



Universidad Autónoma de Chihuahua

Facultad de Ingeniería

Asignatura: Fundamentos de bases de datos

Clave: CI675

Grupo: 6CC2

Semestre: Ago-Dic 2024

Docente: José Saul De Lira Miramontes

Act. 2 Proyección/Selección

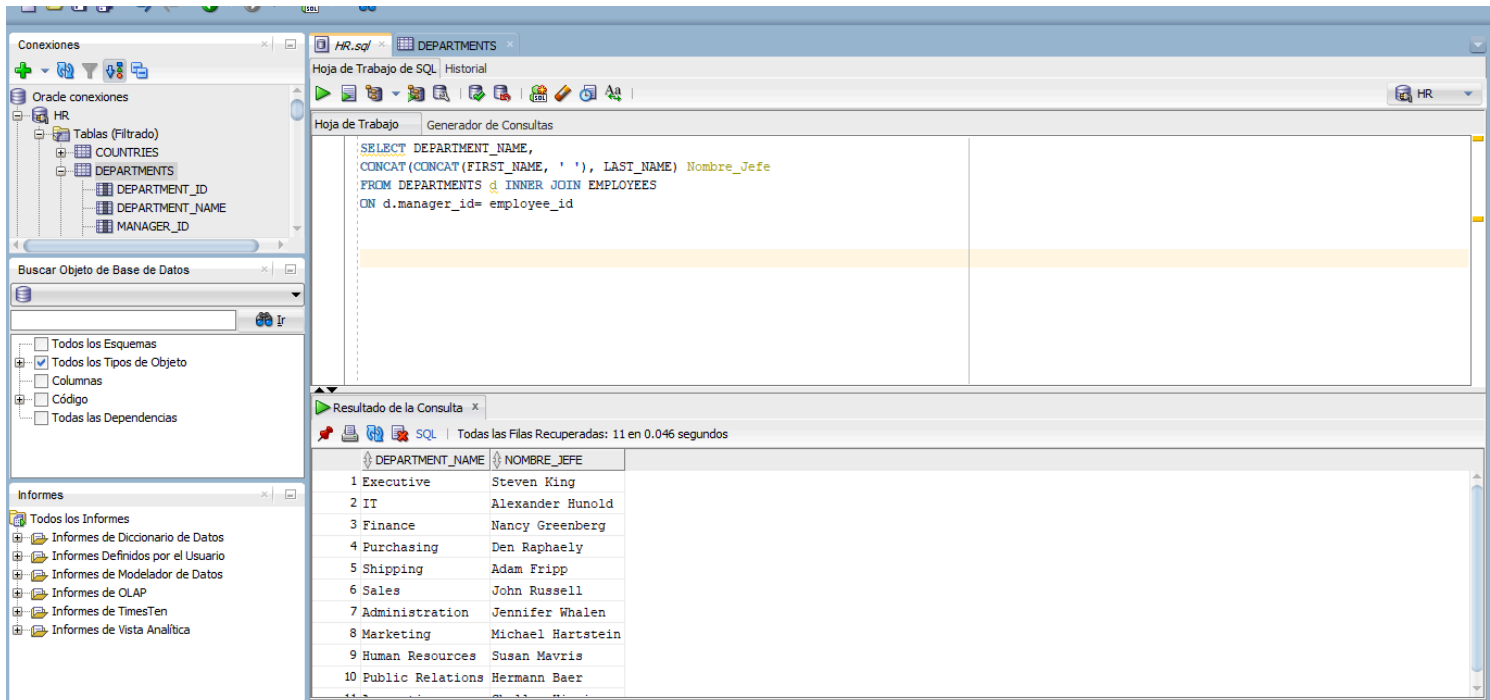
Nombre del alumno: Allan Hall Solorio

Matricula: 358909

Fecha de entrega: domingo 1 de septiembre de 2024

Realizar un documento formal en formato PDF con la respuesta a los requerimientos (Se deberá incluir la redacción del problema, la consulta de SQL y el resultado para cada consulta de la actividad)

1. Obtener para todos los departamentos de la compañía, el nombre del departamento y el nombre del jefe del departamento



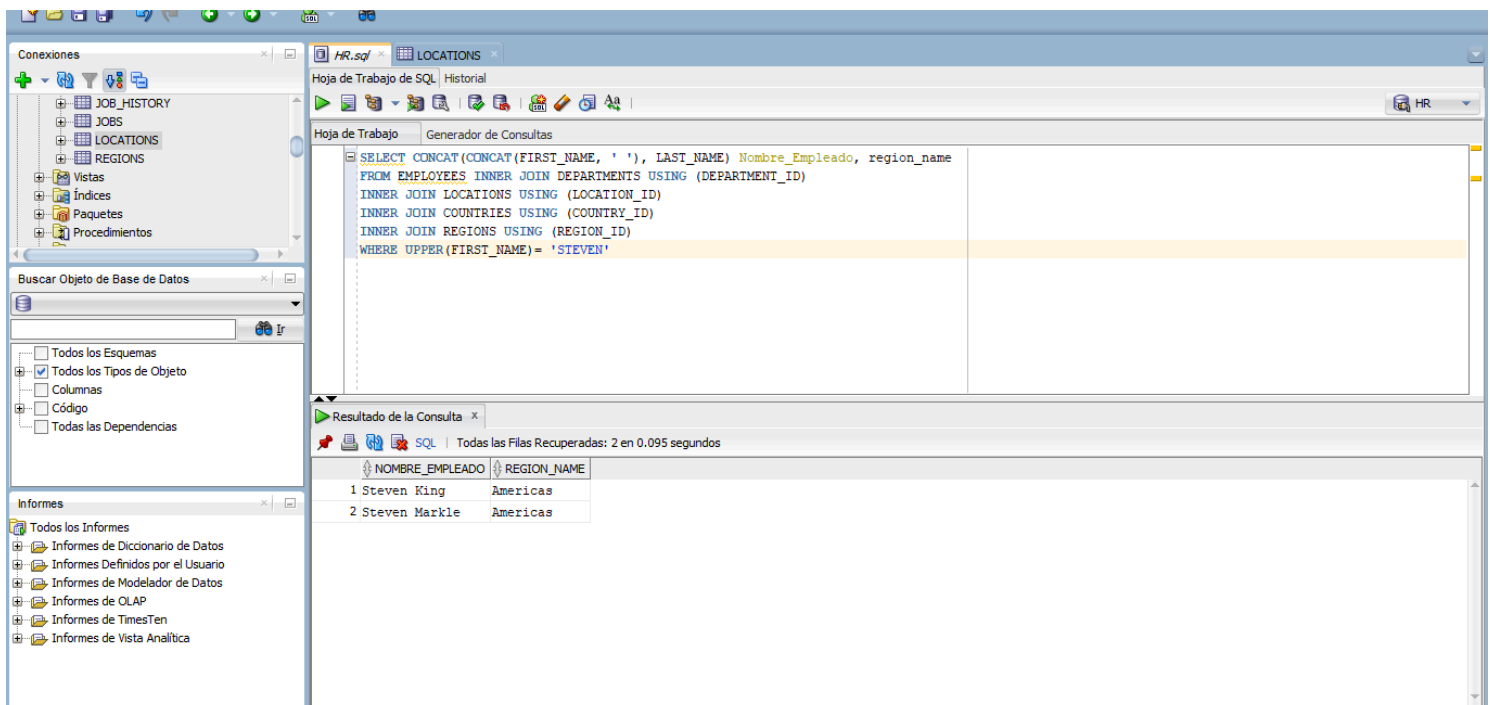
The screenshot shows the Oracle SQL Developer interface. On the left, the 'Conexiones' pane shows a connection to 'HR'. The 'Hoja de Trabajo de SQL' pane contains the following SQL query:

```
SELECT DEPARTMENT_NAME,  
CONCAT(CONCAT(FIRST_NAME, ' '), LAST_NAME) Nombre_Jefe  
FROM DEPARTMENTS d INNER JOIN EMPLOYEES  
ON d.manager_id= employee_id
```

The 'Resultado de la Consulta' pane shows the results of the query, with 11 rows recovered in 0.046 seconds. The results are as follows:

DEPARTMENT_NAME	NOMBRE JEFE
1 Executive	Steven King
2 IT	Alexander Hunold
3 Finance	Nancy Greenberg
4 Purchasing	Den Raphaely
5 Shipping	Adam Fripp
6 Sales	John Russell
7 Administration	Jennifer Whalen
8 Marketing	Michael Hartstein
9 Human Resources	Susan Mavris
10 Public Relations	Hermann Baer

2. Obtener el nombre de la región en la cual labora el empleado "Steven" (región_name, first_name, last_name)



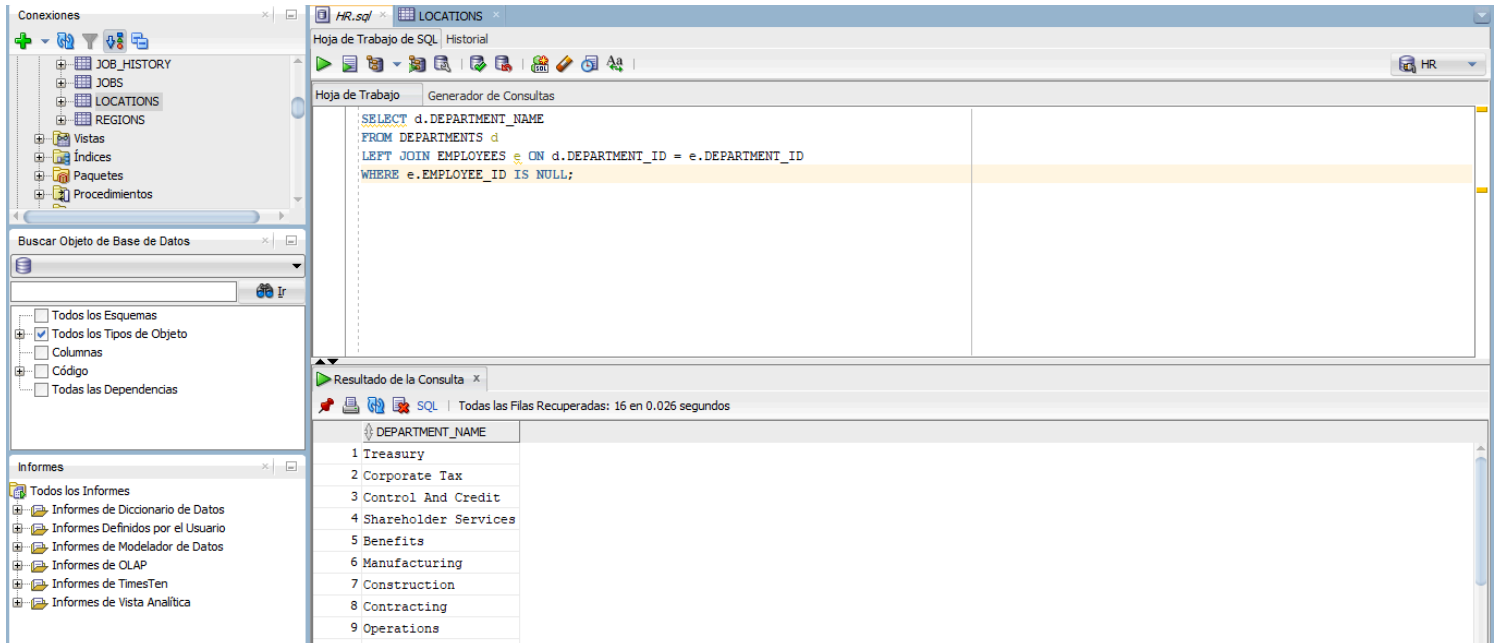
The screenshot shows the Oracle SQL Developer interface. On the left, the 'Conexiones' pane shows a connection to 'HR'. The 'Hoja de Trabajo de SQL' pane contains the following SQL query:

```
SELECT CONCAT(CONCAT(FIRST_NAME, ' '), LAST_NAME) Nombre_Empleado, region_name  
FROM EMPLOYEES INNER JOIN DEPARTMENTS USING (DEPARTMENT_ID)  
INNER JOIN LOCATIONS USING (LOCATION_ID)  
INNER JOIN COUNTRIES USING (COUNTRY_ID)  
INNER JOIN REGIONS USING (REGION_ID)  
WHERE UPPER(FIRST_NAME)= 'STEVEN'
```

The 'Resultado de la Consulta' pane shows the results of the query, with 2 rows recovered in 0.095 seconds. The results are as follows:

NOMBRE EMPLEADO	REGION_NAME
1 Steven King	Américas
2 Steven Markle	Américas

3. Obtener los nombres de los departamentos que no tienen asignados empleados en este momento



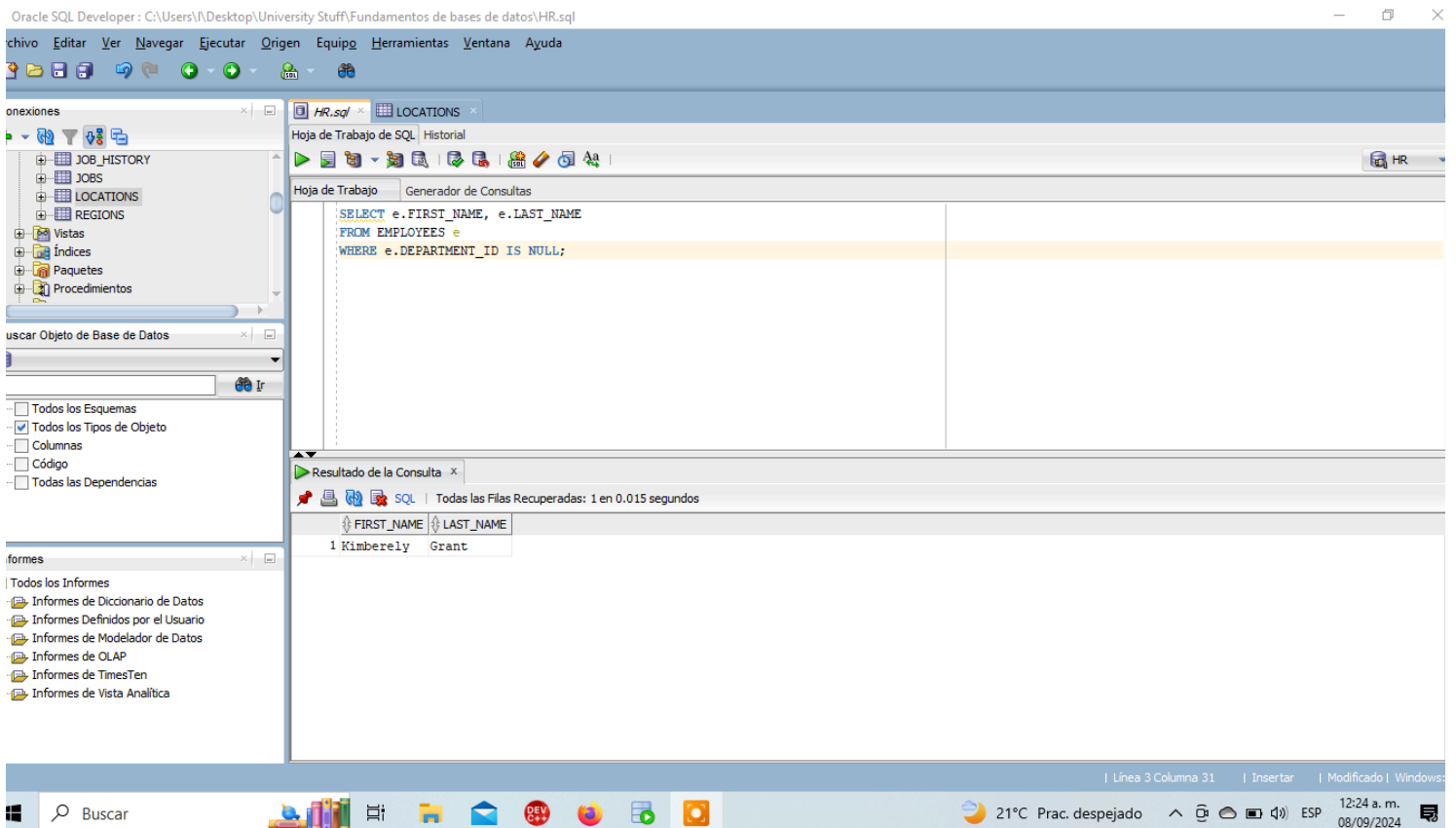
The screenshot shows the Oracle SQL Developer interface. On the left, the 'Conexiones' pane shows a tree view of database objects including JOB_HISTORY, JOBS, LOCATIONS, and REGIONS. The 'Buscar Objeto de Base de Datos' pane is open, showing search criteria. The main window displays a SQL query in the 'Hoja de Trabajo' tab:

```
SELECT d.DEPARTMENT_NAME
FROM DEPARTMENTS d
LEFT JOIN EMPLOYEES e ON d.DEPARTMENT_ID = e.DEPARTMENT_ID
WHERE e.EMPLOYEE_ID IS NULL;
```

The 'Resultado de la Consulta' pane shows the results of the query, displaying a list of department names:

DEPARTMENT_NAME
1 Treasury
2 Corporate Tax
3 Control And Credit
4 Shareholder Services
5 Benefits
6 Manufacturing
7 Construction
8 Contracting
9 Operations

4. Obtener los nombres de los empleados que no tienen asignado departamento en este momento



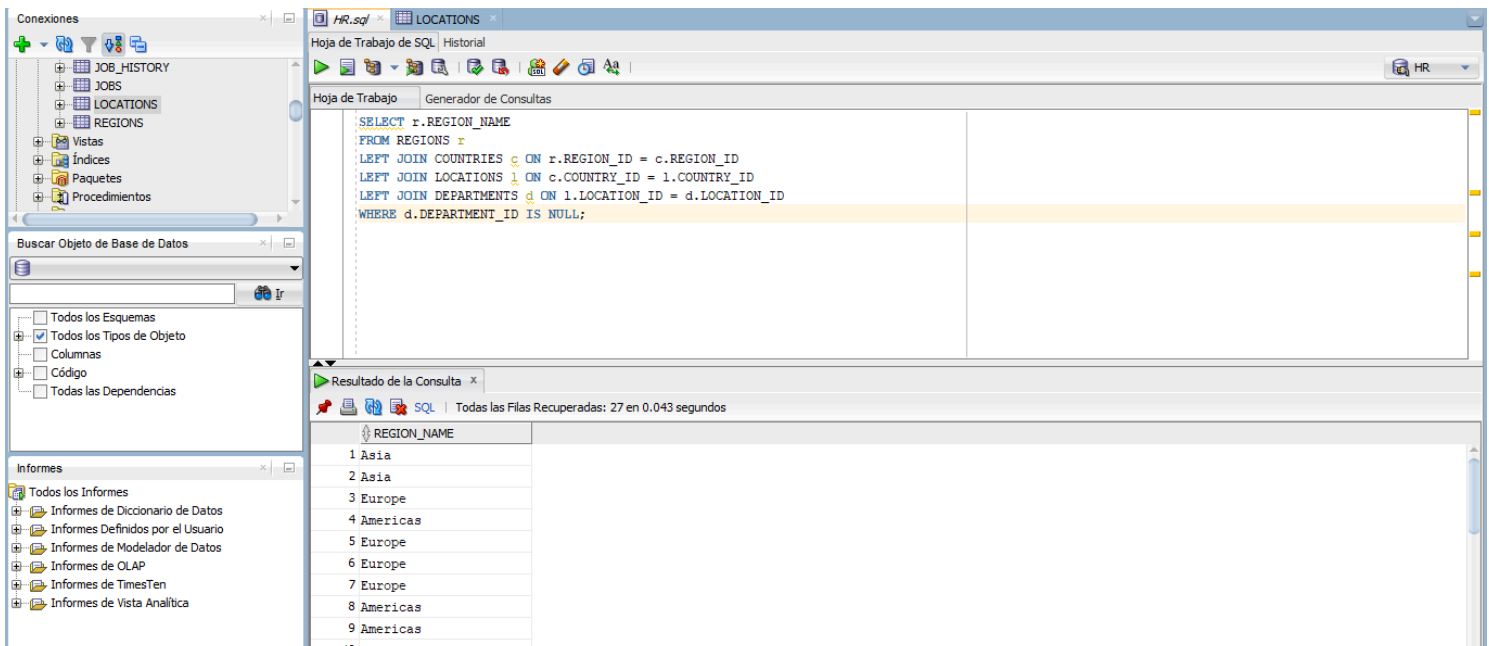
The screenshot shows the Oracle SQL Developer interface. The main window displays a SQL query in the 'Hoja de Trabajo' tab:

```
SELECT e.FIRST_NAME, e.LAST_NAME
FROM EMPLOYEES e
WHERE e.DEPARTMENT_ID IS NULL;
```

The 'Resultado de la Consulta' pane shows the results of the query, displaying a list of employee names:

FIRST_NAME	LAST_NAME
1 Kimberly	Grant

5. Obtener los nombres de las regiones que no tiene departamentos asignados



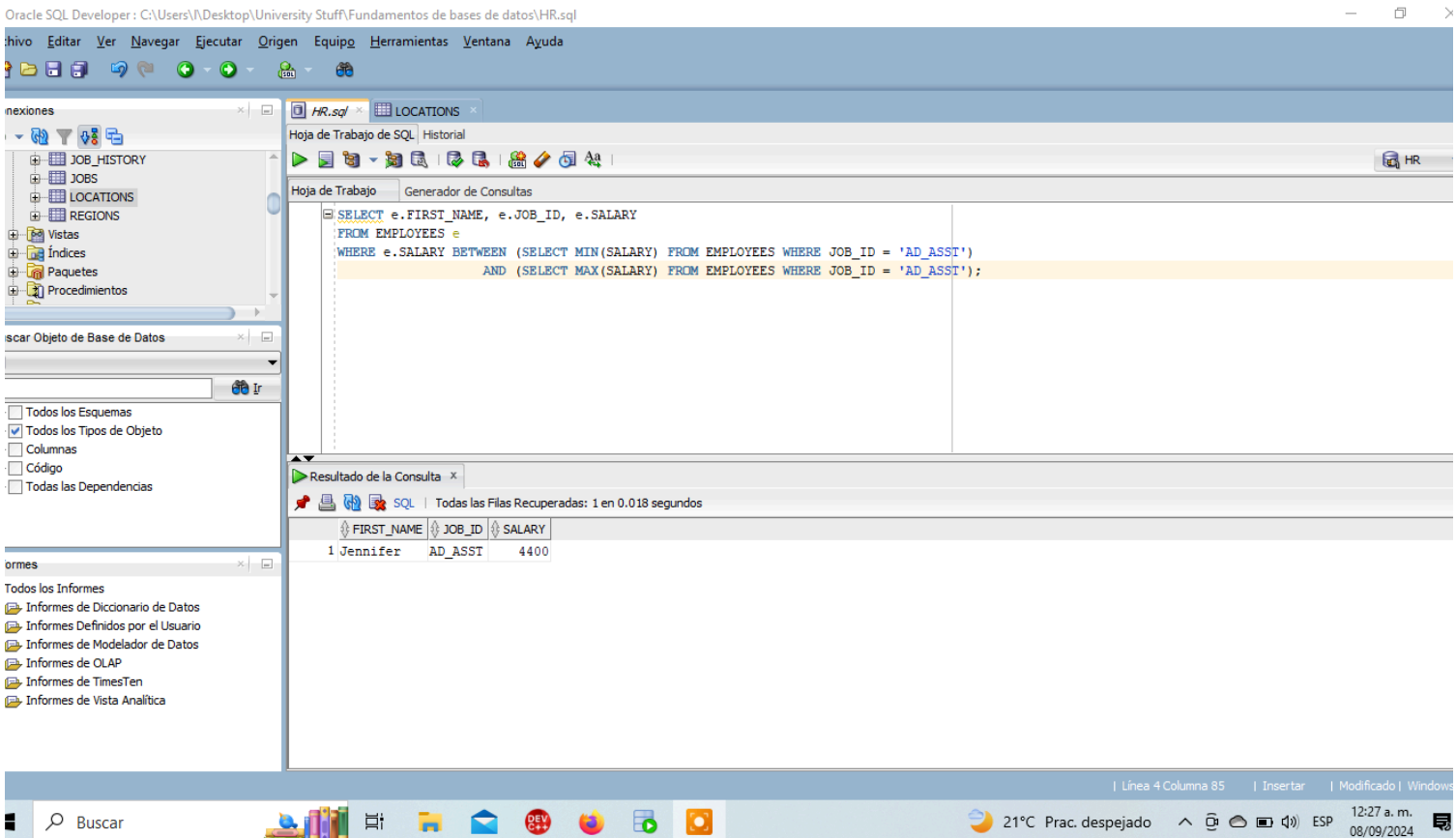
The screenshot shows the Oracle SQL Developer interface. The left pane displays the database schema with tables like JOB_HISTORY, JOBS, LOCATIONS, and REGIONS. The main editor contains the following SQL query:

```
SELECT r.REGION_NAME
FROM REGIONS r
LEFT JOIN COUNTRIES c ON r.REGION_ID = c.REGION_ID
LEFT JOIN LOCATIONS l ON c.COUNTRY_ID = l.COUNTRY_ID
LEFT JOIN DEPARTMENTS d ON l.LOCATION_ID = d.LOCATION_ID
WHERE d.DEPARTMENT_ID IS NULL;
```

The results pane shows the output of the query:

REGION_NAME
1 Asia
2 Asia
3 Europe
4 Americas
5 Europe
6 Europe
7 Europe
8 Americas
9 Americas

6. Obtener los empleados que tienen ingresos que están en el rango del salario que se paga al puesto "AD_ASST" (first_name, job_id, salary)



The screenshot shows the Oracle SQL Developer interface. The left pane displays the database schema. The main editor contains the following SQL query:

```
SELECT e.FIRST_NAME, e.JOB_ID, e.SALARY
FROM EMPLOYEES e
WHERE e.SALARY BETWEEN (SELECT MIN(SALARY) FROM EMPLOYEES WHERE JOB_ID = 'AD_ASST')
AND (SELECT MAX(SALARY) FROM EMPLOYEES WHERE JOB_ID = 'AD_ASST');
```

The results pane shows the output of the query:

FIRST_NAME	JOB_ID	SALARY
1 Jennifer	AD_ASST	4400

7. Obtener los empleados que su puesto actual es el único puesto que han ocupado en la compañía (firs_name, last_name, job_id)

The screenshot shows the Oracle SQL Developer interface. The left pane displays the database schema with tables like JOB_HISTORY, JOBS, LOCATIONS, and REGIONS. The main editor contains the following SQL query:

```
SELECT e.FIRST_NAME, e.LAST_NAME, e.JOB_ID
FROM EMPLOYEES e
LEFT JOIN JOB_HISTORY jh ON e.EMPLOYEE_ID = jh.EMPLOYEE_ID
GROUP BY e.EMPLOYEE_ID, e.FIRST_NAME, e.LAST_NAME, e.JOB_ID
HAVING COUNT(DISTINCT jh.JOB_ID) = 0;
```

The query results are displayed in the bottom pane, showing 10 rows of data:

FIRST_NAME	LAST_NAME	JOB_ID
1 Diana	Lorentz	IT_PROG
2 Sundita	Kumar	SA_REP
3 Nancy	Greenberg	FI_MGR
4 Kevin	Mourgos	ST_MAN
5 Sarath	Sewall	SA_REP
6 Luis	Popp	FI_ACCOUNT
7 Ki	Gee	ST_CLERK
8 Sundar	Ande	SA_REP
9 Julia	Nayer	ST_CLERK
10 Allan	McEwen	SA_REP

8. Obtener los empleados que han ocupado más de un puesto en el departamento en el que laboran actualmente (first_name, last_name)

The screenshot shows the Oracle SQL Developer interface. The left pane displays the database schema. The main editor contains the following SQL query:

```
SELECT e.FIRST_NAME, e.LAST_NAME
FROM EMPLOYEES e
JOIN JOB_HISTORY jh ON e.EMPLOYEE_ID = jh.EMPLOYEE_ID
WHERE e.DEPARTMENT_ID = jh.DEPARTMENT_ID
GROUP BY e.EMPLOYEE_ID, e.FIRST_NAME, e.LAST_NAME
HAVING COUNT(DISTINCT jh.JOB_ID) > 1;
```

The query results are displayed in the bottom pane, showing 1 row of data:

FIRST_NAME	LAST_NAME
1 Jonathon	Taylor

9. Obtener la cantidad mayor de subordinados (directos) para un jefe/administrador (no. de subordinados)

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Conexiones' pane is open, showing a tree of database objects. The 'Buscar Objeto de Base de Datos' pane is also open, showing search filters. The main window displays a SQL query in the 'Hoja de Trabajo' pane:

```
SELECT MAX(subordinados) AS max_subordinados
FROM (
  SELECT m.EMPLOYEE_ID, COUNT(*) AS subordinados
  FROM EMPLOYEES e
  JOIN EMPLOYEES m ON e.MANAGER_ID = m.EMPLOYEE_ID
  GROUP BY m.EMPLOYEE_ID
);
```

The 'Resultado de la Consulta' pane shows the result of the query:

MAX_SUBORDINADOS
14

10. Obtener la mayor rotación de personal existente para los departamentos de la compañía (no. de movimientos)

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Conexiones' pane is open, showing a tree of database objects. The 'Buscar Objeto de Base de Datos' pane is also open, showing search filters. The main window displays a SQL query in the 'Hoja de Trabajo' pane:

```
SELECT MAX(movimientos) AS max_movimientos
FROM (
  SELECT d.DEPARTMENT_ID, COUNT(*) AS movimientos
  FROM DEPARTMENTS d
  JOIN JOB_HISTORY jh ON d.DEPARTMENT_ID = jh.DEPARTMENT_ID
  GROUP BY d.DEPARTMENT_ID
);
```

The 'Resultado de la Consulta' pane shows the result of the query:

MAX_MOVIMIENTOS
2