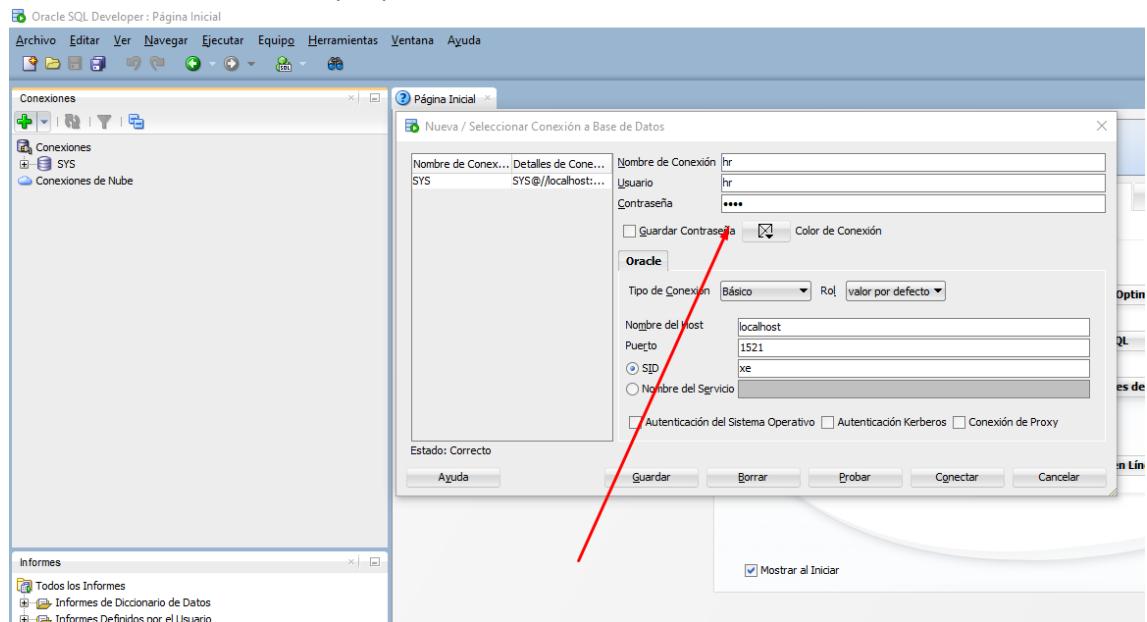


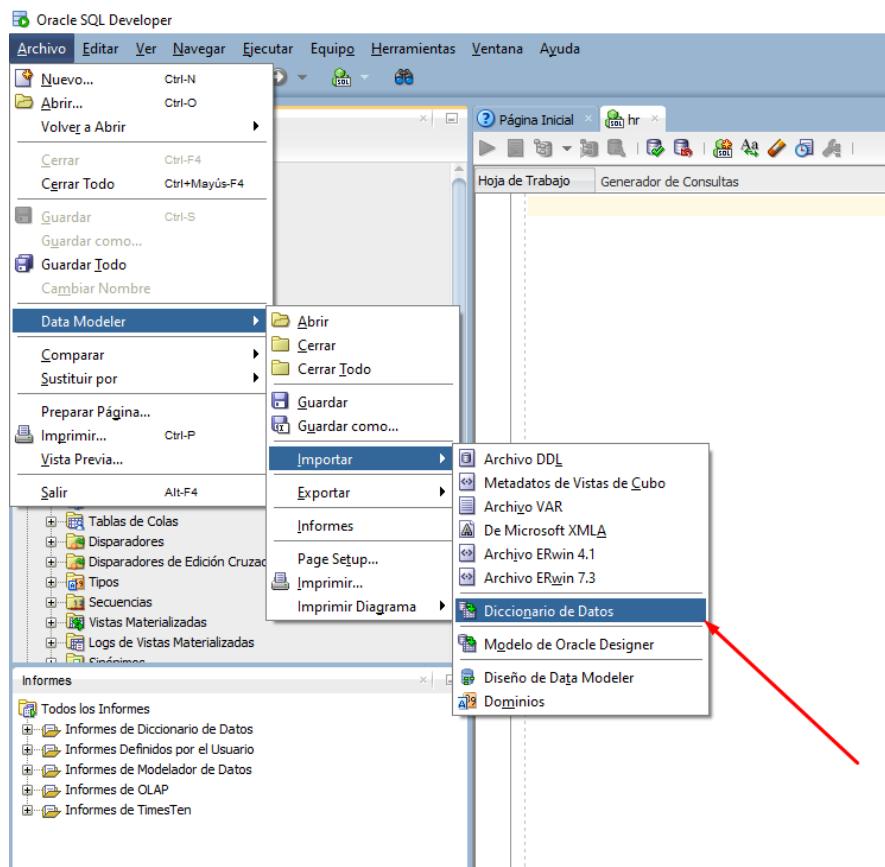
Desarrollo primer laboratorio: Guillermo Alexander Cornejo Argueta

PARTE 1:

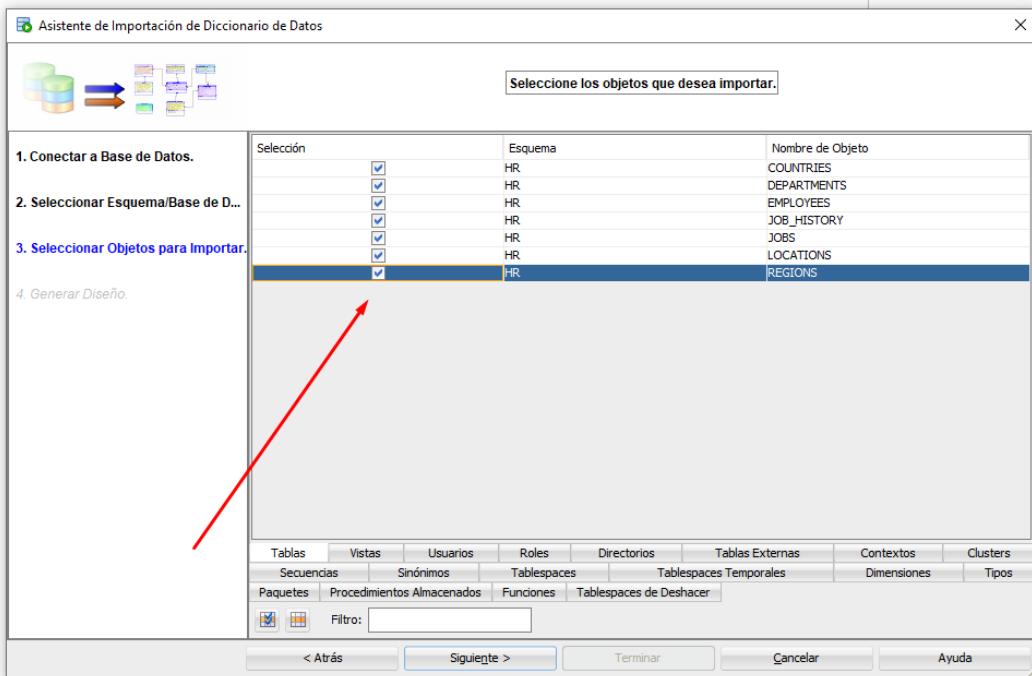
-Creamos la conexión a HR y la probamos.



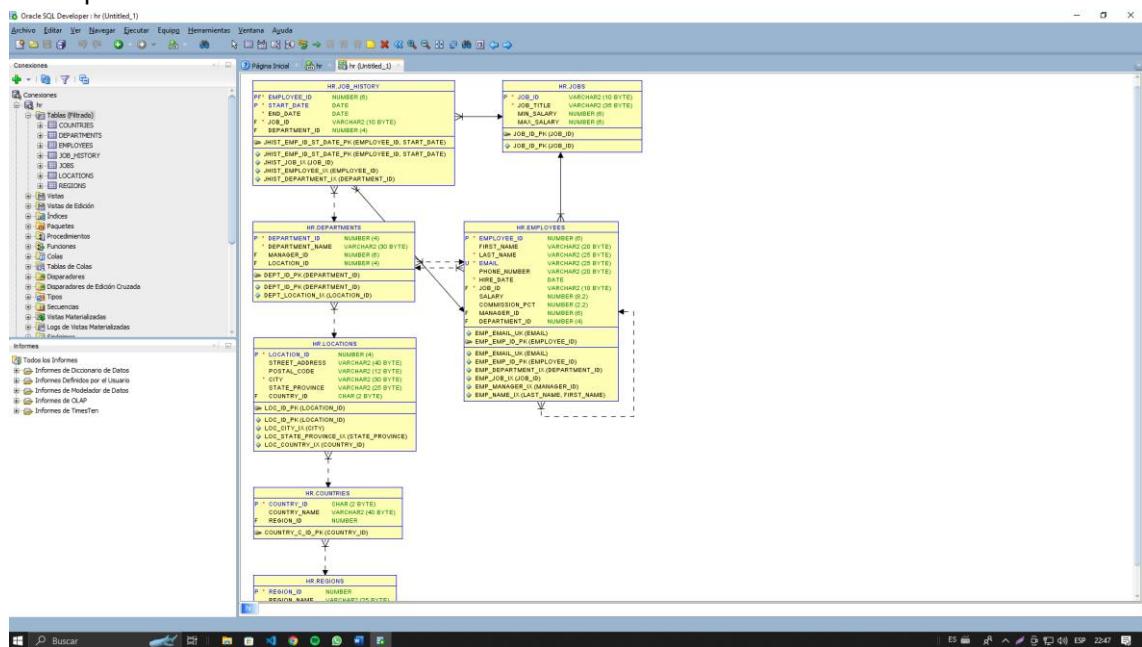
-Importamos las tablas del esquema HR



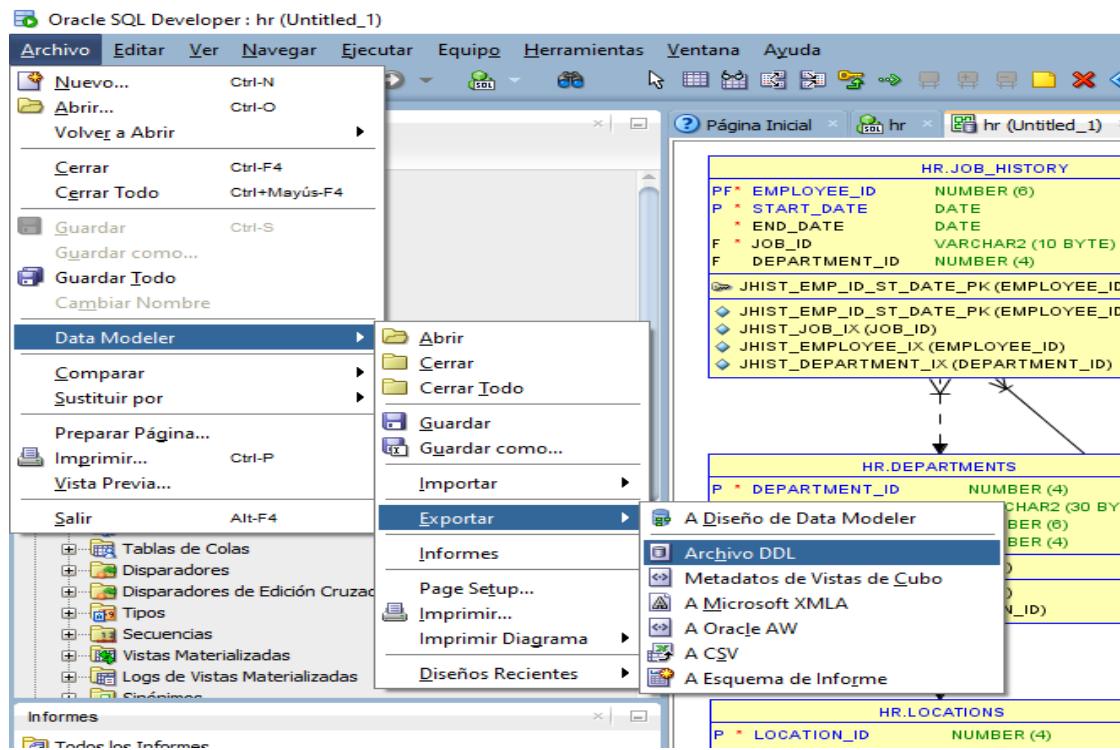
-Seleccionamos las tablas importar del esquema HR



-Se importan las tablas



- Exportamos el script para 11g



-Generamos el script

The screenshot shows the 'Editor de Archivo DDL - Oracle Database 11g' window. The title bar indicates 'Oracle Database 11g' and the schema 'hr'. The main area displays the generated DDL script for the 'HR.COUNTRIES' table:

```
1 -- Generado por Oracle SQL Developer Data Modeler 4.0.0.833
2 -- en: 2023-08-30 22:52:46 CST
3 -- sitio: Oracle Database 11g
4 -- tipo: Oracle Database 11g
5
6
7
8
9 CREATE TABLE HR.COUNTRIES
10 (
11     COUNTRY_ID CHAR (2 BYTE) CONSTRAINT COUNTRY_ID_NN NOT NULL ,
12     COUNTRY_NAME VARCHAR2 (40 BYTE) ,
13     REGION_ID NUMBER ,
14     CONSTRAINT COUNTRY_C_ID_PK PRIMARY KEY ( COUNTRY_ID )
15 )
16 ORGANIZATION INDEX PCTFREE 10 INITTRANS 2 TABLESPACE USERS LOGGING STORAGE
17 (
18     INITIAL 65536 NEXT 1048576 PCTINCREASE 0 MINEXTENTS 1 MAXEXTENTS 2147483645 FREELISTS 1 FREELIST
19 )
20 PCTTHRESHOLD 50 ;
21 COMMENT ON TABLE HR.COUNTRIES
22 IS
23 'country table. Contains 25 rows. References with locations table.' ;
24 COMMENT ON COLUMN HR.COUNTRIES.COUNTRY_ID
25 IS
26 'Primary key of countries table.' ;
27 COMMENT ON COLUMN HR.COUNTRIES.COUNTRY_NAME
28 IS
```

PARTE 2

Creamos un nuevo usuario en Oracle express:

The screenshot shows the 'Create Application Express Workspace' dialog box. It has fields for 'Database User' (radio buttons for 'Create New' or 'Use Existing'), 'Database Username' (text input: SALVADOR2), 'Application Express Username' (text input: SALVADOR2), 'Password' (password input: ****), and 'Confirm Password' (password input: ****). A 'Create Workspace' button is at the bottom right. To the right, a 'Getting Started' panel provides instructions: 'To get started with Oracle Application Express, create a workspace. You will need to specify:' followed by a list: 'Database Username - Name of the database user to be created', 'Application Express Username - Your login name for the Application Express Workspace', 'Password - Password of both your database user and Application Express user'. It also says 'Once created, you will be able to login to your Application Express workspace using these credentials'. At the top right of the main window, it says 'Welcome SYSTEM Logout'.

Iniciamos sesión con el nuevo usuario creado:

The screenshot shows the Oracle Application Express login page. It features a large graphic of a database cylinder with a pencil and ruler. The text 'Enter Application Express workspace and credentials.' is above input fields for 'Workspace' (text input: SALVADOR2), 'Username' (text input: SALVADOR2), and 'Password' (password input: ****). A 'Login' button is below the password field. Below the form, a link says 'Click here to learn how to get started'. At the bottom left, it says 'Language: English, Português (Brasil), 中文 (简体), 日本語'.

Ingresamos a SQL workshop

The screenshot shows the Oracle Application Express dashboard for workspace SALVADOR2. The top navigation bar includes 'Home', 'Application Builder', 'SQL Workshop', 'Team Development', and 'Administration'. The main area has tabs for 'Application Builder', 'SQL Workshop' (which is selected and highlighted with a red arrow), 'Team Development', and 'Administration'. On the left, there's a 'News' section with a single item. In the center, there are three cards: 'Top Applications' (empty), 'Top Users' (empty), and 'Team Development' (showing 'Show: All' and 'Release: All Releases' with counts for Features, Todos, Milestones, Bugs, and Feedback all at 0). On the right, there are sections for 'About' (describing APEX as a rapid Web application development tool), 'Available Updates' (Oracle APEX 23.1 is available), and 'Language' (options for English, Português (Brasil), 中文 (简体), and 日本語). At the bottom, it says 'Set Screen Reader Mode On' and 'Workspace: SALVADOR2 User: SALVADOR2'. The footer includes 'Application Express 4.0.2.0.099', 'Language: en | Copyright © 1999, 2010, Oracle. All rights reserved.', and a 'Help' link.

Luego en SQL Scripts

The screenshot shows the Oracle Application Express interface with the SQL Workshop module selected. In the top navigation bar, the 'SQL Workshop' tab is highlighted. Below the navigation bar, there is a toolbar with icons for Object Browser, SQL Commands, SQL Scripts (which is the active tab), Query Builder, and Utilities. A red arrow points from the text above to the 'SQL Scripts' icon in the toolbar.

Subimos el script SQL script generado anteriormente en Datamodeler:

The screenshot shows the 'Upload Script' dialog box. It has fields for 'File' (set to 'Seleccionar archivo / HR-export.sql'), 'Script Name' (set to 'HR Script'), and 'File Character Set' (set to 'Unicode UTF-8'). There are 'Cancel' and 'Upload' buttons at the top right.

Despues de guardararlo aparecerá de la siguiente manera:

The screenshot shows the SQL Scripts list page. It displays a single entry: 'SALVADOR2 HR export SALVADOR2 Now 14,611 0'. The 'Actions' column contains a 'Run' button next to the script name. On the right side of the screen, there is a sidebar with 'Tasks' and 'Manage Results' options.

Damos click en run:

The screenshot shows the 'Run Script' confirmation dialog. It asks for confirmation to run the script 'HR export'. Below the question, it lists the script details: 'Script Name: HR export', 'Created: on 08/30/2023 11:18:23 PM by SALVADOR2', 'Updated: on 08/30/2023 11:18:23 PM by SALVADOR2', 'Number of Statements: 85', and 'Script Size in Bytes: 14,611'. There are 'Cancel', 'Run in Batch', and 'Run Now' buttons at the top right.

Clic en run in batch y aparecerá el siguiente resultado:

The screenshot shows the Oracle Application Express interface. The top navigation bar includes Home, Application Builder, SQL Workshop (selected), Team Development, and Administration. Below the navigation is a breadcrumb trail: Home > SQL Workshop > SQL Scripts > Manage Script Results. A search bar and an 'Actions' dropdown are present. A table lists a single script named 'HR export' run by 'SALVADOR2' at 'Now' status 'SUBMITTED'. A download icon is shown next to the table, and the page footer indicates '1 - 1' results.

Luego click en view result y nos aparecerá que fue ejecutado de manera exitosa:

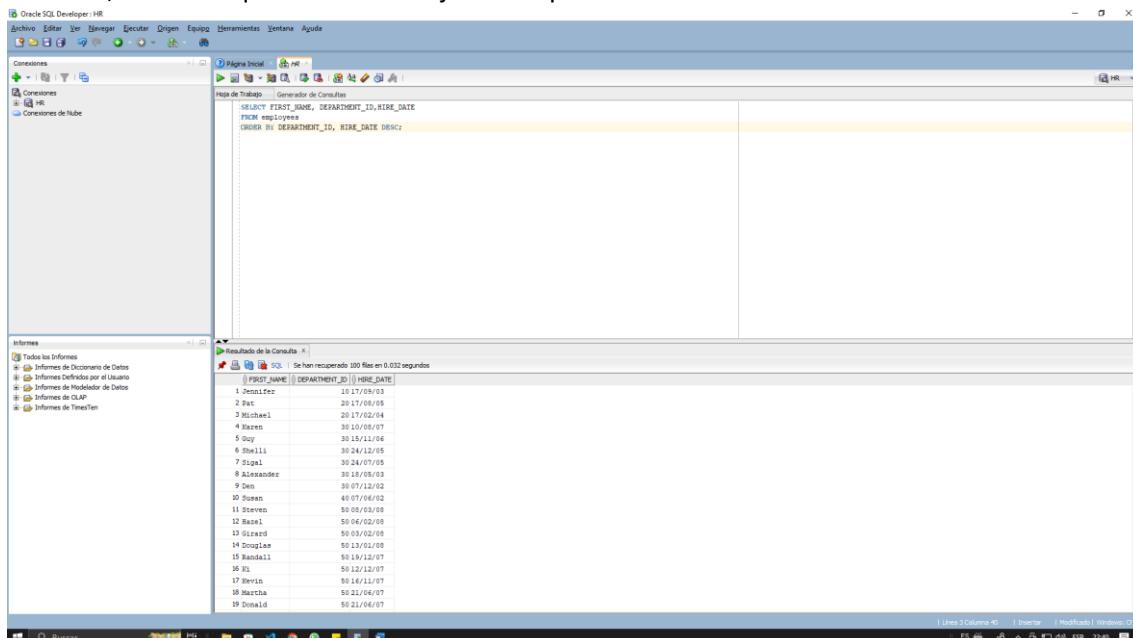
The screenshot shows the Oracle Application Express interface with the SQL Workshop selected. The breadcrumb trail is Home > SQL Workshop > SQL Scripts > Results. It displays the results for the 'HR export' script, which is marked as 'Complete'. The results table has columns: Number, Elapsed, Statement, Feedback, and Rows. The table lists 85 statements processed, with 83 successful and 2 with errors. The last row shows 'row(s) 31 - 45 of 85'. At the bottom, there are links for 'Download' and summary statistics: Statements Processed 85, Successful 83, With Errors 2.

Number	Elapsed	Statement	Feedback	Rows
31	0.00	CREATE INDEX EMP_DEPARTMENT_IX ON EMPLOYEES (Index created.	0
32	0.00	CREATE INDEX EMP_JOB_IX ON EMPLOYEES (JOB_ID	Index created.	0
33	0.01	CREATE INDEX EMP_MANAGER_IX ON EMPLOYEES (MAN	Index created.	0
34	0.01	CREATE INDEX EMP_NAME_IX ON EMPLOYEES (LAST_N	Index created.	0
35	0.00	ALTER TABLE EMPLOYEES ADD CONSTRAINT EMP_EMP_ID_PK PRIMARY	Table altered.	0
36	0.01	ALTER TABLE EMPLOYEES ADD CONSTRAINT EMP_EMAIL_UK UNIQUE (Table altered.	0
37	0.01	CREATE TABLE JOBS (JOB_ID VARCHAR2 (10 BYTE) NO	Table created.	0
38	0.00	COMMENT ON TABLE JOBS IS 'jobs table with job titles and	Statement processed.	0
39	0.00	COMMENT ON COLUMN JOBS.JOB_ID IS 'Primary key of jobs	Statement processed.	0
40	0.01	COMMENT ON COLUMN JOBS.JOB_TITLE IS 'A not null column	Statement processed.	0
41	0.00	COMMENT ON COLUMN JOBS.MIN_SALARY IS 'Minimum salary f	Statement processed.	0
42	0.00	COMMENT ON COLUMN JOBS.MAX_SALARY IS 'Maximum salary f	Statement processed.	0
43	0.00	CREATE UNIQUE INDEX JOB_ID_PK ON JOBS (JOB_ID ASC	Index created.	0
44	0.00	ALTER TABLE JOBS ADD CONSTRAINT JOB_ID_PK PRIMARY KEY (JO	Table altered.	0
45	0.00	CREATE TABLE JOB_HISTORY (EMPLOYEE_ID NUMBER (6)	Table created.	0

PARTE 3:

Consulta 1:

Desarrolle una consulta que liste el nombre del empleado, el código del departamento y la fecha de inicio que empezó a trabajar, ordenando el resultado por departamento y por fecha de inicio, el ultimo que entró a trabajar va de primero.



The screenshot shows the Oracle SQL Developer interface with the HR database connected. The SQL worksheet contains the following query:

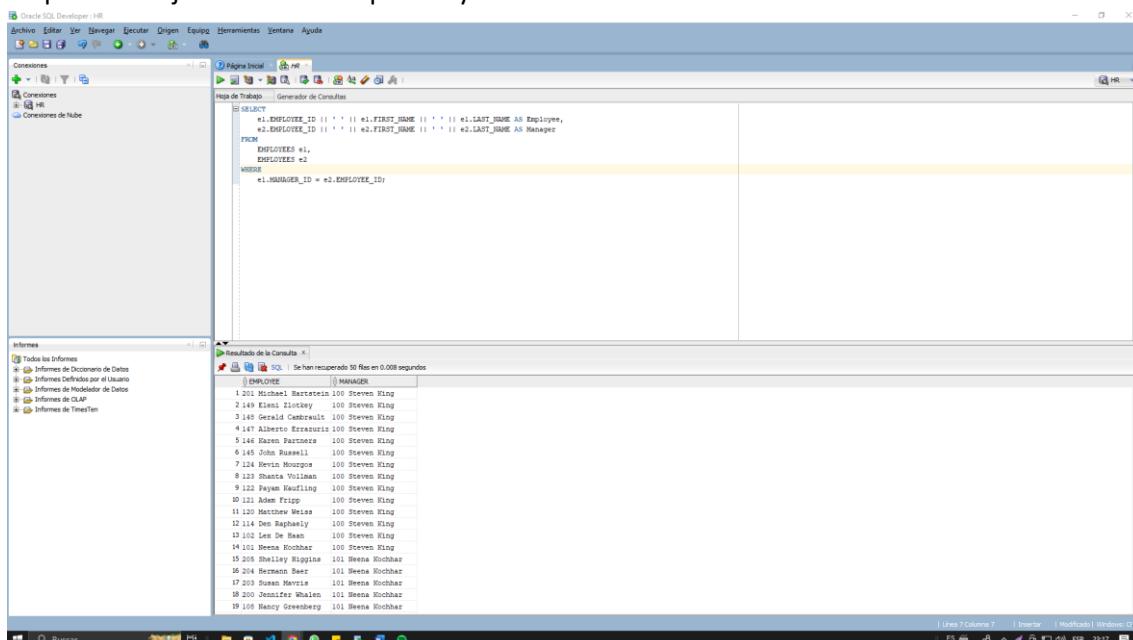
```
SELECT FIRST_NAME, DEPARTMENT_ID, HIRE_DATE
FROM employees
ORDER BY DEPARTMENT_ID, HIRE_DATE DESC;
```

The results window displays the output of the query, listing 100 employees from the HR schema, ordered by department ID and hire date in descending order. The columns are FIRST_NAME, DEPARTMENT_ID, and HIRE_DATE.

FIRST_NAME	DEPARTMENT_ID	HIRE_DATE
Jennifer	10	09/05/03
Pat	20	17/08/05
Michael	30	17/02/04
Susan	40	08/05/07
Guy	50	15/11/06
Shelli	30	24/12/05
Sigal	30	24/07/05
Alexander	30	18/05/03
Den	30	07/12/02
Klaus	40	08/12/02
Elisabet	50	03/03/08
Rachel	50	06/02/08
Girard	50	03/02/08
Douglas	50	13/01/08
Randall	50	19/12/07
Colleen	50	08/07/07
Ervin	50	14/11/07
Martha	50	21/06/07
Donald	50	21/06/07

Consulta 2:

Desarrolle una consulta que liste el código, nombre y apellido de los empleados y sus respectivos jefes con título Empleado y Jefe:



The screenshot shows the Oracle SQL Developer interface with the HR database connected. The SQL worksheet contains the following query:

```
SELECT e1.EMPLOYEE_ID || ' ' || e1.FIRST_NAME || ' ' || e1.LAST_NAME AS Employee,
       e2.EMPLOYEE_ID || ' ' || e2.FIRST_NAME || ' ' || e2.LAST_NAME AS Manager
  FROM   EMPLOYEES e1,
         EMPLOYEES e2
 WHERE  e1.MANAGER_ID = e2.EMPLOYEE_ID;
```

The results window displays the output of the query, listing employees along with their managers, ordered by employee ID. The columns are EMPLOYEE and MANAGER.

EMPLOYEE	MANAGER
1201 Michael Bartlett	100 Steven King
2149 Klein Lockley	100 Steven King
3142 Michael Suyama	100 Steven King
3147 Alison Ferguson	100 Steven King
5144 Karen Pataballa	100 Steven King
6145 John Russell	100 Steven King
7124 Kevin Margerison	100 Steven King
8123 Shanta Vollman	100 Steven King
9122 Payam Kaufling	100 Steven King
9131 Helen Bennett	100 Steven King
11120 Matthew Weiss	100 Steven King
12114 Deen Rathnayake	100 Steven King
13102 Lex De Haan	100 Steven King
14101 Neena Kochhar	100 Steven King
15205 Shelley Higgins	101 Neena Kochhar
16204 Bernhard Beier	101 Neena Kochhar
17103 Guy L鬱	101 Neena Kochhar
18200 Jennifer Whalen	101 Neena Kochhar
19108 Nancy Greenberg	101 Neena Kochhar

Consulta 3:

Desarrolle una consulta que liste los países por región, los datos que debe mostrar son: el código de la región y nombre de la región con los nombres de sus países.

The screenshot shows the Oracle SQL Developer interface. The main window displays a query in the SQL editor:

```
SELECT r.REGION_ID, REGION_NAME, COUNTRY_NAME
FROM REGIONS r, COUNTRIES c
WHERE r.REGION_ID = c.REGION_ID;
```

The results are shown in a table titled "Resultados de la Consulta" (Query Results):

REGION_ID	REGION_NAME	COUNTRY_NAME
1	Europe	Netherlands
2	Europe	France
3	Europe	United Kingdom
4	Europe	Denmark
5	Europe	Belgium
6	Europe	Switzerland
7	Europe	Ireland
8	Europe	Germany
9	Americas	United States of America
10	Americas	Canada
11	Americas	Mexico
12	Americas	Brazil
13	Americas	Argentina
14	Americas	Malaysia
15	Asia	Japan
16	Asia	India
17	Asia	China
18	Asia	Australia
19	Asia	Singapore
20	Middle East and Africa	Iraq
21	Middle East and Africa	Zambia
22	Middle East and Africa	Egypt
23	Middle East and Africa	Zimbabwe
24	Middle East and Africa	Nigeria
25	Middle East and Africa	Kuwait

Consulta 4:

Realice una consulta que muestre el código, nombre, apellido, inicio y fin del historial de trabajo de los empleados.

The screenshot shows the Oracle SQL Developer interface. The main window displays a query in the SQL editor:

```
SELECT e.EMPLOYEE_ID, FIRST_NAME, LAST_NAME, START_DATE, END_DATE
FROM EMPLOYEES e, JOB_HISTORY j
WHERE e.EMPLOYEE_ID = j.EMPLOYEE_ID;
```

The results are shown in a table titled "Resultados de la Consulta" (Query Results):

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	START_DATE	END_DATE
1	101Heena	Hochbar	21/09/97	27/10/01
2	101Heena	Hochbar	28/10/01	19/03/05
3	102Lam	Rand	24/09/97	14/12/04
4	114Pen	Reguly	24/03/04	31/12/07
5	122Peyam	Keeling	01/01/07	31/12/07
6	176Jonathan	Taylor	24/03/04	31/12/06
7	176Jonathan	Taylor	01/01/07	31/12/07
8	200Jennifer	Whalen	17/09/95	17/06/01
9	200Jennifer	Whalen	01/07/02	31/12/06
10	201Michael	Hartstein	17/02/04	19/12/07

Consulta 5:

Elabore una consulta que muestre el nombre y apellido del empleado con título Empleado, el salario, porcentaje de comisión, la comisión y salario total.

```
SELECT
    FIRST_NAME || ' ' || LAST_NAME AS Employee,
    SALARY AS Salary,
    COMMISSION_PCT AS Percentage,
    NVL(COMMISSION_PCT * SALARY, 0) AS Commission,
    SALARY + NVL(COMMISSION_PCT * SALARY, 0) AS "Total Salary"
FROM
    EMPLOYEES;
```

The screenshot shows the Oracle SQL Developer interface. The top window displays the query above. The bottom window, titled 'Resultado de la Consulta', shows the results of the query execution. The results are presented in a table with columns: Employee, Salary, Percentage, Commission, and Total Salary. The data includes rows for employees like Alfred Chen, Eleni Zlotkey, Peter Tucker, Devri Bernstein, and many others, with their respective salaries, commission percentages, commissions, and total salaries.

Employee	Salary	Percentage	Commission	Total Salary
Alfred Chen	11000	0.2	2200	13200
Eleni Zlotkey	10500	0.2	2100	12600
Peter Tucker	10000	0.3	3000	13000
Devri Bernstein	9500	0.25	2375	11875
Peter Hall	9000	0.25	2250	11250
Christopher Giese	8000	0.25	1600	9600
Donaldat Molisani	7000	0.25	1750	8750
Oliver Towall	7000	0.15	1050	8050
Janette King	10000	0.35	3500	13500
Patricia Sully	9500	0.35	3325	12825
Allie Hobden	9000	0.35	3150	12150
Lindsey Smith	8000	0.3	2400	10400
Howard Baier	7500	0.25	1875	9375
Sherith Bernal	7000	0.25	1750	8750
Claire Vilchez	10500	0.25	2425	13125
Danielle Greene	9500	0.15	1425	10925
Martee Marvin	7200	0.1	720	7920
David Lee	6500	0.1	650	7450
Sundar Ande	6400	0.1	640	7040
Amit Banda	6200	0.1	620	6820

Consulta 6:

Elabore una consulta que liste nombre del trabajo y el salario de los empleados que son manager, cuyo código es 100 o 125 y cuyo salario sea mayor de 6000.

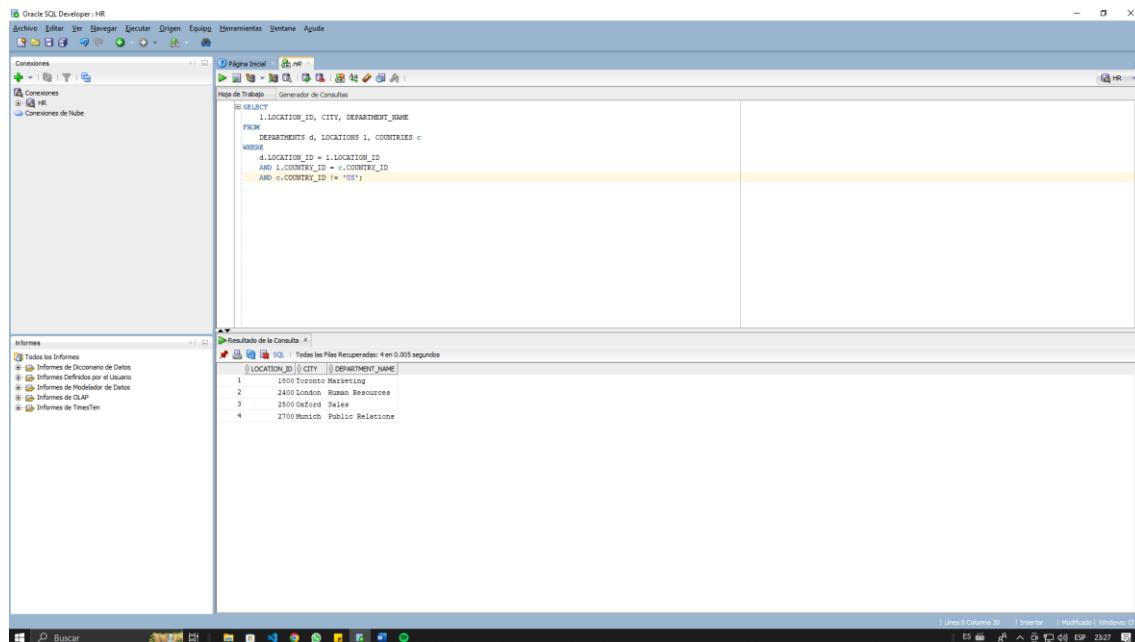
```
SELECT
    JOB_TITLE, SALARY
FROM
    EMPLOYEES e, JOBS j
WHERE
    e.JOB_ID = j.JOB_ID
    AND (MANAGER_ID = 100 OR MANAGER_ID = 125)
    AND SALARY > 6000;
```

The screenshot shows the Oracle SQL Developer interface. The top window displays the query above. The bottom window, titled 'Resultado de la Consulta', shows the results of the query execution. The results are presented in a table with columns: Job Title and Salary. The data includes rows for managers like Administration Vice President, Marketing Manager, Purchasing Manager, Sales Manager, and Stock Manager, all with salaries greater than 6000.

Job Title	Salary
Administration Vice President	17000
Administration Vice President	17000
Marketing Manager	13000
Purchasing Manager	11000
Sales Manager	12000
Sales Manager	10000
Sales Manager	12000
Sales Manager	11000
Sales Manager	10500
Stock Manager	7900
Stock Manager	8200
Stock Manager	8000
Stock Manager	6500

Consulta 7:

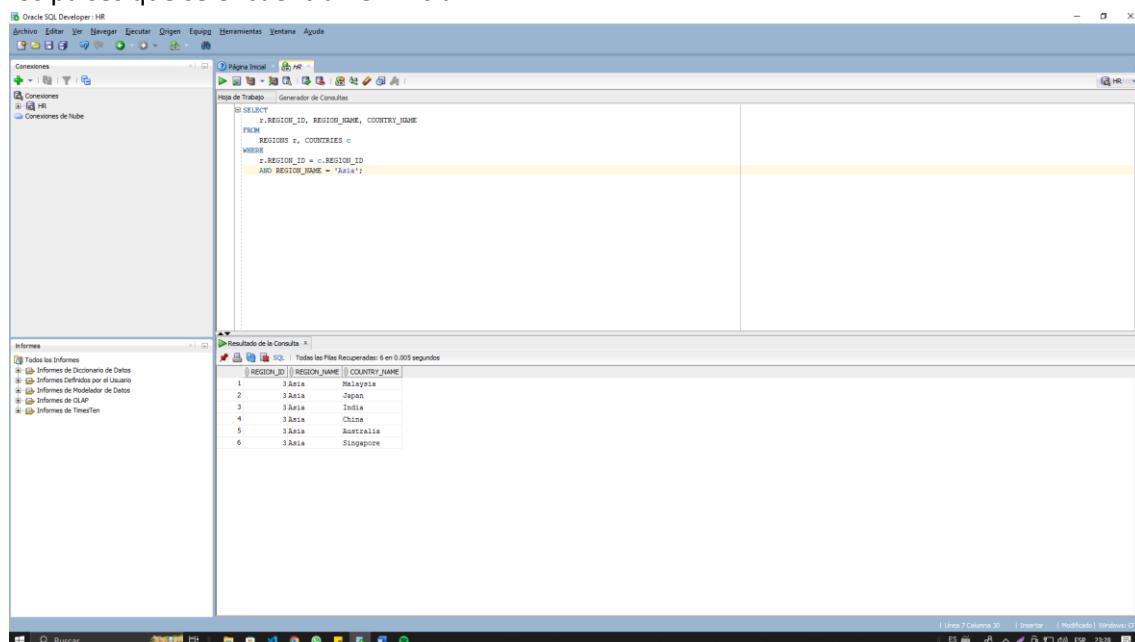
Desarrolle una consulta que liste el código de la localidad, la ciudad y el nombre del departamento de únicamente de los que se encuentran fuera de estados unidos (US).



The screenshot shows the Oracle SQL Developer interface. The top window displays the SQL query:`SELECT l.LOCATION_ID, c.CITY, d.DEPARTMENT_NAME
FROM DEPARTMENTS d, LOCATIONS l, COUNTRIES c
WHERE d.LOCATION_ID = l.LOCATION_ID
AND l.COUNTRY_ID = c.COUNTRY_ID
AND c.COUNTRY_ID != 'US';`The bottom window shows the results of the query:| LOCATION_ID | CITY | DEPARTMENT_NAME |
| --- | --- | --- |
| 1 | 1400 Technicolor Way | Customer Service |
| 2 | 2400 London Road | Human Resources |
| 3 | 2500 Oxford Street | Sales |
| 4 | 2700 Munich Public Relations | |

Consulta 8:

Realice una consulta que muestre el código de la región, nombre de la región y el nombre de los países que se encuentran en “Asia”.



The screenshot shows the Oracle SQL Developer interface. The top window displays the SQL query:`SELECT r.REGION_ID, r.REGION_NAME, c.COUNTRY_NAME
FROM REGIONS r, COUNTRIES c
WHERE r.REGION_ID = c.REGION_ID
AND r.REGION_NAME = 'Asia';`The bottom window shows the results of the query:| REGION_ID | REGION_NAME | COUNTRY_NAME |
| --- | --- | --- |
| 1 | Asia | Malaysia |
| 2 | Asia | Japan |
| 3 | Asia | India |
| 4 | Asia | China |
| 5 | Asia | Australia |
| 6 | Asia | Singapore |

Consulta 9:

Elabore una consulta que liste el código de la región y nombre de la región, código de la localidad, la ciudad, código del país y nombre del país, de solamente de las localidades mayores a 2400.

```

SELECT
    r.REGION_ID, REGION_NAME, l.LOCATION_ID, c.COUNTRY_ID, COUNTRY_NAME
  FROM
    LOCATIONS l, REGIONS r, COUNTRIES c
 WHERE
    l.COUNTRY_ID = c.COUNTRY_ID
    AND c.REGION_ID = r.REGION_ID
    AND l.LOCATION_ID > 2400;
  
```

REGION_ID	REGION_NAME	LOCATION_ID	COUNTRY_ID	COUNTRY_NAME
1	Europe	3100_NL	NL	Netherlands
2	Europe	3000_CH	CH	Switzerland
3	Europe	2900_CH	CH	Switzerland
4	Europe	2700_DE	DE	Germany
5	Europe	2400_UK	UK	United Kingdom
6	Europe	2500_UK	UK	United Kingdom
7	Americas	3200_MX	MX	Mexico
8	Americas	2800_BR	BR	Brazil

Consulta 10:

. Desarrolle una consulta donde muestre el código de región con un alias de Región, el nombre de la región con una etiqueta Nombre Región, que muestre una cadena string (concatenación) que diga la siguiente frase “Código País: CA Nombre: Canadá”, CA es el código de país y Canadá es el nombre del país con etiqueta País, el código de localización con etiqueta Localización, la dirección de calle con etiqueta Dirección y el código postal con etiqueta “Código Postal”, esto a su vez no deben aparecer código postal que sean nulos:

```

SELECT
    a.REGION_ID AS "Region",
    a.REGION_NAME AS "Nombre region",
    "Codigo País : " || b.COUNTRY_ID || " Nombre : " || b.COUNTRY_NAME AS "País",
    c.LOCATION_ID AS "Localización",
    c.STREET_ADDRESS AS "Dirección",
    c.POSTAL_CODE AS "Código Postal"
  FROM
    REGIONS a, COUNTRIES b, LOCATIONS c
 WHERE
    a.REGION_ID = b.REGION_ID
    AND b.COUNTRY_ID = c.COUNTRY_ID
    AND c.POSTAL_CODE IS NOT NULL;
  
```

Region	Nombre region	País	Localización	Dirección	Código Postal
1 Europe	Europe	Netherlands	3100 Peter Breughelstraat 837	3025NK	
2 Europe	Europe	Switzerland	3000 Murtenstrasse 821	3095	
3 Europe	Europe	Switzerland	2900 28 Rue des Corps-Saintes	1730	
4 Europe	Europe	Germany	2700 Schwanthalerstr. 7031	80925	
5 Europe	Europe	United Kingdom	2400 Regent's Park Road	WN2 2RS	194200295
6 Europe	Europe	United Kingdom	2500 Regulus Centre, The Oxford Science Park	OX2 0AB	
7 Europe	Europe	Italy	11009301 Calle della Testa	10934	
8 Europe	Europe	Italy	1000 1297 Via Cola di Rie	00959	
9 Americas	Americas	Mexico	3200 Mariano Escobedo 9991	11932	
10 Americas	Americas	Brazil	2800 Rio Frei Caneca 1860	01307-002	
11 Americas	Americas	USA	1600 Amphitheatre Pkwy	95014-2027	
12 Americas	Americas	Canada	1800 147 Avenue NW	1007107	
13 Americas	Americas	United States of America	1700 2004 Charles Rd	94169	
14 Americas	Americas	United States of America	1600 2007 Zapruder St	50590	
15 Americas	Americas	United States of America	1500 2011 Intercoast Blvd	59236	
16 Americas	Americas	United States of America	1400 2014 Jaberwocky Rd	26192	
17 Asia	Asia	Singapore	2300 10 Clementi North	540190	
18 Asia	Asia	Australia	2200 12-14 Victoria Street	2901	
19 Asia	Asia	India	2100 1286 Vilasgaike (E)	49231	
20 Asia	Asia	China	2000 60-9-12 Langfangyuan	190518	

Consulta 11:

Desarrolle una consulta que muestre el salario promedio de los empleados de los departamentos 30 y 80:

```
SELECT
    AVG(SALARY)
  FROM
    EMPLOYEES
 WHERE
    DEPARTMENT_ID IN (30, 80);
```

The screenshot shows the Oracle SQL Developer interface. The main window displays the SQL query above. Below it, the 'Resultado de la Consulta' (Result of the Query) window shows the output: 5235. The bottom status bar indicates the query took 0 seconds.

Consulta 12:

Desarrolle una consulta que muestre el nombre de la región, el nombre del país, la provincia, el código de los empleados que son manager, el nombre y apellido del empleado que es manager de los países del reino Unido (UK), Estados Unidos de América (US), respectivamente de los estados de la provincia de Washington y Oxford.

```
SELECT
    REGION_NAME AS REGION_NOMBRE,
    COUNTRY_NAME AS PAIS_NOMBRE,
    STATE_PROVINCE AS PROVINCIA,
    e.MANAGER_ID AS GERENTE_ID,
    e.FIRST_NAME AS PRIMER_NOMBRE,
    e.LAST_NAME AS APELLIDO
  FROM
    EMPLOYEES e,
    DEPARTMENTS d,
    LOCATIONS l,
    COUNTRIES c,
    REGIONS r
 WHERE
    e.MANAGER_ID = d.MANAGER_ID
    AND d.LOCATION_ID = l.LOCATION_ID
    AND l.COUNTRY_ID = c.COUNTRY_ID
    AND c.REGION_ID = r.REGION_ID
    AND c.COUNTRY_ID IN ('GB', 'US')
    AND STATE_PROVINCE IN ('Washington', 'Oxford');
```

The screenshot shows the Oracle SQL Developer interface. The main window displays the complex query above. Below it, the 'Resultado de la Consulta' (Result of the Query) window shows a table with 20 rows of data. The columns are REGION_NOMBRE, PAIS_NOMBRE, PROVINCIA, GERENTE_ID, PRIMER_NOMBRE, and APELLIDO. The data includes managers from the United Kingdom (UK) and the United States (US) working in Oxford and Washington respectively.

REGION_NOMBRE	PAIS_NOMBRE	PROVINCIA	GERENTE_ID	PRIMER_NOMBRE	APELLIDO
1 Europe	United Kingdom	Oxford	145	Peter	Tucker
2 Europe	United Kingdom	Oxford	145	David	Bernstein
3 Europe	United Kingdom	Oxford	145	Albert	Wong
4 Europe	United Kingdom	Oxford	145	Christopher	Giles
5 Europe	United Kingdom	Oxford	145	Sanette	Casmirski
6 Europe	United Kingdom	Oxford	145	Oliver	Tureault
7 Americas	United States of America	Washington	111	Alexander	Khoa
8 Americas	United States of America	Washington	114	Shelli	Baida
9 Americas	United States of America	Washington	114	Erin	Tobias
10 Americas	United States of America	Washington	114	Pat	Mazza
11 Americas	United States of America	Washington	114	Susan	Coleman
12 Americas	United States of America	Washington	100	Neena	Mochtar
13 Americas	United States of America	Washington	100	Lex	De Haan
14 Americas	United States of America	Washington	100	Raphaely	
15 Americas	United States of America	Washington	100	Matthew	Weiss
16 Americas	United States of America	Washington	100	Pat	Joshi
17 Americas	United States of America	Washington	100	Payam	Kochhar
18 Americas	United States of America	Washington	100	Shanta	Vollman
19 Americas	United States of America	Washington	100	Kevin	Morgane
20 Americas	United States of America	Washington	100	John	Russell

Consulta 13:

Realice una consulta que muestre el nombre y apellido de los empleados que trabajan para departamentos que están localizados en países cuyo nombre comienza con la letra C, que muestre el nombre del país.

The screenshot shows the Oracle SQL Developer interface. The SQL worksheet contains the following query:

```
SELECT FIRST_NAME || ' ' || LAST_NAME, COUNTRY_NAME
FROM EMPLOYEES e, DEPARTMENTS d, LOCATIONS l, COUNTRIES c
WHERE e.DEPARTMENT_ID = d.DEPARTMENT_ID
AND d.LOCATION_ID = l.LOCATION_ID
AND l.COUNTRY_ID = c.COUNTRY_ID
AND COUNTRY_NAME LIKE 'CA%';
```

The results window displays the following data:

FIRST_NAME ' ' LAST_NAME	COUNTRY_NAME
Michael Hartstein	Canada
Pat Fay	Canada

Consulta 14:

Desarrolle una consulta que liste en nombre del puesto (TRABAJO_TITULO), el nombre y apellidos del empleado que ocupa ese puesto, cuyo email es 'NKOCHHAR', el 21 de septiembre de 1989.

The screenshot shows the Oracle SQL Developer interface. The SQL worksheet contains the following query:

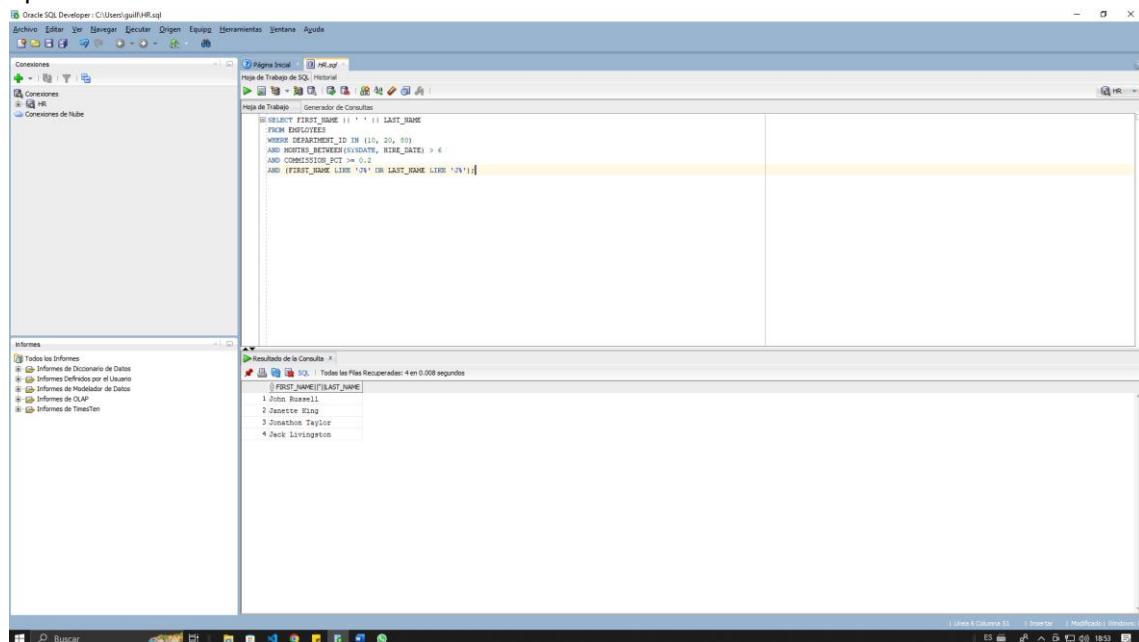
```
SELECT JOB_TITLE, FIRST_NAME || ' ' || LAST_NAME
FROM JOBS j, EMPLOYEES e
WHERE j.JOB_ID = e.JOB_ID
AND EMAIL = 'NKOCHHAR'
AND HIRE_DATE = '21/09/1989';
```

The results window displays the following data:

JOB_TITLE	FIRST_NAME ' ' LAST_NAME
SALESREP	Neena Kochhar

Consulta 15:

Escriba una sola consulta que liste los empleados de los departamentos 10,20 y 80 que fueron contratados hace mas de 180 días, que ganan una comisión no menor de 20% y cuyo nombre o apellido comienza con la letra 'J'.



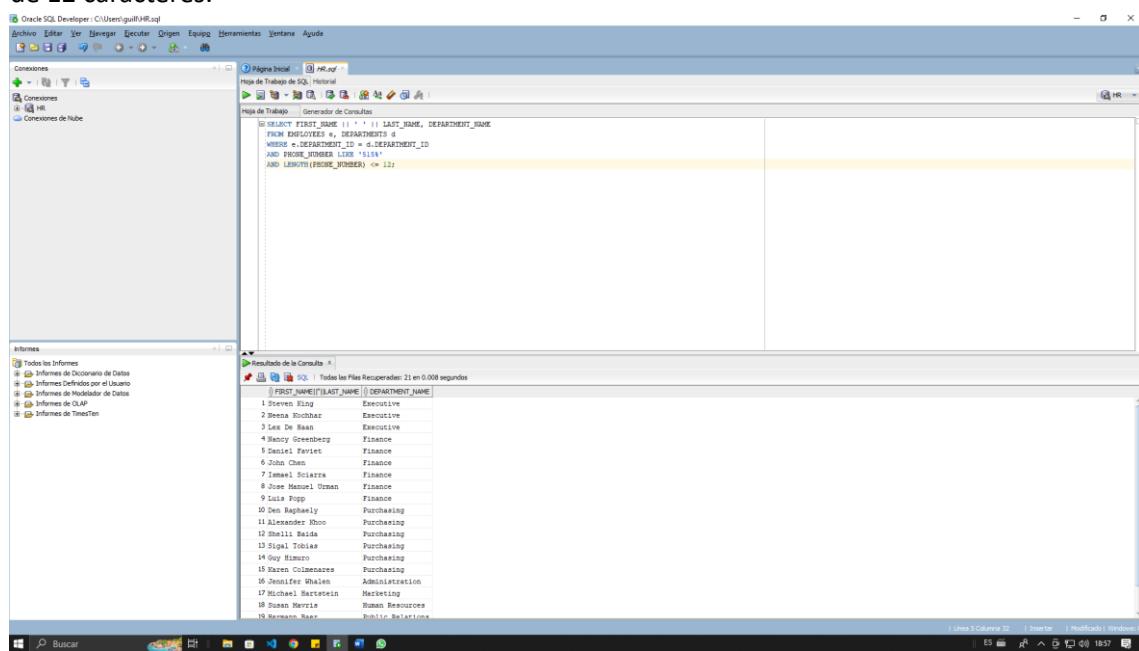
```
SELECT FIRST_NAME || ' ' || LAST_NAME
FROM EMPLOYEES
WHERE DEPARTMENT_ID IN(10, 20, 80)
AND HIRE_DATE <= (SYSDATE - 180)
AND COMMISSION_PCT >= 0.2
AND (FIRST_NAME LIKE 'J%' OR LAST_NAME LIKE 'J%');
```

Resultados de la Consulta

FIRST_NAME LAST_NAME
1 John Russell
2 Janette King
3 Jonathan Taylor
4 Jack Livingston

Consulta 16:

Realice una consulta de muestre el nombre, el apellido y nombre de departamento de los empleados cuyo número telefónico tiene código de área 515 (numero de 12 dígitos: 3 del área, 7 del número y dos puntos), excluya los números telefónicos que tienen una longitud diferente de 12 caracteres.



```
SELECT FIRST_NAME || ' ' || LAST_NAME, DEPARTMENT_NAME
FROM EMPLOYEES e, DEPARTMENTS d
WHERE e.DEPARTMENT_ID = d.DEPARTMENT_ID
AND PHONE_NUMBER LIKE '515%'
AND LENGTH(PHONE_NUMBER) = 12;
```

Resultados de la Consulta

FIRST_NAME LAST_NAME	DEPARTMENT_NAME
1 Steven King	Executive
2 Steele Enochbar	Executive
3 Lex De Haan	Executive
4 Alexander Berg	Finance
5 Daniel Farret	Finance
6 John Chai	Finance
7 Tamsel Sciarrra	Finance
8 Jose Manuel Uzman	Finance
9 Luisa Popp	Finance
10 Ralph Willis	Purchasing
11 Alexander Khoo	Purchasing
12 Shelli Baird	Purchasing
13 Sigal Tobias	Purchasing
14 Guy Rimmer	Purchasing
15 Karen Colmatedes	Purchasing
16 Alessandro Tiehan	Administracion
17 Michael Battstein	Marketing
18 Susan Morris	Human Resources
19 Hermann Baar	Public Relations

Consulta 17:

Desarrolle una consulta que muestre el código, el nombre y apellido separado por coma con título de encabezado Nombre Completo, el salario con título Salario, el código de departamento con título Código de Departamento y el nombre de departamento al que pertenece con título Descripción, únicamente se desean consultas los que pertenezcan al departamento de IT y ordenar la información por salario descendente.

The screenshot shows the Oracle SQL Developer interface. The top window displays the following SQL query:

```
SELECT e.EMPLOYEE_ID, FIRST_NAME || ' ' || LAST_NAME AS "Full Name", SALARY AS Salary,
d.DEPARTMENT_ID AS "Department Code", DEPARTMENT_NAME AS Description
FROM EMPLOYEES e, DEPARTMENTS d
WHERE e.DEPARTMENT_ID = d.DEPARTMENT_ID
AND DEPARTMENT_NAME = 'IT'
ORDER BY SALARY DESC;
```

The bottom window shows the results of the query:

Employee ID	Full Name	Salary	Department Code	Description
103	Alexander,Brunold	9000	60 IT	
104	Bruce,Ernst	6000	60 IT	
105	David,Austin	4800	60 IT	
106	Vallie,Pebbles	4800	60 IT	
107	Diana,Lorentz	4200	60 IT	

Consulta 18:

Realice una consulta que liste el nombre y apellido, salario del empleado, el nombre del departamento al que pertenece, la dirección, el código postal y la ciudad donde está ubicado el departamento, se debe mostrar únicamente aquellos que sean del departamento 100,80 y 50 respectivamente, además deben pertenecer únicamente a la ciudad del sur de san francisco y el rango de salario debe ser entre 4000 y 8000 incluyendo los valores límites.

The screenshot shows the Oracle SQL Developer interface. The top window displays the following SQL query:

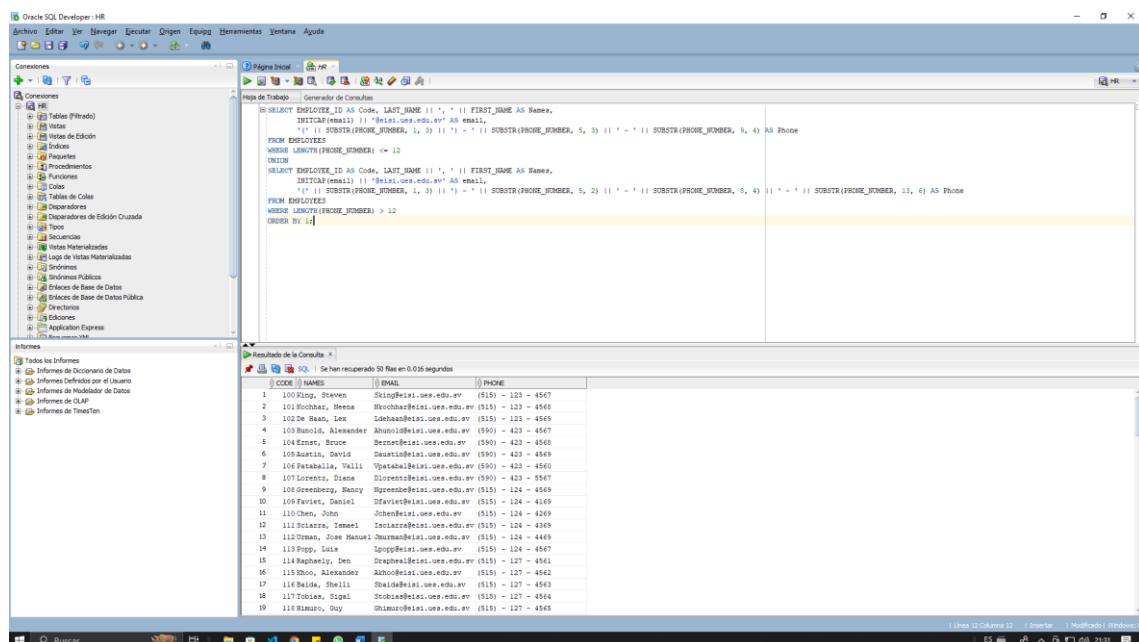
```
SELECT FIRST_NAME, LAST_NAME, SALARY, DEPARTMENT_NAME, STREET_ADDRESS, POSTAL_CODE, CITY
FROM EMPLOYEES e, LOCATIONS l
WHERE e.DEPARTMENT_ID = l.DEPARTMENT_ID
AND l.CITY IN ('South San Francisco', 'Redwood City', 'Burlingame')
AND l.ZIPCODE IN (100, 80, 50)
AND CITY = 'South San Francisco'
AND SALARY BETWEEN 4000 AND 8000;
```

The bottom window shows the results of the query:

First Name	Last Name	Salary	Department Name	Street Address	Postal Code	City
Matthew	Weiss	6000	Shipping	2011 Interiore Blvd 99236	99236	South San Francisco
Payam	Kaufling	7900	Shipping	2011 Interiore Blvd 99236	99236	South San Francisco
Shanta	Vulimbi	6500	Shipping	2011 Interiore Blvd 99236	99236	South San Francisco
Kevin	Mousavi	5800	Shipping	2011 Interiore Blvd 99236	99236	South San Francisco
Randita	Sarchand	4200	Shipping	2011 Interiore Blvd 99236	99236	South San Francisco
Alexis	Hull	4100	Shipping	2011 Interiore Blvd 99236	99236	South San Francisco
Sarah	Bell	4000	Shipping	2011 Interiore Blvd 99236	99236	South San Francisco

Consulta 19:

Desarrolle una consulta donde seleccione el código del empleado cuyo alias será código, el apellido concatenado con el nombre de empleado pero separados por coma(,) cuyo alias será Nombres, el email donde su inicial este en mayúscula y todos posean el dominio de @eisi.ues.edu.sv, es decir debe ir concatenado con ese dominio cuyo alias es email, además que aparezca si el número telefónico está almacenado en el campo de esta manera 515.123.4567 deberá convertirlo al formato siguiente formato (515)-123-4567, si posee un número telefónico con esta longitud 011.44.1344.429268, es decir una longitud mayor al formato anterior, deberá aparecer en el formato siguiente (011-44-1344-429268- Funciones que puede hacer uso para este ejercicio LENGTH, SUBSTR. Dicha información deberá ir ordenada por código de empleado.



The screenshot shows the Oracle SQL Developer interface with the HR schema selected. The code editor contains the following SQL query:

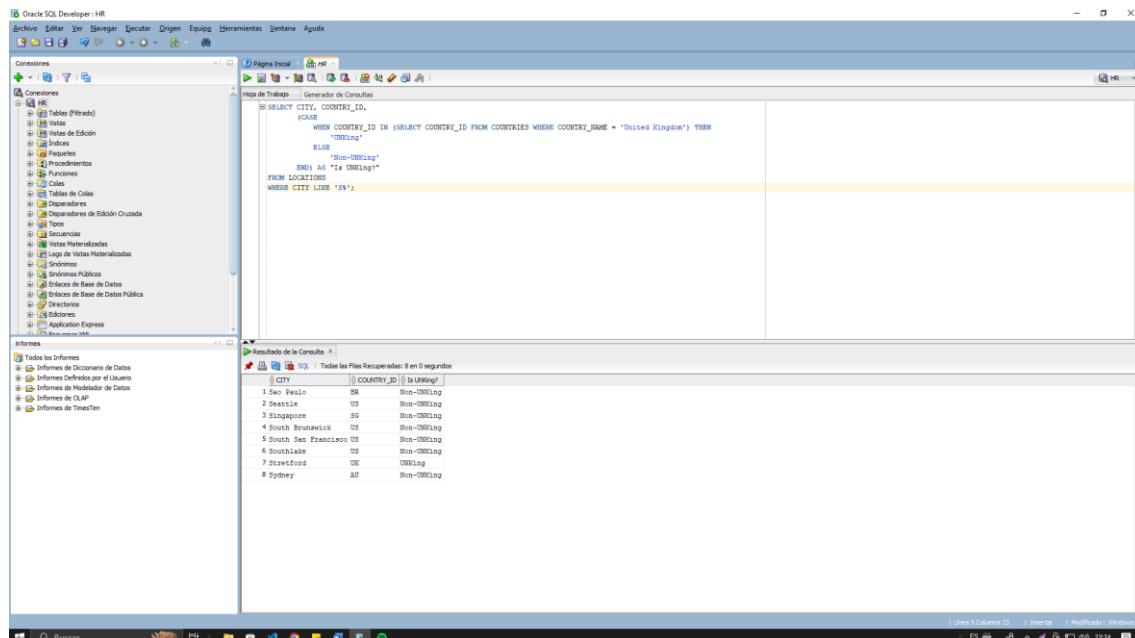
```
SELECT EMPLOYEE_ID AS Code, LAST_NAME || ', ' || FIRST_NAME AS Names,
INITCAP(email) || '@eisi.ues.edu.sv' AS email,
('+' || SUBSTR(phone_number, 1, 3) || '-' * || SUBSTR(phone_number, 5, 3) || '-' * || SUBSTR(phone_number, 9, 4)) AS Phone
FROM EMPLOYEES
WHERE LENGTH(phone_number) <= 12
ORDER BY 1;
SELECT EMPLOYEE_ID AS Code, LAST_NAME || ', ' || FIRST_NAME AS Names,
INITCAP(email) || '@eisi.ues.edu.sv' AS email,
('+' || SUBSTR(phone_number, 1, 3) || '-' * || SUBSTR(phone_number, 5, 2) || '-' * || SUBSTR(phone_number, 8, 4) || '-' * || SUBSTR(phone_number, 12, 6)) AS Phone
FROM EMPLOYEES
WHERE LENGTH(phone_number) > 12
ORDER BY 1;
```

The results window displays the output of the query, showing columns for Code, Names, Email, and Phone. The data includes various employees from the HR schema, such as Steven King, Neena Kochhar, Lex Dehaan, Alexander Hunold, Bruce Bernstei, David Austin, Valli Pataballa, Diane Lorentz, Nancy Greenberg, Daniel Faviet, John Chen, Janneke Peeters, Inneke Sciarra, Manuel Schez, Jose Tornos, and others. The phone numbers are correctly formatted according to the specified rules.

CODE	NAME	EMAIL	PHONE
1	100 King, Steven	SKing@eisi.ues.edu.sv	(515) - 123 - 4567
2	101 Kochhar, Neena	NKochhar@eisi.ues.edu.sv	(515) - 123 - 4568
3	102 De Haan, Lex	LDehaan@eisi.ues.edu.sv	(515) - 123 - 4569
4	103 Hunold, Alexander	AHunold@eisi.ues.edu.sv	(590) - 423 - 4567
5	104 Ernst, Bruce	Bernstei@eisi.ues.edu.sv	(590) - 423 - 4568
6	105 Austin, David	DAustin@eisi.ues.edu.sv	(590) - 423 - 4569
7	106 Pataballa, Valli	VPataballa@eisi.ues.edu.sv	(590) - 423 - 4570
8	107 Lorentz, Diane	DLorentz@eisi.ues.edu.sv	(590) - 423 - 5567
9	108 Greenberg, Nancy	NGreenberg@eisi.ues.edu.sv	(515) - 124 - 4567
10	109 Faviet, Daniel	DFaviet@eisi.ues.edu.sv	(515) - 124 - 4169
11	110 Chen, John	JChen@eisi.ues.edu.sv	(515) - 124 - 4269
12	111 Sciarra, Janneke	TSciarra@eisi.ues.edu.sv	(515) - 124 - 4469
13	112 Peeters, Inneke	IPeeters@eisi.ues.edu.sv	(515) - 124 - 4469
14	113 Tornos, Jose	LTornos@eisi.ues.edu.sv	(515) - 124 - 4567
15	114 Raphaely, Den	DRaphaely@eisi.ues.edu.sv	(515) - 127 - 4561
16	115 Zhou, Alexander	AZhou@eisi.ues.edu.sv	(515) - 127 - 4562
17	116 Baida, Shelli	SBaida@eisi.ues.edu.sv	(515) - 127 - 4563
18	117 Tobias, Sigal	STobias@eisi.ues.edu.sv	(515) - 127 - 4564
19	118 HIMMEL, Guy	GHimmel@eisi.ues.edu.sv	(515) - 127 - 4565

Consulta 20:

Desarrolle una consulta que permita seleccionar las ciudades, su código de país, y si es de Reino Unido (United Kingdom) lo cambia por (UNKing) caso contrario si no es de Reino Unido (Non- UNKing) y cuya ciudades deben iniciar con la letra S.



The screenshot shows the Oracle SQL Developer interface with the HR database selected. The top navigation bar includes Archivo, Editor, Ver, Navegar, Ejecutar, Origen, Equipo, Herramientas, Ventana, and Ayuda. The left sidebar displays the Conexiones tree, which includes the HR connection and various schema objects like Tables, Views, Procedures, Functions, and Triggers. The main workspace contains a SQL editor window titled "Página Inicial - Generador de Consultas" with the following SQL query:

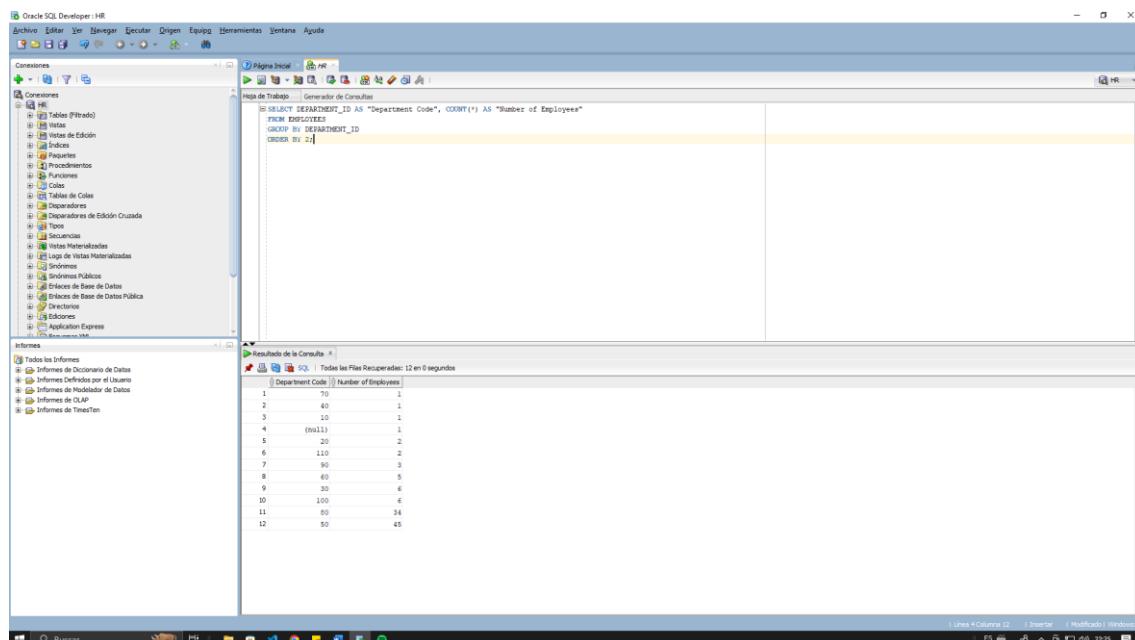
```
SELECT CITY, COUNTRY_ID,
       CASE
           WHEN COUNTRY_ID IN (SELECT COUNTRY_ID FROM COUNTRIES WHERE COUNTRY_NAME = 'United Kingdom') THEN
               'UNKing'
           ELSE
               'Non-UNKing'
       END AS "Is UNKing"
  FROM LOCATIONS
 WHERE CITY LIKE 'SA%';
```

Below the SQL editor is a "Resultado de la Consulta" (Result of the Query) window showing the output:

CITY	COUNTRY_ID	Is UNKing
Sao Paulo	BR	Non-UNKing
Seattle	US	Non-UNKing
Singapore	SG	Non-UNKing
South San Francisco	US	Non-UNKing
South San Francis	US	Non-UNKing
Southlake	US	Non-UNKing
Stretford	GB	UNKing
Sydney	AU	Non-UNKing

Consulta 21:

. Desarrolle una consulta que muestre el código del departamento con título Código del departamento, que cuente los empleados agrupados por departamentos, ordenados por código de departamento;



The screenshot shows the Oracle SQL Developer interface with the HR database selected. The top navigation bar includes Archivo, Editor, Ver, Navegar, Ejecutar, Origen, Equipo, Herramientas, Ventana, and Ayuda. The left sidebar displays the Conexiones tree, which includes the HR connection and various schema objects like Tables, Views, Procedures, Functions, and Triggers. The main workspace contains a SQL editor window titled "Página Inicial - Generador de Consultas" with the following SQL query:

```
IS SELECT DEPARTMENT_ID AS "Department Code", COUNT(*) AS "Number of Employees"
  FROM EMPLOYEES
 GROUP BY DEPARTMENT_ID
 ORDER BY 2;
```

Below the SQL editor is a "Resultado de la Consulta" (Result of the Query) window showing the output:

Department Code	Number of Employees
1	70
2	45
3	10
4	(null)
5	20
6	110
7	90
8	60
9	30
10	100
11	80
12	50

Consulta 22:

Realicé una consulta que muestre solo los nombres de los empleados que se repiten:

The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the connection to the HR database and various schema objects like tables, views, and procedures. The main area contains a SQL editor window with the following query:

```
SELECT FIRST_NAME
FROM EMPLOYEES
GROUP BY FIRST_NAME
HAVING COUNT(*) > 1;
```

Below the editor is a results window titled "Resultado de la Consulta" showing the first names of employees who have repeating first names:

FIRST_NAME
Peter
Michael
Steven
John
Julia
William
Karen
Kevin
David
Dennifer
Randal
Alexander
James

Consulta 23:

Desarrolle una consulta que muestre solo los nombres de los empleados que no se repiten.

The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the connection to the HR database and various schema objects like tables, views, and procedures. The main area contains a SQL editor window with the following query:

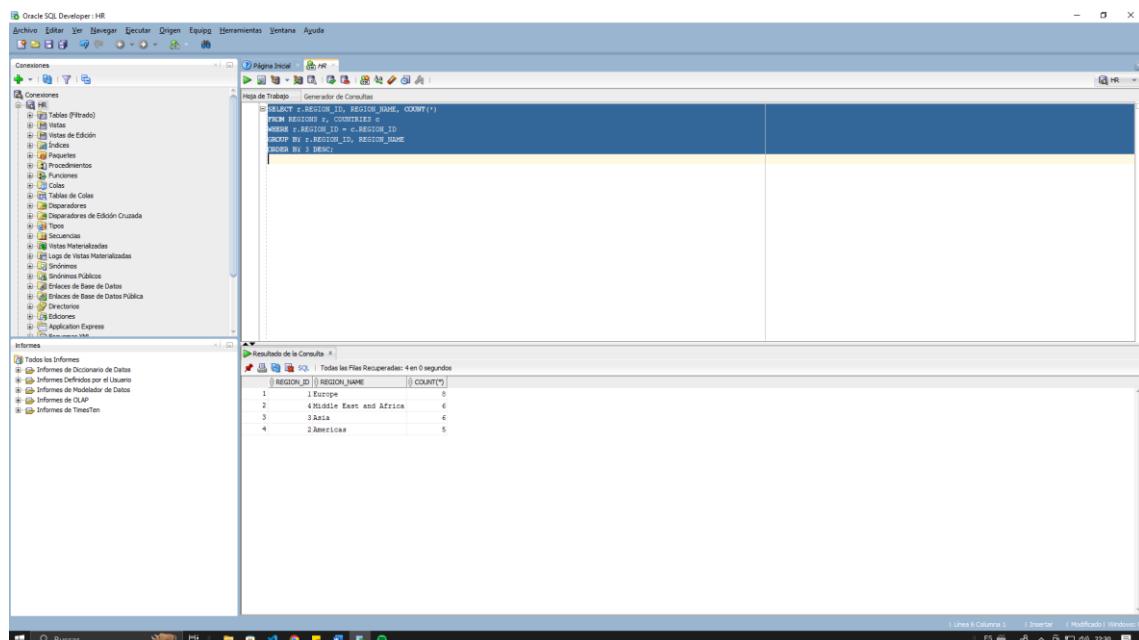
```
SELECT FIRST_NAME
FROM EMPLOYEES
GROUP BY FIRST_NAME
HAVING COUNT(*) = 1;
```

Below the editor is a results window titled "Resultado de la Consulta" showing the first names of employees who have unique first names:

FIRST_NAME
Ellen
Noche
Hermann
Alberto
Britney
Don
Timothy
Eli
Nancy
Shelley
Isabel
Christopher
Lindsey
Sigal
Jose Manuel
Shanta
Louise
Girard
Mary

Consulta 24:

Realice una consulta que muestre el número de países por región, la consulta debe mostrar el código y nombre de la región así como el número de países de cada región, ordenando el resultado por la región que tenga mayor número de países.



The screenshot shows the Oracle SQL Developer interface with the HR database selected. The 'Página Principal' tab is active, displaying a query in the central pane:

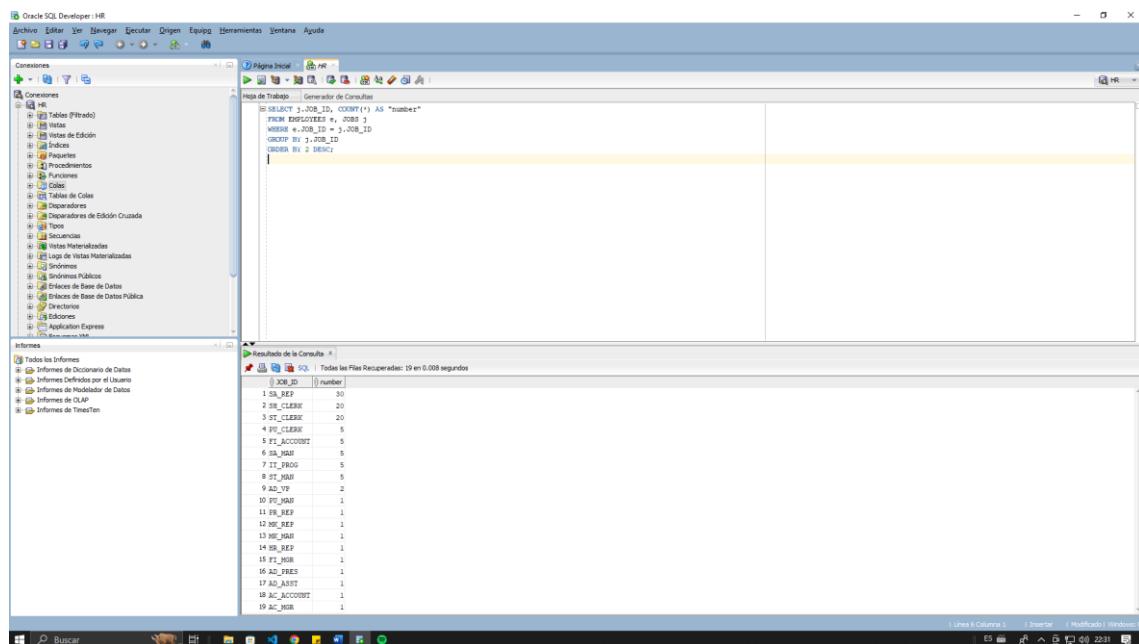
```
SELECT r.REGION_ID, REGION_NAME, COUNT(*)
FROM COUNTRIES c
JOIN REGIONS r ON c.REGION_ID = r.REGION_ID
GROUP BY r.REGION_ID, REGION_NAME
ORDER BY 3 DESC;
```

The results are shown in the 'Resultado de la Consulta' tab:

REGION_ID	REGION_NAME	COUNT(*)
1	Europe	8
2	Middle East and Africa	6
3	Asia	6
4	Americas	5

Consulta 25:

Desarrolle una consulta que liste los códigos de puestos con el número de empleados que pertenecen a cada puesto, ordenados por número de empleados: los puestos que tienen más empleados aparecen primero.



The screenshot shows the Oracle SQL Developer interface with the HR database selected. The 'Página Principal' tab is active, displaying a query in the central pane:

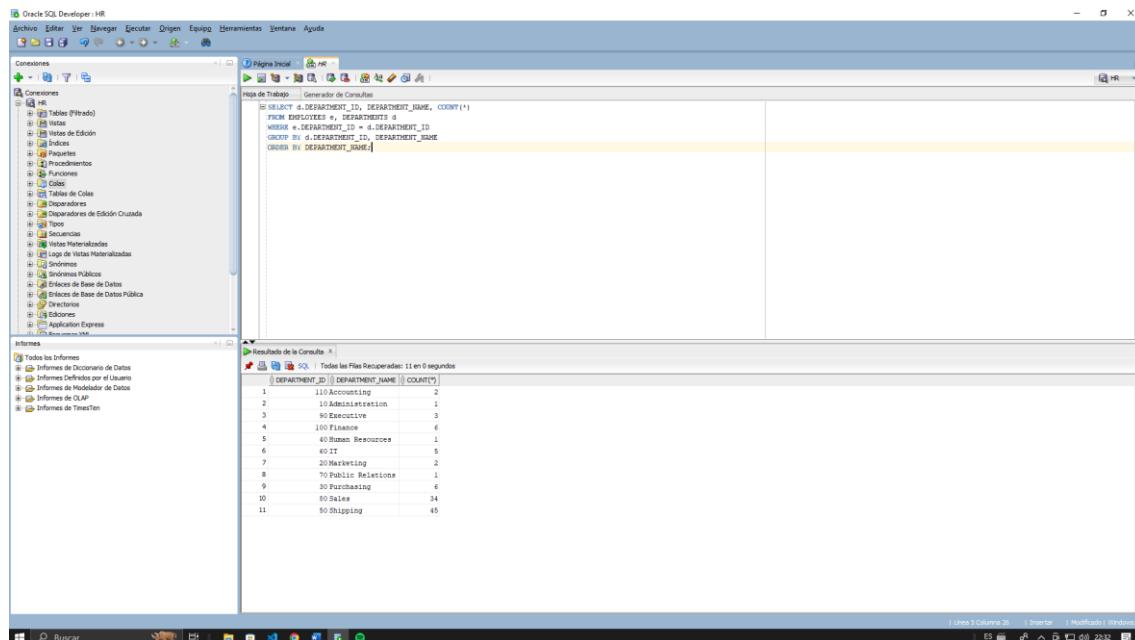
```
SELECT j.JOB_ID, COUNT(*) AS "number"
FROM EMPLOYEES e, JOBS j
WHERE e.JOB_ID = j.JOB_ID
GROUP BY j.JOB_ID
ORDER BY 2 DESC;
```

The results are shown in the 'Resultado de la Consulta' tab:

JOB_ID	number
1 SA_REP	30
2 EX_MGR	20
3 ST_CLERK	20
4 PR_CLERK	5
5 PL_ACCOUNTANT	5
6 SA_MAN	5
7 IT_PROG	5
8 IT_MAN	5
9 CLERK	2
10 PU_MAN	1
11 PR_REP	1
12 MH_REP	1
13 MH_MAN	1
14 SH_PRES	1
15 SH共享	1
16 AD_PRES	1
17 AD_ASST	1
18 AC_ACCOUNT	1
19 AC_MGR	1

Consulta 26:

Desarrolle una consulta que muestre el número de empleados por departamento, ordenados alfabéticamente por nombre de departamento.



The screenshot shows the Oracle SQL Developer interface with the HR database selected. The left sidebar displays various schema objects like tables, views, and procedures. The main area contains a SQL query and its results. The SQL query is:

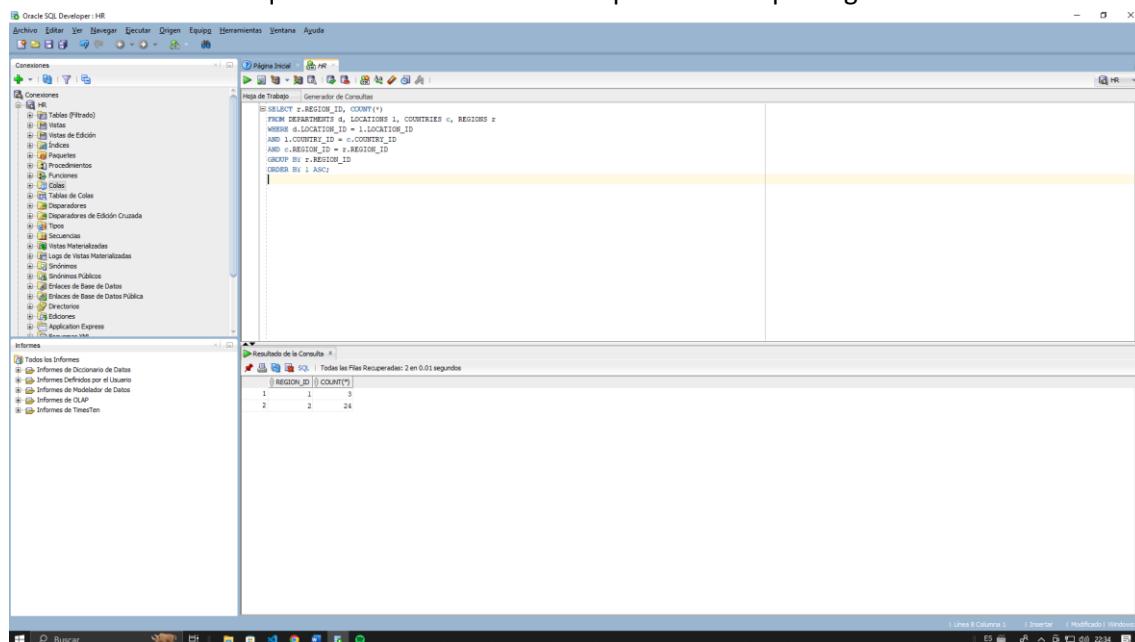
```
SELECT d.DEPARTMENT_ID, DEPARTMENT_NAME, COUNT(*) FROM EMPLOYEES e, DEPARTMENTS d WHERE e.DEPARTMENT_ID = d.DEPARTMENT_ID GROUP BY d.DEPARTMENT_ID, DEPARTMENT_NAME ORDER BY DEPARTMENT_NAME;
```

The results table shows the department ID, name, and count of employees:

DEPARTMENT_ID	DEPARTMENT_NAME	COUNT()
1	110 Accounting	2
2	10 Administration	1
3	90 Executive	3
4	100 Finance	6
5	40 Human Resources	1
6	40 IT	5
7	20 Marketing	2
8	70 Public Relations	1
9	30 Purchasing	6
10	80 Sales	34
11	50 Shipping	45

Consulta 27:

Realice una consulta que muestre el número de departamentos por región.



The screenshot shows the Oracle SQL Developer interface with the HR database selected. The left sidebar displays various schema objects. The main area contains a SQL query and its results. The SQL query is:

```
SELECT r.REGION_ID, COUNT(*) FROM REGIONS r, COUNTRIES c, LOCATIONS l, DEPARTMENTS d WHERE r.REGION_ID = c.COUNTRY_ID AND c.COUNTRY_ID = l.LOCATION_ID AND l.LOCATION_ID = d.DEPARTMENT_ID GROUP BY r.REGION_ID ORDER BY r.REGION_ID;
```

The results table shows the region ID and count of departments:

REGION_ID	COUNT(*)
1	3
2	24

Consulta 28:

Realice una consulta que muestre el salario que paga cada departamento (sin incluir comisión), ordenado descendente por salario pagado. Se mostrara el código y nombre del departamento y el salario que paga.

The screenshot shows the Oracle SQL Developer interface. The 'Herramientas' (Tools) menu is open, and the 'Generador de Consultas' (Query Builder) option is selected. In the central workspace, a query is being built:

```
SELECT a.DEPARTMENT_ID, DEPARTMENT_NAME, SUM(SALARY)
FROM EMPLOYEES e, DEPARTMENTS d
WHERE e.DEPARTMENT_ID = d.DEPARTMENT_ID
GROUP BY d.DEPARTMENT_ID, d.DEPARTMENT_NAME
ORDER BY 3 DESC;
```

The results of the query are displayed in the 'Resultado de la Consulta' (Query Result) window:

DEPARTMENT_ID	DEPARTMENT_NAME	SUM(SALARY)
2	50 Shipping	154400
3	50 Executive	59000
4	100 Finance	52398
5	60 IT	28800
6	30 Purchasing	24900
7	11 Accounting	20300
8	20 Marketing	19800
9	70 Public Relations	10000
10	40 Human Resources	6500
11	10 Administration	4400

Consulta 29:

Desarrolle una consulta que muestre el año de contratación, el salario menor, mayor y promedio de todos los empleados por año de contratación. Ordene el resultado por año de contratación: Los más recientes primero.

The screenshot shows the Oracle SQL Developer interface. The 'Herramientas' (Tools) menu is open, and the 'Generador de Consultas' (Query Builder) option is selected. In the central workspace, a query is being built:

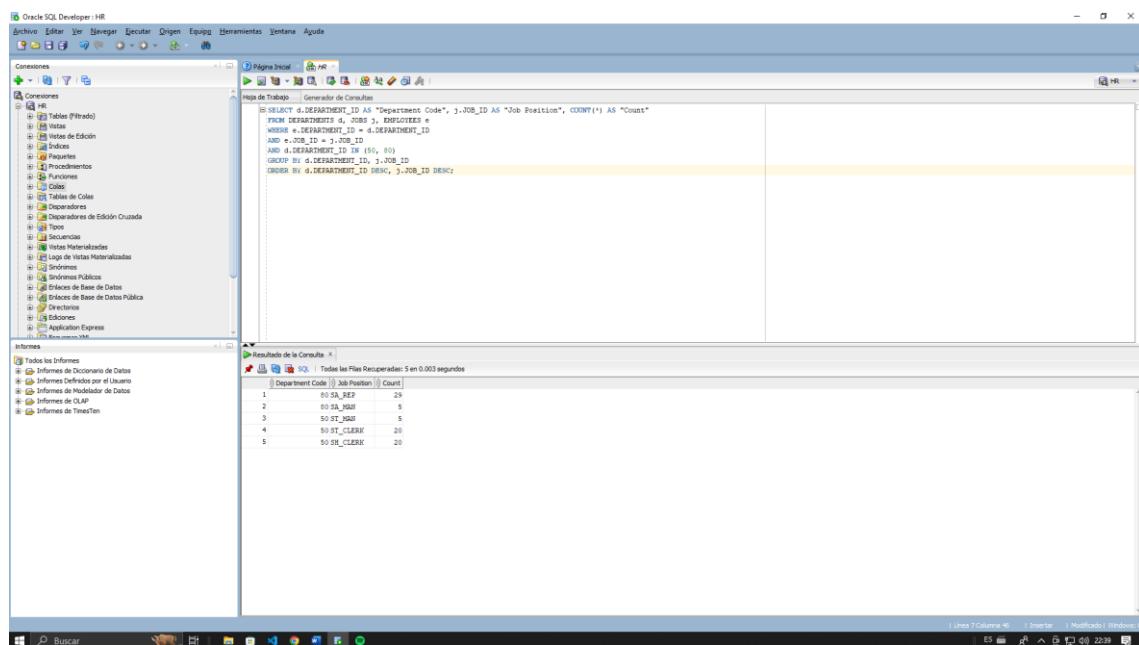
```
SELECT EXTRACT(YEAR FROM HIRE_DATE) AS "Year",
       MIN(SALARY) AS "Minimum Salary",
       MAX(SALARY) AS "Maximum Salary",
       AVG(SALARY) AS "Average Salary"
FROM EMPLOYEES
GROUP BY EXTRACT(YEAR FROM HIRE_DATE)
ORDER BY 1 DESC;
```

The results of the query are displayed in the 'Resultado de la Consulta' (Query Result) window:

Year	Minimum Salary	Maximum Salary	Average Salary
1	2008	2200	10500
2	2007	2100	11000
3	2006	2500	10000
4	2005	2500	17000
5	2004	3100	14000
6	2003	3100	14000
7	2002	4500	12300
8	2001	17000	17000

Consulta 30:

Desarrolle una consulta que muestre el código del departamento con título “Código del Departamento”, El código del trabajo con título “Puesto de trabajo” y que cuente los empleados de los departamentos 50 y 80, ordenado el resultado por departamento y puesto de trabajo.



The screenshot shows the Oracle SQL Developer interface. The top window displays the following SQL query:

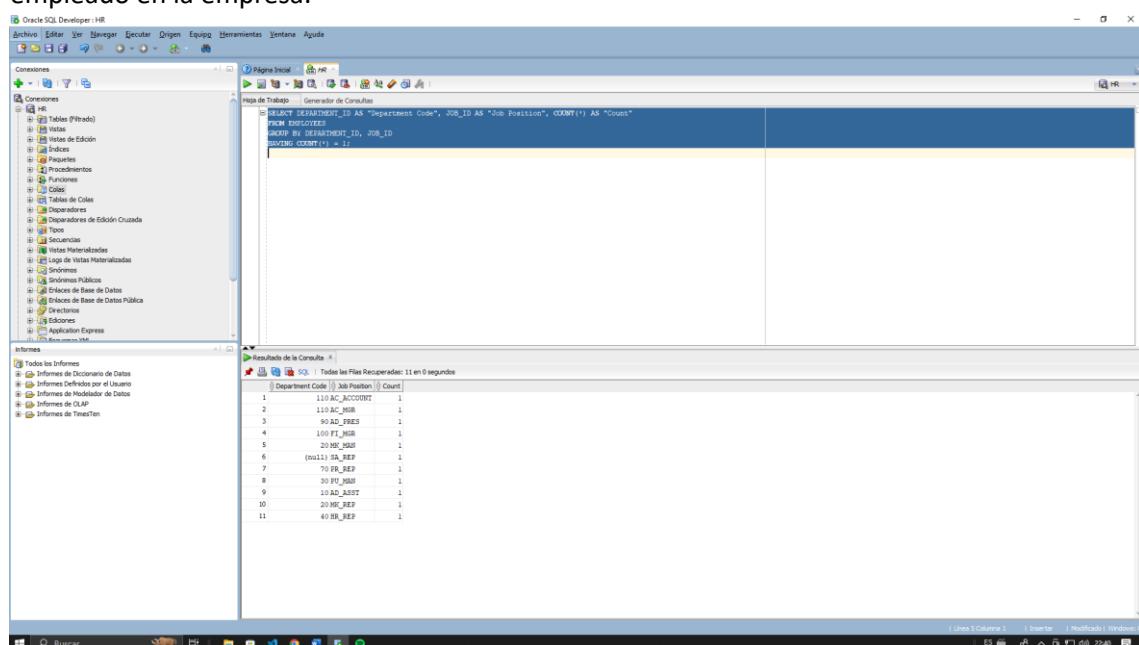
```
SELECT d.DEPARTMENT_CODE AS "Department Code", j.JOB_ID AS "Job Position", COUNT(*) AS "Count"
FROM DEPARTMENTS d, JOBS j, EMPLOYEES e
WHERE e.DEPARTMENT_ID = d.DEPARTMENT_ID
AND j.JOB_ID = e.JOB_ID
AND d.DEPARTMENT_ID IN (50, 80)
GROUP BY d.DEPARTMENT_ID, j.JOB_ID
ORDER BY d.DEPARTMENT_ID DESC, j.JOB_ID DESC;
```

The bottom window shows the results of the query:

Department Code	Job Position	Count
80	SA REP	29
80	SA_MGR	5
3	SA_CLERK	5
4	ST_CLERK	20
5	ST_CLERK	20

Consulta 31:

. Desarrolle una consulta que liste el código del departamento con título “Código del departamento”, el código de trabajo con título “Puesto de Trabajo” y que cuente los empleados por departamentos y puesto de trabajo, en donde el puesto de trabajo tenga solamente un empleado en la empresa.



The screenshot shows the Oracle SQL Developer interface. The top window displays the following SQL query:

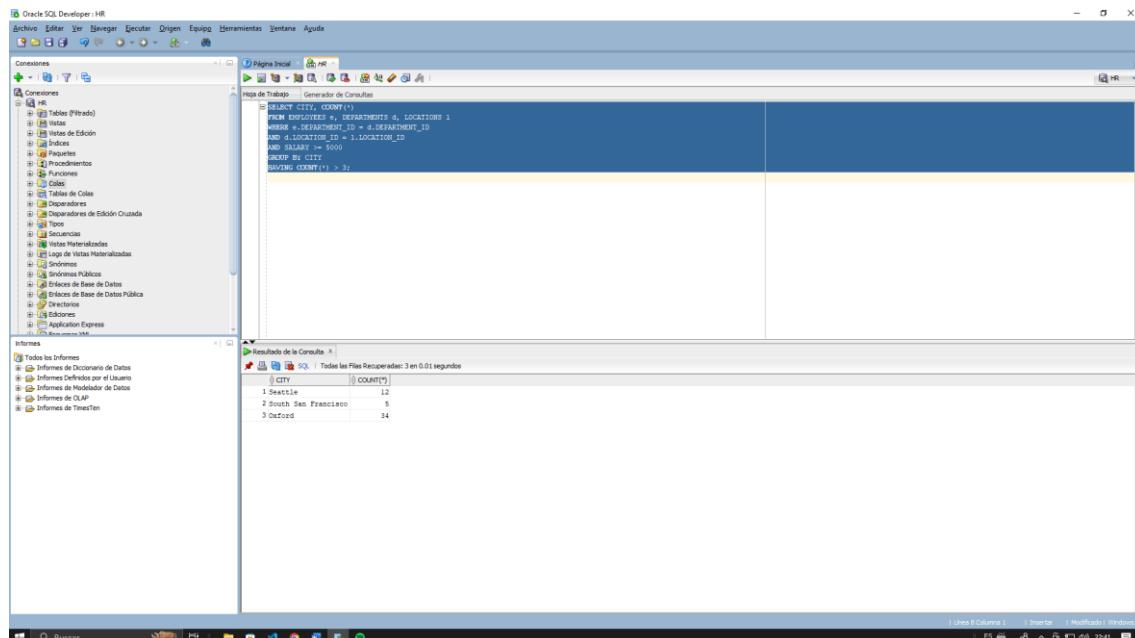
```
SELECT DEPARTMENT_ID AS "Department Code", JOB_ID AS "Job Position", COUNT(*) AS "Count"
FROM EMPLOYEES
GROUP BY DEPARTMENT_ID, JOB_ID
HAVING COUNT(*) = 1;
```

The bottom window shows the results of the query:

Department Code	Job Position	Count
110	AC_ACCOUNT	1
110	AC_MGR	1
90	AD_PRES	1
4	FI_ACCOUNT	1
5	MK_MGR	1
6	(null) SA REP	1
7	PR REP	1
8	PU_MGR	1
9	AD_ASST	1
10	MKTG REP	1
11	HR REP	1

Consulta 32:

Realice una consulta que liste el número de empleados por ciudad, que ganan como mínimo 5000 en concepto de salario. Omita las ciudades que tengan menos de 3 empleados con ese salario.



The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the database schema for the HR database, including tables like EMPLOYEES, DEPARTMENTS, and LOCATIONS. The main workspace contains a SQL editor window with the following query:

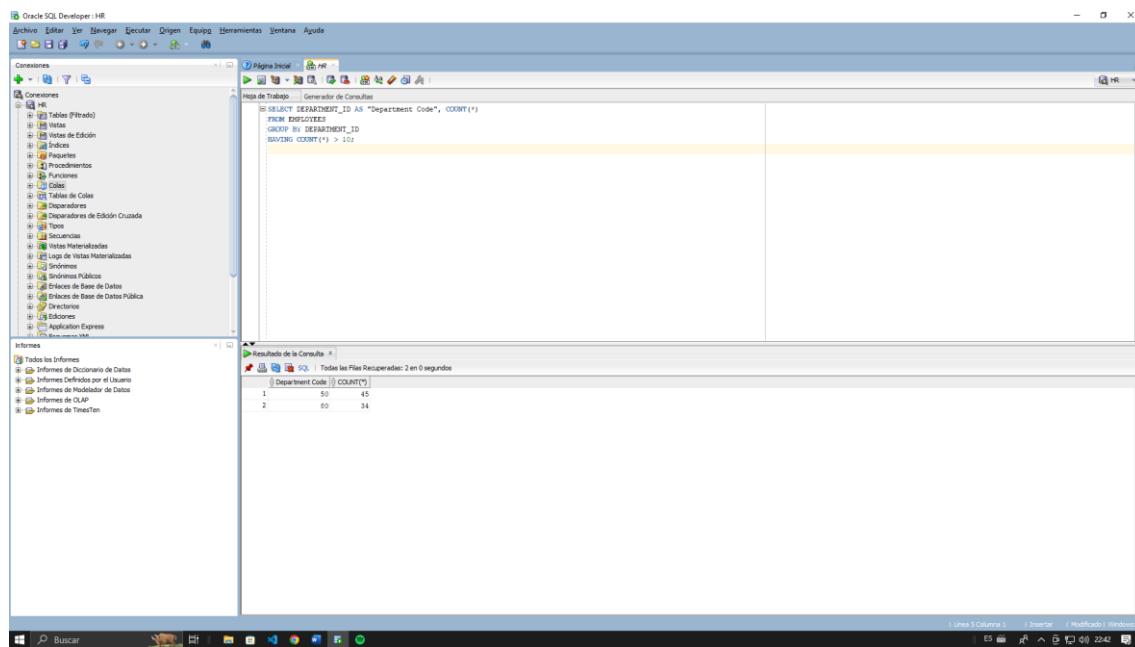
```
SELECT CITY, COUNT(*)
FROM (
    SELECT DEPARTMENT_ID, COUNT(*) AS CNT
    FROM EMPLOYEES
    WHERE SALARY >= 5000
    GROUP BY DEPARTMENT_ID
)
WHERE CNT > 2
GROUP BY CITY
HAVING COUNT(*) > 3;
```

Below the SQL editor is a results window titled "Resultado de la Consulta" showing the output:

CITY	COUNT(*)
Seattle	12
South San Francisco	5
Oxford	34

Consulta 33:

Elabore una consulta que muestre el código del departamento con título “Código del departamento”, que cuente los empleados por departamento de aquellos departamentos que tengan más de 10 empleados.



The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the database schema for the HR database. The main workspace contains a SQL editor window with the following query:

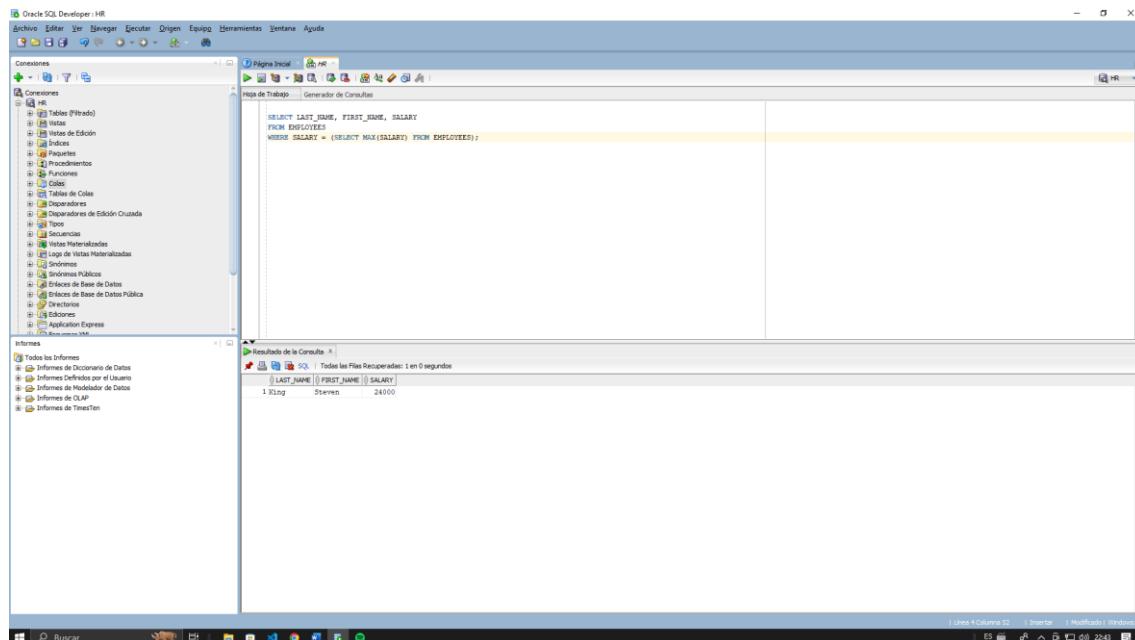
```
IS SELECT DEPARTMENT_ID AS "Department Code", COUNT(*)
FROM EMPLOYEES
GROUP BY DEPARTMENT_ID
HAVING COUNT(*) > 10;
```

Below the SQL editor is a results window titled "Resultado de la Consulta" showing the output:

Department Code	COUNT(*)
1	45
2	80
3	34

Consulta 34:

Desarrolle una consulta que liste el apellido, el nombre y salario del empleado con el salario mayor de los todos los departamentos.



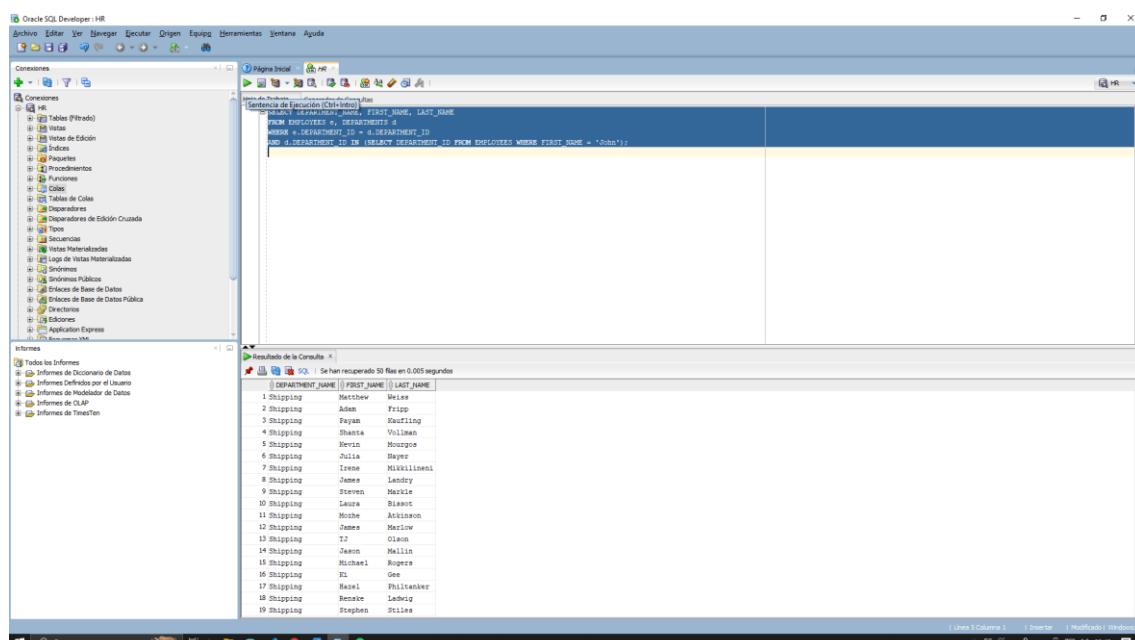
```
SELECT LAST_NAME, FIRST_NAME, SALARY
FROM EMPLOYEES
WHERE SALARY = (SELECT MAX(SALARY) FROM EMPLOYEES);
```

The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the HR schema with various objects like tables, views, and procedures. The main workspace contains the SQL query for Consulta 34. Below it, the 'Resultado de la Consulta' (Query Result) window shows a single row of data:

LAST_NAME	FIRST_NAME	SALARY
King	Steven	24000

Consulta 35:

Desarrolle una consulta que muestre código de departamento, el nombre y apellido de los empleados de únicamente de los departamentos en donde existen empleados con nombre 'Jonh'.



```
SELECT DEPARTMENT_ID, FIRST_NAME, LAST_NAME
FROM EMPLOYEES
WHERE DEPARTMENT_ID IN (SELECT DEPARTMENT_ID FROM EMPLOYEES WHERE FIRST_NAME = 'John');
```

The screenshot shows the Oracle SQL Developer interface. The left sidebar displays the HR schema. The main workspace contains the SQL query for Consulta 35. Below it, the 'Resultado de la Consulta' (Query Result) window shows multiple rows of data, listing employees from the department where 'John' is present:

DEPARTMENT_ID	FIRST_NAME	LAST_NAME
1	Steven	King
2	Matthew	Weiss
2	Adam	Ripp
3	Pavay	Kaufling
4	Patricia	Vulcan
5	Reva	Murphy
6	Julia	Nayer
7	Irene	Mikkilineni
8	James	Landy
9	Steven	Martie
10	Laura	Bianchi
11	Pat	Aubineau
12	Denes	Marlow
13	TJ	Olsen
14	Jesse	Mellon
15	Michael	Rogers
16	Eli	Gee
17	Paul	Peltier
18	Renata	Lancug
19	Stephen	Stiles

Consulta 36:

Desarrolle una consulta que liste el código de departamento, nombre, apellido y salario de únicamente de los empleados con máximo salario en cada departamento.

The screenshot shows the Oracle SQL Developer interface with the HR database selected. The 'Generador de Consultas' (Query Builder) window is open, displaying the following SQL query:

```
SELECT DEPARTMENT_ID, FIRST_NAME, LAST_NAME, SALARY
FROM EMPLOYEES e1
WHERE SALARY = (SELECT MAX(SALARY) FROM EMPLOYEES e2 WHERE e1.DEPARTMENT_ID = e2.DEPARTMENT_ID);
```

The results of the query are shown in the 'Resultado de la Consulta' (Query Results) window, listing 11 employees from various departments with their names and salaries:

DEPARTMENT_ID	FIRST_NAME	LAST_NAME	SALARY
1	100 Nancy	Greenberg	12000
2	30 Dep	Raphaely	11000
3	90 Stevens	King	24000
4	20 Michael	Hartstein	13000
5	70 Bermann	Ber	10000
6	110能力强	Colleen	12000
7	50 Adela	Frisip	1200
8	80 John	Russell	14000
9	40 Susan	Mavris	6500
10	60 Alexander	Hunold	9000
11	10 Jennifer	Whalen	4400

Consulta 37:

Elabore una consulta que muestre el código del departamento, el nombre de departamento y el salario máximo de cada departamento.

The screenshot shows the Oracle SQL Developer interface with the HR database selected. The 'Generador de Consultas' (Query Builder) window is open, displaying the following SQL query:

```
SELECT d.DEPARTMENT_ID, d.DEPARTMENT_NAME, SALARY
FROM DEPARTMENTS d, EMPLOYEES e
WHERE d.DEPARTMENT_ID = e.DEPARTMENT_ID
AND SALARY = (SELECT MAX(SALARY) FROM EMPLOYEES e2 WHERE e2.DEPARTMENT_ID = d.DEPARTMENT_ID);
```

The results of the query are shown in the 'Resultado de la Consulta' (Query Results) window, listing 11 departments with their names and maximum salaries:

DEPARTMENT_ID	DEPARTMENT_NAME	SALARY
1	100 Finance	12000
2	30 Purchasing	11000
3	40 Marketing	24000
4	20 Marketing	13000
5	70 Public Relations	10000
6	110 Accounting	12000
7	50 Shipping	8200
8	80 Sales	14000
9	40 Human Resources	4500
10	60 IT	9000
11	10 Administration	4400

Consulta 38:

Encuentra todos los registros en la tabla empleados que contengan un valor que ocurre dos veces en una columna dada.

The screenshot shows the Oracle SQL Developer interface with the HR database selected. In the top-left pane, the 'Conexiones' tree shows the HR connection. In the center, a SQL editor window displays the following query:

```
SELECT * FROM EMPLOYEES a1
WHERE 2 = (SELECT COUNT(*) FROM EMPLOYEES a2 WHERE a1.DEPARTMENT_ID = a2.DEPARTMENT_ID)
```

In the bottom-right pane, the 'Resultado de la Consulta' (Query Result) window shows the results of the query:

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	PHONE_NUMBER	HIRE_DATE	JOB_ID	SALARY	COMMISSION_PCT	MANAGER_ID	DEPARTMENT_ID
1	201 Michael	Hardstein	515.123.5555	17/02/04	ME_MGR	13000	(null)	100	20
2	202 Pat	Fay	403.123.4444	17/08/05	ME_MER	6000	(null)	201	20
3	205 Shelley	Erigina	515.123.8080	07/06/02	AC_MGR	12000	(null)	101	110
4	206 William	Gietz	515.123.9181	07/06/02	AC_ACCOUNT	8300	(null)	205	110

Consulta 39:

Realice una consulta que liste los empleados que están en departamentos que tienen menos de 10 empleados.

The screenshot shows the Oracle SQL Developer interface with the HR database selected. In the top-left pane, the 'Conexiones' tree shows the HR connection. In the center, a SQL editor window displays the following query:

```
SELECT DEPARTMENT_ID, FIRST_NAME || ' ' || LAST_NAME
FROM EMPLOYEES a1
WHERE (SELECT COUNT(*) FROM EMPLOYEES a2 WHERE a1.DEPARTMENT_ID = a2.DEPARTMENT_ID) < 10
ORDER BY DEPARTMENT_ID;
```

In the bottom-right pane, the 'Resultado de la Consulta' (Query Result) window shows the results of the query:

DEPARTMENT_ID	FIRST_NAME LAST_NAME
1	10 Jennifer Whalen
2	20 Pat Fay
3	20 Michael Hardstein
4	30 Sigeru TOKUMA
5	30 Guy Rimmer
6	30 Shelli Baida
7	30 Alexander Khoo
8	30 Dene Reedly
9	30 Maria Colleen
10	40 Susan Morris
11	40 David Austin
12	40 Alexander Hunold
13	40 Bruce Ernst
14	40 Diane Lorentz
15	40 Vicky Neculae
16	70 Hermann Beur
17	90 Lex De Haan
18	90 Neena Kochhar
19	90 Steven King

Consulta 40:

Desarrolle una consulta que muestre el mayor salario entre los empleados que trabajan en el departamento 30 (DEPARTAMENTO_ID) y que empleados ganan ese salario

The screenshot shows the Oracle SQL Developer interface with the HR database selected. The 'Página Inicial' tab is active. In the central workspace, a query window displays the following SQL code:

```
SELECT DEPARTMENT_ID, FIRST_NAME || ' ' || LAST_NAME, SALARY
FROM EMPLOYEES
WHERE DEPARTMENT_ID = 30
AND SALARY = (SELECT MAX(SALARY) FROM EMPLOYEES WHERE DEPARTMENT_ID = 30);
```

The results of the query are shown in a table titled 'Resultado de la Consulta':

DEPARTMENT_ID	FIRST_NAME LAST_NAME	SALARY
30	Den Raphaely	11000

Consulta 41:

Elabore una consulta que muestre los departamentos en donde no exista ningún empleado.

The screenshot shows the Oracle SQL Developer interface with the HR database selected. The 'Página Inicial' tab is active. In the central workspace, a query window displays the following SQL code:

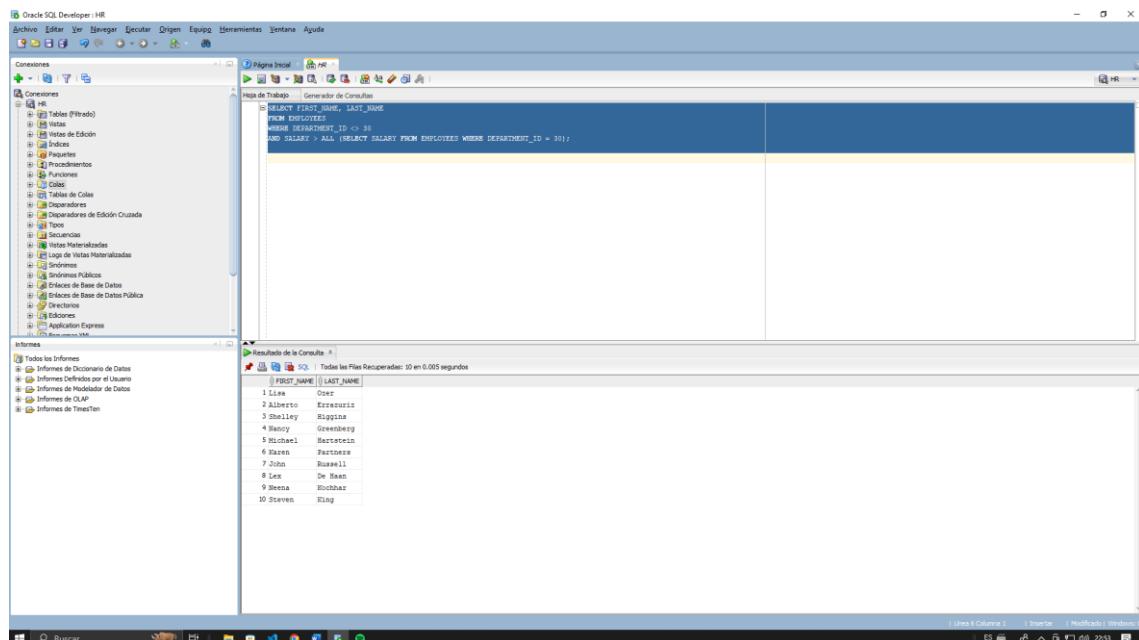
```
SELECT DEPARTMENT_ID, DEPARTMENT_NAME
FROM DEPARTMENTS
WHERE NOT EXISTS (SELECT * FROM EMPLOYEES e WHERE e.DEPARTMENT_ID = d.DEPARTMENT_ID);
```

The results of the query are shown in a table titled 'Resultado de la Consulta':

DEPARTMENT_ID	DEPARTMENT_NAME
1	Customer Service
2	Public Relations
3	Human Resources
4	Marketing
5	Sales
6	IT
7	Production
8	Infrastructure
9	Operations
10	IT Support
11	Marketing
12	Customer Service
13	Public Relations
14	Human Resources
15	Sales
16	Production

Consulta 42:

Desarrolle una consulta que muestre a todos los empleados que no estén trabajando en el departamento 30 y que ganen más que todos los empleados que trabajan en el departamento 30.



The screenshot shows the Oracle SQL Developer interface. The 'Generador de Consultas' (Query Builder) window contains the following SQL query:

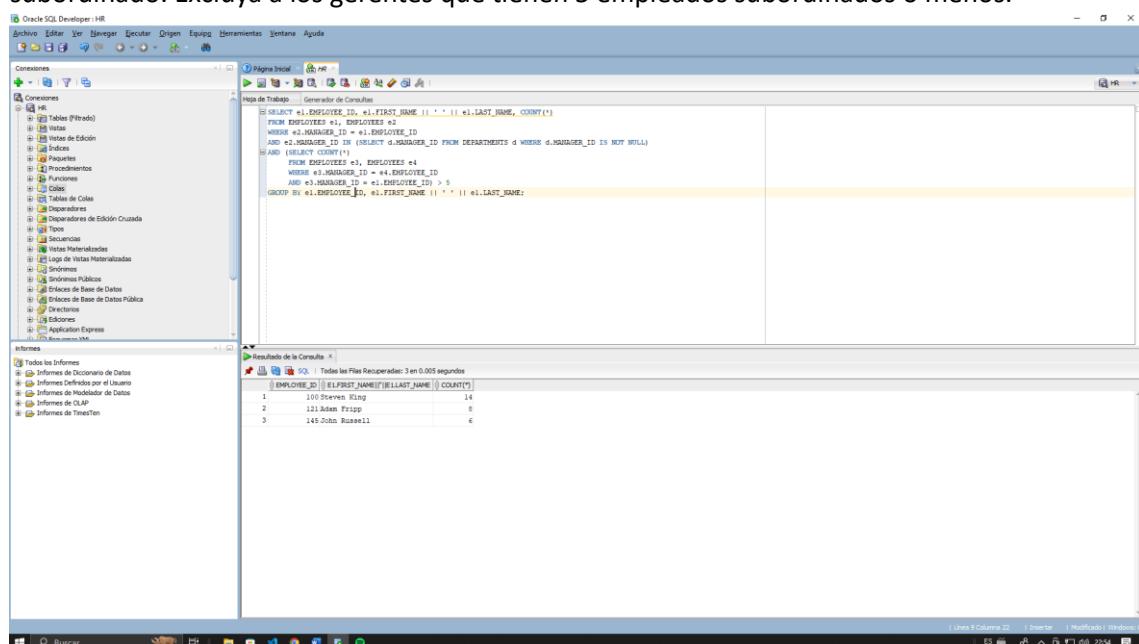
```
SELECT FIRST_NAME, LAST_NAME
FROM EMPLOYEES
WHERE DEPARTMENT_ID > 30
AND SALARY > ALL (SELECT SALARY FROM EMPLOYEES WHERE DEPARTMENT_ID = 30);
```

The 'Resultado de la Consulta' (Query Result) window displays the output:

FIRST_NAME	LAST_NAME
1 Linda	Plum
2 Alberto	Kressner
3 Shelley	Higgins
4 Nancy	Greenberg
5 Michael	Hartstein
6 Karen	Partners
7 John	Russell
8 Ken	De Haan
9 Neena	Mochtar
10 Steven	King

Consulta 43:

Realice una consulta que muestre los empleados que son gerentes (GERENTE_ID) y el número de empleados subordinados a cada uno, ordenados descendenteamente por número de subordinado. Excluya a los gerentes que tienen 5 empleados subordinados o menos.



The screenshot shows the Oracle SQL Developer interface. The 'Generador de Consultas' (Query Builder) window contains the following SQL query:

```
SELECT e1.EMPLOYEE_ID, e1.FIRST_NAME || ' ' || e1.LAST_NAME, COUNT(*)
FROM EMPLOYEES e1, EMPLOYEES e2
WHERE e2.MANAGER_ID = e1.EMPLOYEE_ID
AND e2.EMPLOYEE_ID = (SELECT d.MANAGER_ID FROM DEPARTMENTS d WHERE d.MANAGER_ID IS NOT NULL)
AND COUNT(*) > 5
FROM EMPLOYEES e3, EMPLOYEES e4
WHERE e3.MANAGER_ID = e4.EMPLOYEE_ID
AND e3.EMPLOYEE_ID = e1.EMPLOYEE_ID
AND e3.MANAGER_ID > e1.EMPLOYEE_ID
GROUP BY e1.EMPLOYEE_ID, e1.FIRST_NAME || ' ' || e1.LAST_NAME;
```

The 'Resultado de la Consulta' (Query Result) window displays the output:

EMPLOYEE_ID	EMPLOYEE_NAME	COUNT(*)
1	100 Steven King	14
2	111 Adam Fripp	6
3	145 John Russell	6

Consulta 44:

Desarrolle una consulta donde muestre el código de empleado, el apellido, salario, nombre de región, nombre de país, estado de la provincia , código de departamento, nombre de departamento donde cumpla las siguientes condiciones:

- Que los empleados que seleccione su salario sea mayor al promedio de su departamento.
- Que no seleccione los del estado de la provincia de Texas
- Que ordene la información por código de empleado ascendenteamente.
- Que no escoja los del departamento de finanzas (Finance)

The screenshot shows the Oracle SQL Developer interface. The top menu bar includes Archivo, Editor, Ver, Navegar, Ejecutar, Origen, Equipo, Herramientas, Ventana, Ayuda. The title bar says "Oracle SQL Developer - HR". The left sidebar has sections for Conexiones (Connections), Mapa de Trabajo (Workmap), Informes (Reports), and Herramientas (Tools). The main area has a query editor with the following SQL code:

```
SELECT a.EMPLOYEE_ID, a.LAST_NAME, a.SALARY, b.REGION_NAME, c.COUNTRY_NAME, d.STATE_PROVINCE,
       e.LOCATION_ID, f.DEPARTMENT_ID
  FROM EMPLOYEES a, REGIONS b, COUNTRIES c, LOCATIONS d, DEPARTMENTS e,
       LOCATIONS f
 WHERE a.DEPARTMENT_ID = e.DEPARTMENT_ID
   AND f.LOCATION_ID = a.LOCATION_ID
   AND c.COUNTRY_ID = f.COUNTRY_ID
   AND b.REGION_ID = e.REGION_ID
   AND a.SALARY > (SELECT AVG(sal) FROM
                     (SELECT a.EMPLOYEE_ID, a.SALARY
                       FROM EMPLOYEES a
                      WHERE a.DEPARTMENT_ID = e.DEPARTMENT_ID)
                    ) - 2
   AND d.STATE_PROVINCE != 'Texas'
   AND e.DEPARTMENT_NAME != 'Finance'
 ORDER BY a.EMPLOYEE_ID;
```

Below the query editor is a results grid titled "Resultado de la Consulta" (Query Result) with the following columns: EMPLOYEE_ID, LAST_NAME, SALARY, REGION_NAME, COUNTRY_NAME, STATE_PROVINCE, DEPARTMENT_ID, DEPARTMENT_NAME. The results show 19 rows of employee data from the HR schema.

EMPLOYEE_ID	LAST_NAME	SALARY	REGION_NAME	COUNTRY_NAME	STATE_PROVINCE	DEPARTMENT_ID	DEPARTMENT_NAME
1	100 King	24000	Americas	United States of America	Washington	90	Executive
2	114 Raphaely	11000	Americas	United States of America	Washington	80	Purchasing
3	120 Weiss	8000	Americas	United States of America	California	80	Shipping
4	131 Fraily	9200	Americas	United States of America	California	80	Shipping
5	132残缺	7800	Americas	United States of America	California	80	Shipping
6	123Vilma	4500	Americas	United States of America	California	80	Shipping
7	124Hunpike	5800	Americas	United States of America	California	80	Shipping
8	137Ladwig	3600	Americas	United States of America	California	80	Shipping
9	141Rajs	3500	Americas	United States of America	California	80	Shipping
10	142Pavitt	14800	Europe	United Kingdom	Oxford	80	Sales
11	143Mavrelis	13800	Europe	United Kingdom	Oxford	80	Sales
12	147Terranovis	12000	Europe	United Kingdom	Oxford	80	Sales
13	149Cachia	11000	Europe	United Kingdom	Oxford	80	Sales
14	149Zlotkey	10500	Europe	United Kingdom	Oxford	80	Sales
15	150Turker	10000	Europe	United Kingdom	Oxford	80	Sales
16	151Bernstein	9500	Europe	United Kingdom	Oxford	80	Sales
17	152Mall	9000	Europe	United Kingdom	Oxford	80	Sales
18	153Sing	10000	Europe	United Kingdom	Oxford	80	Sales
19	157Buly	9800	Europe	United Kingdom	Oxford	80	Sales