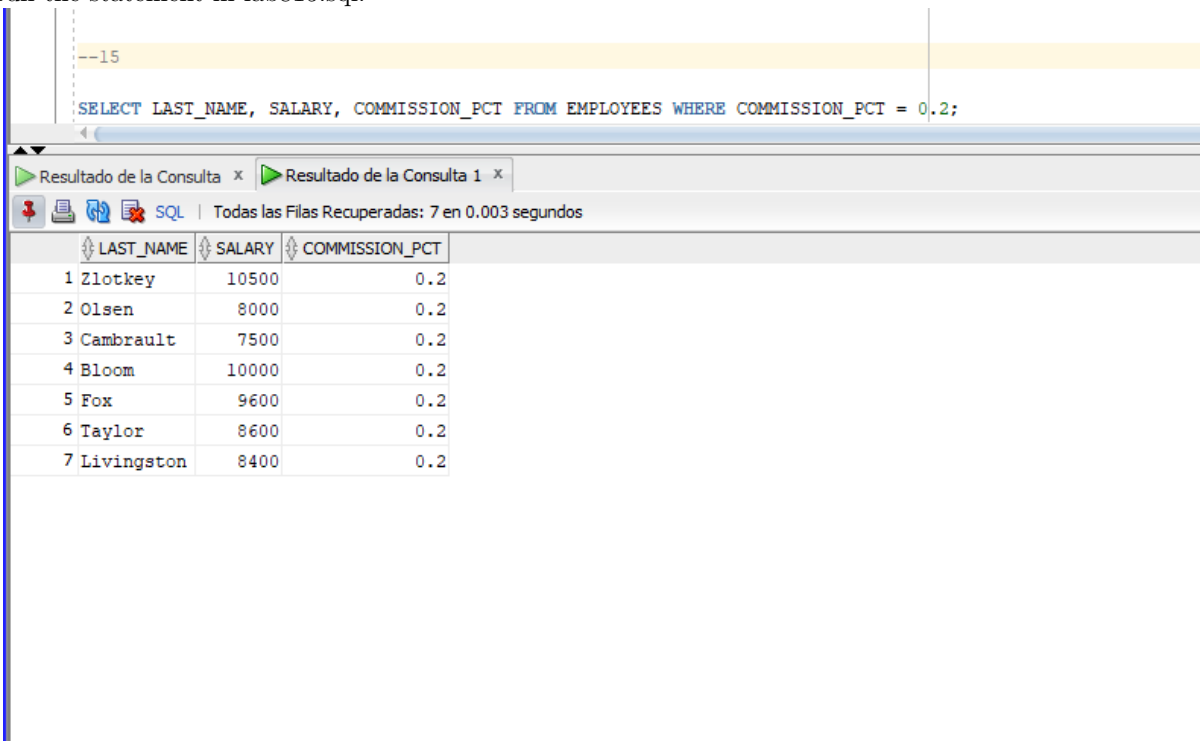
```
--14
SELECT * FROM EMPLOYEES;
SELECT LAST_NAME, JOB_ID, SALARY FROM EMPLOYEES WHERE (JOB_ID = 'SA_REP' OR JOB_ID='ST_CLERK')
AND (SALARY <> 2500 OR SALARY <> 3500 OR SALARY <> 7000);
```

Resultado de la Consulta | Resultado de la Consulta 1

SQL | Todas las Filas Recuperadas: 50 en 0.004 segundos

	LAST_NAME	JOB_ID	SALARY
6	Atkinson	ST_CLERK	2800
7	Marlow	ST_CLERK	2500
8	Olson	ST_CLERK	2100
9	Mallin	ST_CLERK	3300
10	Rogers	ST_CLERK	2900
11	Gee	ST_CLERK	2400
12	Philtanker	ST_CLERK	2200
13	Ladwig	ST_CLERK	3600
14	Stiles	ST_CLERK	3200
15	Seo	ST_CLERK	2700
16	Patel	ST_CLERK	2500
17	Rajs	ST_CLERK	3500
18	Davies	ST_CLERK	3100
19	Matos	ST_CLERK	2600
20	Vargas	ST_CLERK	2500
21	Tucker	SA_REP	10000
22	Bernstein	SA_REP	9500
23	Hall	SA_REP	9000
24	Olsen	SA_REP	8000

15. Modify lab806.sql to display the last name, salary, and commission for all employees whose commission is 20percent. Resave lab806.sql as lab815.sql. Rerun the statement in lab815.sql.



```
--15

SELECT LAST_NAME, SALARY, COMMISSION_PCT FROM EMPLOYEES WHERE COMMISSION_PCT = 0.2;
```

Resultado de la Consulta | Resultado de la Consulta 1

SQL | Todas las Filas Recuperadas: 7 en 0.003 segundos

	LAST_NAME	SALARY	COMMISSION_PCT
1	Zlotkey	10500	0.2
2	Olsen	8000	0.2
3	Cambrault	7500	0.2
4	Bloom	10000	0.2
5	Fox	9600	0.2
6	Taylor	8600	0.2
7	Livingston	8400	0.2

3 PRE-EVALUATION

Practices pre-Assessment for Database Systems Laboratory II Pre-Assessment
PRACTICE 8 carried out by student

1 COMPLIES WITH THE REQUESTED FUNCTIONALITY
YES

4 HAS THE CORRECT INDENTATION
YES

6 HAS AN EASY WAY TO ACCESS THE PROVIDED FILES
YES

7 HAS A REPORT WITH IDC FORMAT
YES

8 REPORT INFORMATION IS FREE OF SPELLING ERRORS
YES

9 DELIVERED IN TIME AND FORM
YES

10 IS FULLY COMPLETED (SPECIFY THE PERCENTAGE COMPLETED)
YES,100 percent

4 Conclusion

This practice seemed very interesting to me, at the same time it was very helpful since I was able to improve some things that I did not master, I like to create sentences of this type since I even entertain myself doing them, I liked the practice, plus activity 5 since It was where I had some doubts but I was able to solve them.

I could learn a lot from this practice, and I really like doing practices like these.