

ACTIVIDAD 1: SQL & BBDD ORACLE

1. ¿Cuáles son los datos de los almacenes que tiene la compañía? Se necesita:
 - **Identificador del almacén.**
 - **Nombre del almacén.**
 - **Nombre de la ciudad, país y región donde está ubicado.**

```
SELECT
W.WAREHOUSE_ID,
W.WAREHOUSE_NAME,
L.CITY,
C.COUNTRY_NAME,
R.REGION_NAME

FROM
WAREHOUSES W

JOIN
LOCATIONS L ON l.location_id = w.location_id
JOIN
COUNTRIES C ON c.country_id = l.country_id
JOIN
REGIONS R ON r.region_id = c.region_id
```

The screenshot shows the Oracle SQL Developer interface. The title bar indicates the file path: `/home/alumno-86/Escritorio/EX1.sql`. The menu bar includes: Archivo, Editar, Ver, Navegar, Ejecutar, Origen, Equipo, Herramientas, Ventana, Ayuda. The left pane shows the 'Oracle conexiones' tree with a tree view of database objects including CONTACTS, COUNTRIES, CUSTOMERS, EMPLOYEES, INVENTORIES, LOCATIONS, ORDER_ITEMS, ORDERS, PRODUCT_CATEGORIES, PRODUCTS, REGIONS, and WAREHOUSES. The main editor window displays the following SQL query:

```
SELECT
W.WAREHOUSE_ID,
W.WAREHOUSE_NAME,
L.CITY,
C.COUNTRY_NAME,
R.REGION_NAME

FROM
WAREHOUSES W

JOIN
LOCATIONS L ON l.location_id = w.location_id
JOIN
COUNTRIES C ON c.country_id = l.country_id
JOIN
REGIONS R ON r.region_id = c.region_id
```

The bottom pane shows the 'Resultado de la Consulta' (Query Result) with 9 rows of data. The status bar indicates 'Todas las Filas Recuperadas: 9 en 0,021 segundos'.

WAREHOUSE_ID	WAREHOUSE_NAME	CITY	COUNTRY_NAME	REGION_NAME
1	Southlake, Texas	Southlake	United States of America	Americas
2	San Francisco	South San Francisco	United States of America	Americas
3	New Jersey	South Brunswick	United States of America	Americas
4	Seattle, Washington	Seattle	United States of America	Americas
5	Mexico City	Mexico City	Mexico	Americas
6	Toronto	Toronto	Canada	Americas
7	Bombay	Bombay	India	Asia
8	Beijing	Beijing	China	Asia
9	Sydney	Sydney	Australia	Asia

2. ¿Cuál es el nombre del producto que tiene más stock en Europa?

El resultado de la sentencia de SQL me indica que no hay ningún producto que tenga más stock en Europa (region_id 1). Para contrastar y comprobar que la sentencia SQL es correcta, he buscado lo mismo con otra región (region_id, 2, Americas) y en este caso sí que puedo ver el nombre del producto que tiene más stock en América.

Sentencia SQL para la región 1, Europa

```
SELECT
P.PRODUCT_NAME,
SUM (I.QUANTITY)

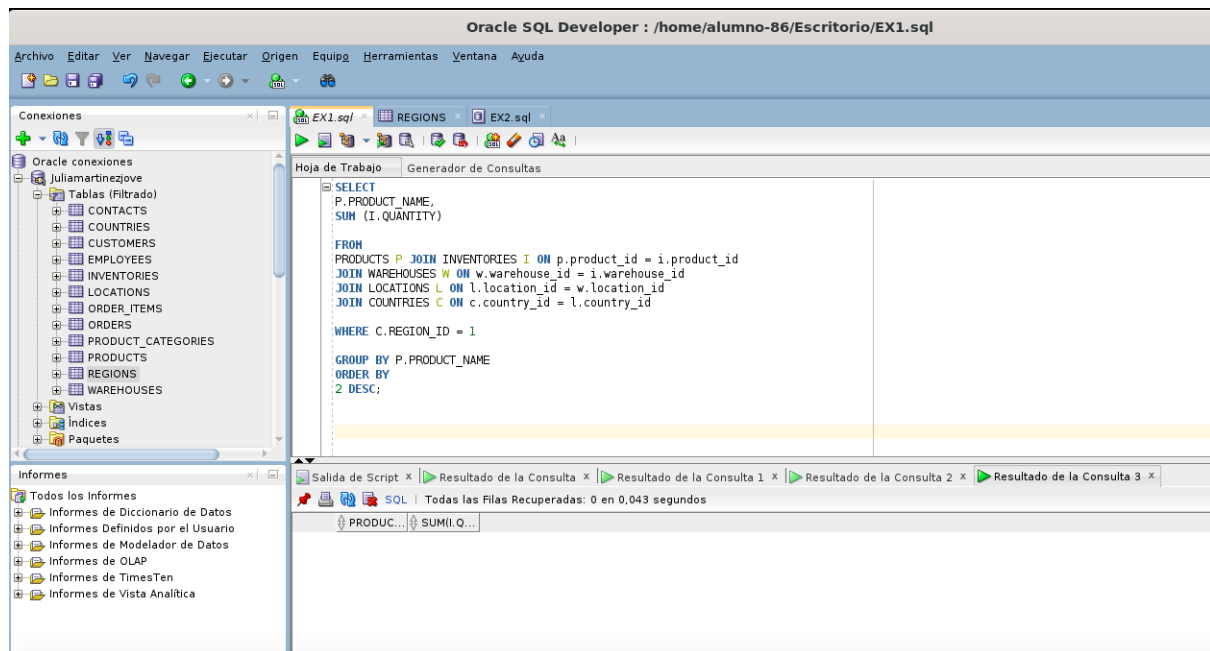
FROM
PRODUCTS P JOIN INVENTORIES I ON p.product_id = i.product_id
JOIN WAREHOUSES W ON w.warehouse_id = i.warehouse_id
JOIN LOCATIONS L ON l.location_id = w.location_id
JOIN COUNTRIES C ON c.country_id = l.country_id

WHERE C.REGION_ID = 1

GROUP BY P.PRODUCT_NAME
ORDER BY
```

2 DESC;

Screenshot región 1, Europa



Sentencia SQL para la región 2, América

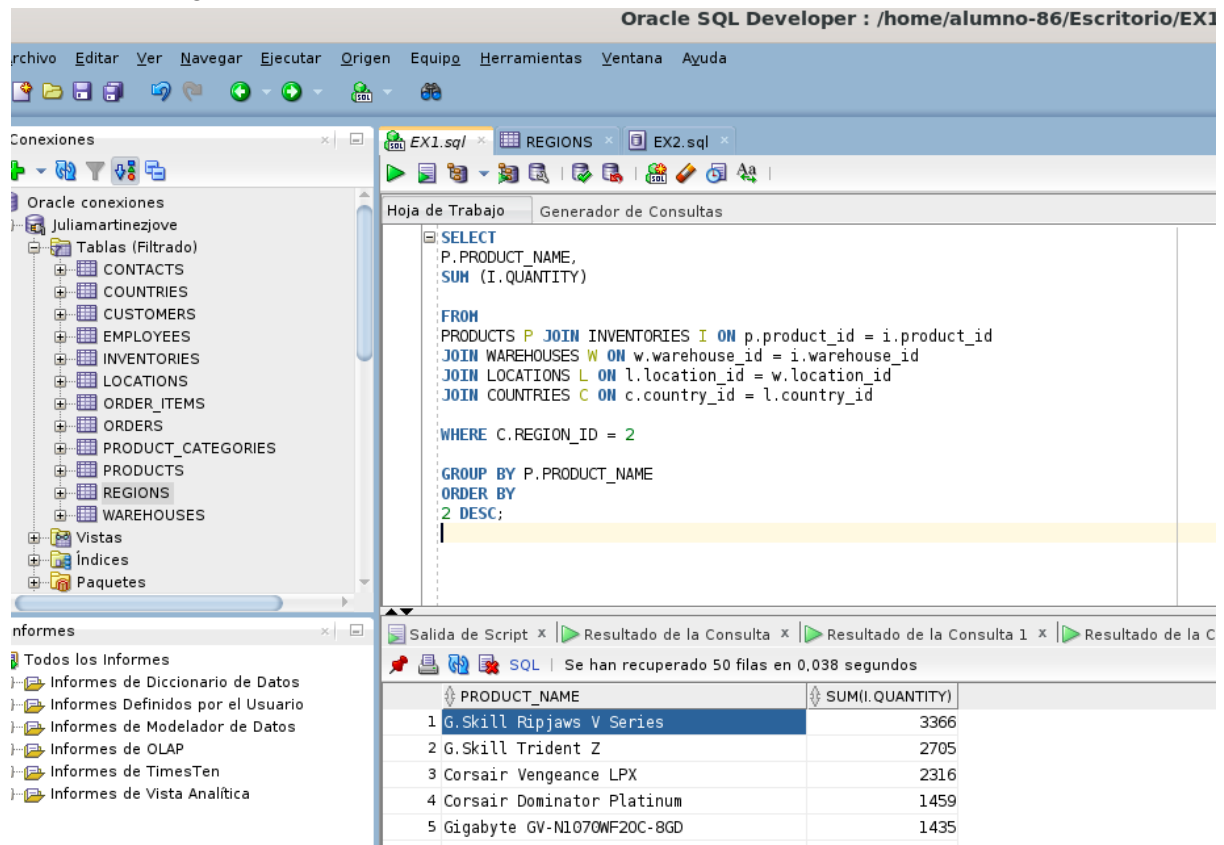
```
SELECT
P.PRODUCT_NAME,
SUM (I.QUANTITY)

FROM
PRODUCTS P JOIN INVENTORIES I ON p.product_id = i.product_id
JOIN WAREHOUSES W ON w.warehouse_id = i.warehouse_id
JOIN LOCATIONS L ON l.location_id = w.location_id
JOIN COUNTRIES C ON c.country_id = l.country_id

WHERE C.REGION_ID = 2

GROUP BY P.PRODUCT_NAME
ORDER BY
2 DESC;
```

Screenshot región 2. América



Oracle SQL Developer : /home/alumno-86/Escritorio/EX1

Archivo Editar Ver Navegar Ejecutar Origen Equipo Herramientas Ventana Ayuda

Conexiones

Oracle conexiones

Juliamartinezjove

Tablas (Filtrado)

CONTACTS

COUNTRIES

CUSTOMERS

EMPLOYEES

INVENTORIES

LOCATIONS

ORDER_ITEMS

ORDERS

PRODUCT_CATEGORIES

PRODUCTS

REGIONS

WAREHOUSES

Vistas

Índices

Paquetes

Informes

Todos los Informes

Informes de Diccionario de Datos

Informes Definidos por el Usuario

Informes de Modelador de Datos

Informes de OLAP

Informes de TimesTen

Informes de Vista Analítica

EX1.sql

REGIONS

EX2.sql

Hoja de Trabajo

Generador de Consultas

```
SELECT
P.PRODUCT_NAME,
SUM (I.QUANTITY)

FROM
PRODUCTS P JOIN INVENTORIES I ON p.product_id = i.product_id
JOIN WAREHOUSES W ON w.warehouse_id = i.warehouse_id
JOIN LOCATIONS L ON l.location_id = w.location_id
JOIN COUNTRIES C ON c.country_id = l.country_id

WHERE C.REGION_ID = 2

GROUP BY P.PRODUCT_NAME
ORDER BY
2 DESC;
```

Salida de Script x Resultado de la Consulta x Resultado de la Consulta 1 x Resultado de la C

SQL | Se han recuperado 50 filas en 0,038 segundos

	PRODUCT_NAME	SUM(I.QUANTITY)
1	G.Skill Ripjaws V Series	3366
2	G.Skill Trident Z	2705
3	Corsair Vengeance LPX	2316
4	Corsair Dominator Platinum	1459
5	Gigabyte GV-N1070WF20C-8GD	1435

3. ¿Cuál es el producto que ha vendido más unidades durante 2016?

El producto que ha vendido más unidades durante el 2016 es G.Skill Ripjaws V Series con 1.057 unidades vendidas.

```
SELECT
P.PRODUCT_NAME,
```

```
SUM (OI.QUANTITY)
```

```
FROM PRODUCTS P
JOIN ORDER_ITEMS OI ON oi.product_id = p.product_id
JOIN ORDERS O ON o.order_id = oi.order_id
```

```
WHERE O.ORDER_DATE BETWEEN DATE '2016-01-01' AND DATE '2016-12-31' AND
STATUS = 'Shipped'
GROUP BY P.PRODUCT_NAME
```

```
ORDER BY
```

2 DESC;

The screenshot shows the Oracle SQL Developer interface. The main window displays a SQL query in the 'Hoja de Trabajo' (Worksheet) tab. The query is as follows:

```
SELECT
P.PRODUCT_NAME,
SUM (OI.QUANTITY)
FROM PRODUCTS P
JOIN ORDER_ITEMS OI ON oi.product_id = p.product_id
JOIN ORDERS O ON o.order_id = oi.order_id
WHERE O.ORDER_DATE BETWEEN DATE '2016-01-01' AND DATE '2016-12-31' AND STATUS = 'Shipped'
GROUP BY P.PRODUCT_NAME
ORDER BY
2 DESC;
```

The 'Informes' (Reports) pane on the left shows a tree structure of reports. The 'Resultado de la Consulta' (Query Result) pane at the bottom shows the results of the query, which are 50 rows. The first few rows are:

PRODUCT_NAME	SUM(OI.QUANTITY)
1 G.Skill Ripjaws V Series	1057
2 Corsair Vengeance LPX	585
3 Corsair Dominator Platinum	581
4 G.Skill Trident Z	445
5 Kingston	386
6 MSI GT72 7RD-67 12GB	364

4. ¿Cuál es la categoría de productos que ha vendido más unidades durante 2017?

La categoría de productos que ha vendido más unidades durante el 2017 es Storage con 6.693 unidades vendidas.

```
SELECT
C.CATEGORY_NAME,
```

```
SUM (OI.QUANTITY)
```

```
FROM PRODUCTS P
JOIN ORDER_ITEMS OI ON oi.product_id = p.product_id
JOIN ORDERS O ON o.order_id = oi.order_id
JOIN PRODUCT_CATEGORIES C ON c.category_id = p.category_id
```

```
WHERE O.ORDER_DATE BETWEEN DATE '2017-01-01' AND DATE '2017-12-31' AND
STATUS = 'Shipped'
GROUP BY C.CATEGORY_NAME
```

```
ORDER BY
2 DESC;
```

The screenshot shows the Oracle SQL Developer interface. The main window displays a SQL query in the 'Hoja de Trabajo' (Worksheet) tab. The query is as follows:

```

SELECT
  C.CATEGORY_NAME,
  SUM (OI.QUANTITY)
FROM PRODUCTS P
JOIN ORDER_ITEMS OI ON oi.product_id = p.product_id
JOIN ORDERS O ON o.order_id = oi.order_id
JOIN PRODUCT_CATEGORIES C ON c.category_id = p.category_id
WHERE O.ORDER_DATE BETWEEN DATE '2017-01-01' AND DATE '2017-12-31' AND STATUS = 'Shipped'
GROUP BY C.CATEGORY_NAME
ORDER BY
  2 DESC;

```

The 'Informes' (Reports) pane on the left shows a tree structure of reports. The 'Resultado de la Consulta' (Query Result) pane at the bottom displays the results of the query in a table format:

CATEGORY_NAME	SUM(OI.QUANTITY)
1 Storage	6693
2 CPU	3948
3 Mother Board	3175
4 Video Card	2982

5. ¿Cuál es el nombre del cliente cuyo gasto ha sido más alto en 2015?

El cliente cuyo gasto ha sido más alto en 2015 es Jabil Circuit con un gasto de 1050939,97

```

SELECT
  C.CUSTOMER_ID,
  C.NAME,

```

```

SUM (OI.QUANTITY * OI.UNIT_PRICE)

```

```

FROM PRODUCTS P
JOIN ORDER_ITEMS OI ON oi.product_id = p.product_id
JOIN ORDERS O ON o.order_id = oi.order_id
JOIN CUSTOMERS C ON c.customer_id = o.customer_id

```

```

WHERE O.ORDER_DATE BETWEEN DATE '2015-01-01' AND DATE '2015-12-31' AND
STATUS = 'Shipped'
GROUP BY C.CUSTOMER_ID, C.NAME

```

```

ORDER BY
  3 DESC;

```

Oracle SQL Developer : /home/alumno-86/Escritorio/EX1.sql

Archivo Editar Ver Navegar Ejecutar Origen Equip2 Herramientas Ventana Ayuda

Conexiones

Oracle conexiones

- Juliamartinezjove
 - Tablas (Filtrado)
 - CONTACTS
 - COUNTRIES
 - CUSTOMERS
 - EMPLOYEES
 - INVENTORIES
 - LOCATIONS
 - ORDER_ITEMS
 - ORDERS
 - PRODUCT_CATEGORIES
 - PRODUCTS
 - REGIONS
 - WAREHOUSES
 - Vistas
 - Indices
 - Paquetes

Hoja de Trabajo

```

SELECT
  C.CUSTOMER_ID,
  C.NAME,
  SUM (OI.QUANTITY * OI.UNIT_PRICE)
FROM PRODUCTS P
JOIN ORDER_ITEMS OI ON oi.product_id = p.product_id
JOIN ORDERS O ON o.order_id = oi.order_id
JOIN CUSTOMERS C ON c.customer_id = o.customer_id
WHERE O.ORDER_DATE BETWEEN DATE '2015-01-01' AND DATE '2015-12-31' AND STATUS = 'Shipped'
GROUP BY C.CUSTOMER_ID, C.NAME
ORDER BY
  3 DESC;

```

Salida de Script x Resultado de la Consulta x Resultado de la Consulta 1 x Resultado de la Consulta 2 x Resultado de la Consulta

Todas las Filas Recuperadas: 8 en 0.015 segundos

	CUSTOMER_ID	NAME	SUM(OI.QUANTITY*OI.UNIT_PRICE)
1	44	Jabil Circuit	1050939,97
2	70	PPG Industries	1043144,72
3	47	General Mills	893175,62
4	8	International Paper	613735,06
5	4	AbbVie	590302,91
6	7	Alcoa	499526,41

6. ¿Cuánto ha facturado la compañía en cada uno de los años de los que tiene datos?

El resultado de la facturación para cada año se detalla en el screenshot adjunto del ejercicio 6

```

SELECT
EXTRACT (YEAR FROM ORDER_DATE),

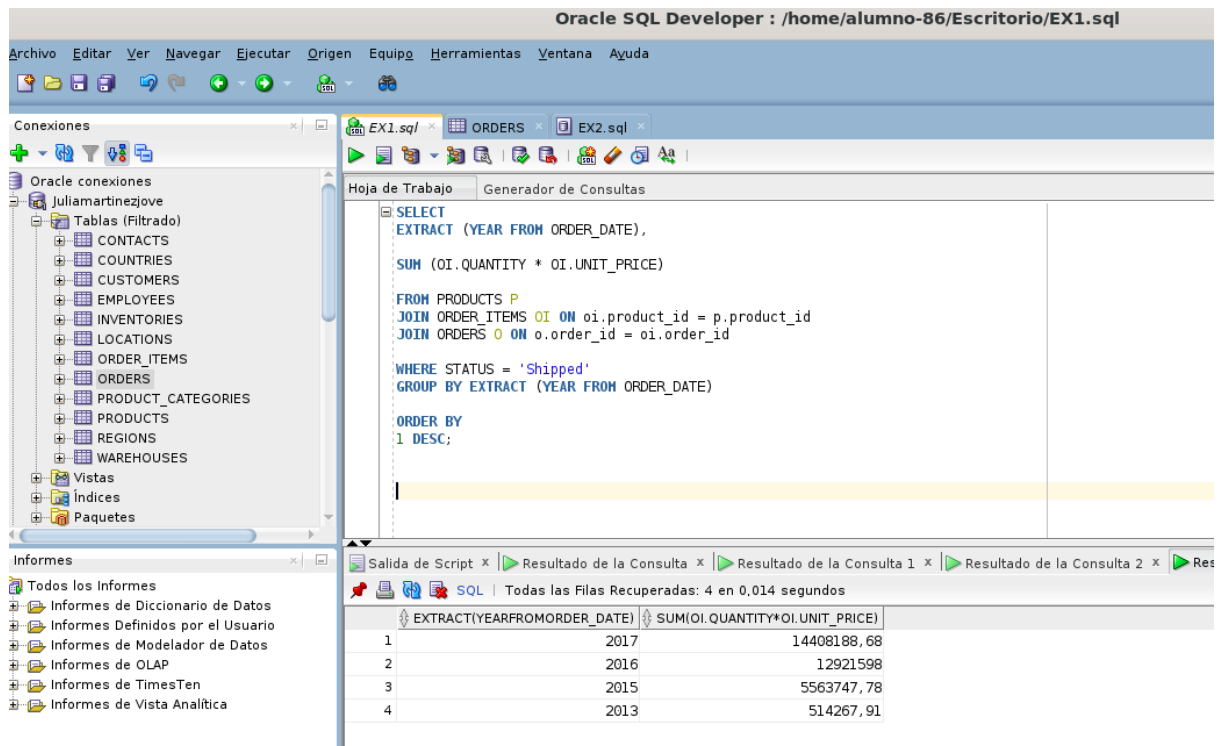
SUM (OI.QUANTITY * OI.UNIT_PRICE)

FROM PRODUCTS P
JOIN ORDER_ITEMS OI ON oi.product_id = p.product_id
JOIN ORDERS O ON o.order_id = oi.order_id

WHERE STATUS = 'Shipped'
GROUP BY EXTRACT (YEAR FROM ORDER_DATE)

ORDER BY
1 DESC;

```



7. ¿Cuáles son los nombres de los productos cuyo precio es superior la media?

Primero calculo la media de list_price (adjunto código y screenshot) y luego identifico los productos cuyo precio es superior a la media. Hay un total de 85 productos que tienen un precio superior a la media

Cálculo media

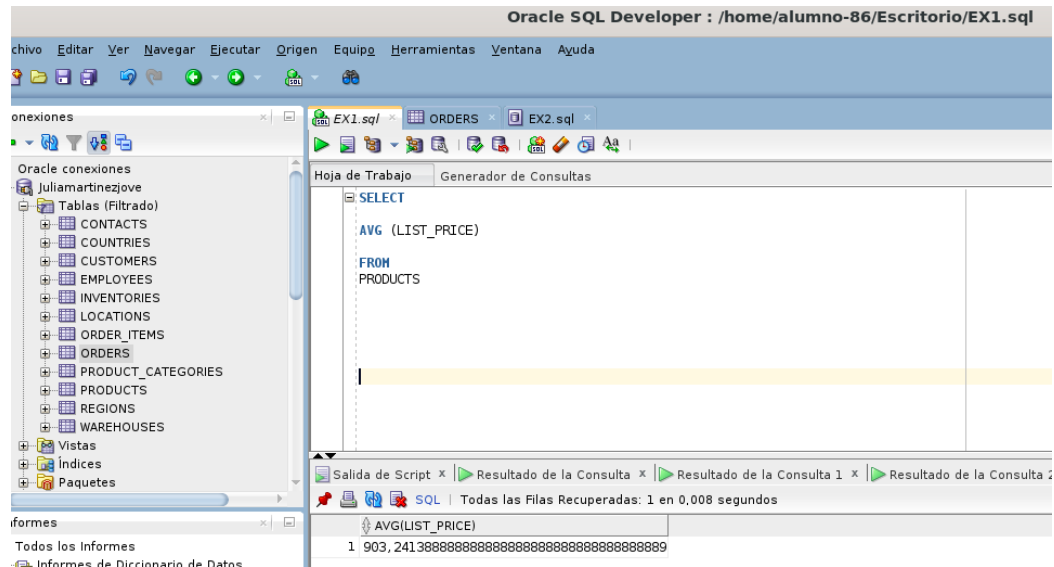
SELECT

AVG (LIST_PRICE)

FROM

PRODUCTS

Screenshot del cálculo de la media



Cálculo de los productos cuyo precio es superior a la media

```
SELECT
PRODUCT_NAME,
LIST_PRICE,
PRODUCT_ID
```

FROM
PRODUCTS

```
WHERE LIST_PRICE > (SELECT
AVG(LIST_PRICE)
FROM
PRODUCTS)
```

```
ORDER BY
PRODUCT_ID;
```

Puedo verificar que el list_price de los 85 productos obtenidos es superior a la media.

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Oracle conexiones' tree shows a connection to 'Juliamartinezjove'. The 'Tablas (Filtrado)' tree lists various tables including CONTACTS, COUNTRIES, CUSTOMERS, EMPLOYEES, INVENTORIES, LOCATIONS, ORDER_ITEMS, ORDERS, PRODUCT_CATEGORIES, PRODUCTS, REGIONS, and WAREHOUSES. The 'Informes' tree shows various report types. The main window displays a SQL query in the 'Generador de Consultas' pane:

```
SELECT
  PRODUCT_NAME,
  LIST_PRICE,
  PRODUCT_ID
FROM
  PRODUCTS
WHERE LIST_PRICE > (SELECT
  AVG(LIST_PRICE)
FROM
  PRODUCTS)
ORDER BY
  PRODUCT_ID;
```

The query results are shown in the 'Resultado de la Consulta' pane, displaying 85 rows. The status bar indicates 'Todas las Filas Recuperadas: 85 en 0,02 segundos'.

PRODUCT_NAME	LIST_PRICE	PRODUCT_ID
69 Intel Xeon E5-2699 V3 (OEM/Tray)	3410,46	228
70 Intel Core i7-4960X Extreme Ed...	1805,97	240
71 Intel Xeon E5-2699 V4 (OEM/Tray)	1756	241
72 Intel Xeon E5-1680 V3 (OEM/Tray)	1751,99	242
73 Intel Xeon E5-2643 V4 (OEM/Tray)	1708,86	243
74 Crucial	1620,99	244
75 ATI FirePro S9050	1699	245
76 Intel Xeon E5-2697 V3	2774,98	248
77 Intel Xeon E5-2698 V3 (OEM/Tray)	2660,72	249
78 G.Skill TridentZ RGB	1504,99	261
79 Corsair Dominator Platinum	1449,99	262
80 G.Skill Trident Z	1431,99	265
81 G.Skill Trident Z RGB	1418,99	266
82 EVGA 12G-P4-1999-KR	1799,99	267
83 G.Skill Ripjaws 4 Series	1073,99	272
84 Corsair Vengeance LPX	1163,99	276
85 G.Skill Ripjaws V Series	1318,99	279

8. ¿Cuáles son los empleados (nombre y apellido) que han vendido más de 50K durante 2017?

En el screenshot podemos ver el nombre y apellido de los empleados que han vendido más de 50k en 2017.

```
SELECT
  E.EMPLOYEE_ID,
  E.FIRST_NAME,
  E.LAST_NAME,
```

```
SUM (QUANTITY * UNIT_PRICE)
```

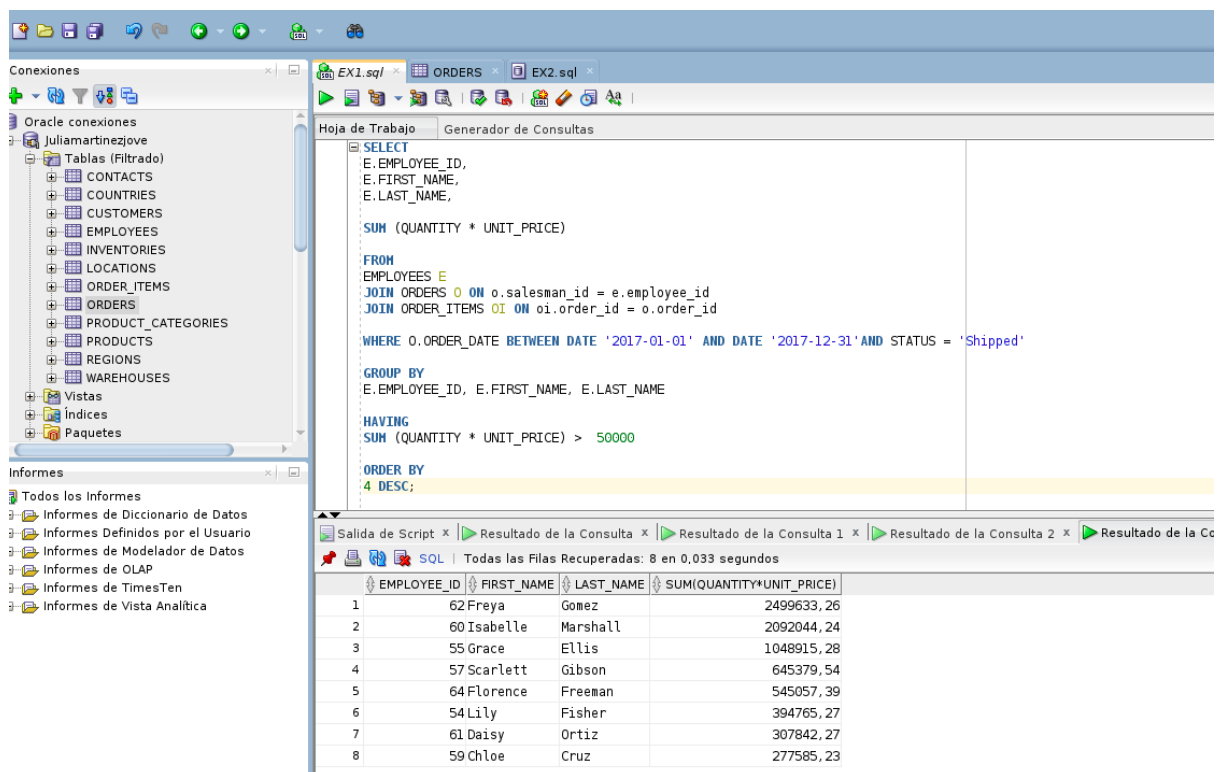
```
FROM
  EMPLOYEES E
JOIN ORDERS O ON o.salesman_id = e.employee_id
JOIN ORDER_ITEMS OI ON oi.order_id = o.order_id
```

WHERE O.ORDER_DATE BETWEEN DATE '2017-01-01' AND DATE '2017-12-31' AND
STATUS = 'Shipped'

GROUP BY
E.EMPLOYEE_ID, E.FIRST_NAME, E.LAST_NAME

HAVING
SUM (QUANTITY * UNIT_PRICE) > 50000

ORDER BY
4 DESC;



The screenshot shows the SQL Developer interface. On the left, the 'Conexiones' pane shows a connection to 'Juliamartinezjove'. The 'Informes' pane shows various report options. The main window displays a SQL query in the 'Hoja de Trabajo' tab. The query is as follows:

```
SELECT
E.EMPLOYEE_ID,
E.FIRST_NAME,
E.LAST_NAME,

SUM (QUANTITY * UNIT_PRICE)

FROM
EMPLOYEES E
JOIN ORDERS O ON o.salesman_id = e.employee_id
JOIN ORDER_ITEMS OI ON oi.order_id = o.order_id

WHERE O.ORDER_DATE BETWEEN DATE '2017-01-01' AND DATE '2017-12-31' AND STATUS = 'Shipped'

GROUP BY
E.EMPLOYEE_ID, E.FIRST_NAME, E.LAST_NAME

HAVING
SUM (QUANTITY * UNIT_PRICE) > 50000

ORDER BY
4 DESC;
```

Below the query, the 'Resultado de la Consulta' pane shows the results of the query. The results are displayed in a table with the following columns: EMPLOYEE_ID, FIRST_NAME, LAST_NAME, and SUM(QUANTITY*UNIT_PRICE). The results are ordered by the fourth column in descending order.

EMPLOYEE_ID	FIRST_NAME	LAST_NAME	SUM(QUANTITY*UNIT_PRICE)
62	Freya	Gomez	2499633,26
60	Isabelle	Marshall	2092044,24
55	Grace	Ellis	1048915,28
57	Scarlett	Gibson	645379,54
64	Florence	Freeman	545057,39
54	Lily	Fisher	394765,27
61	Daisy	Ortiz	307842,27
59	Chloe	Cruz	277585,23

9. ¿Cuántos clientes no tienen persona de contacto?

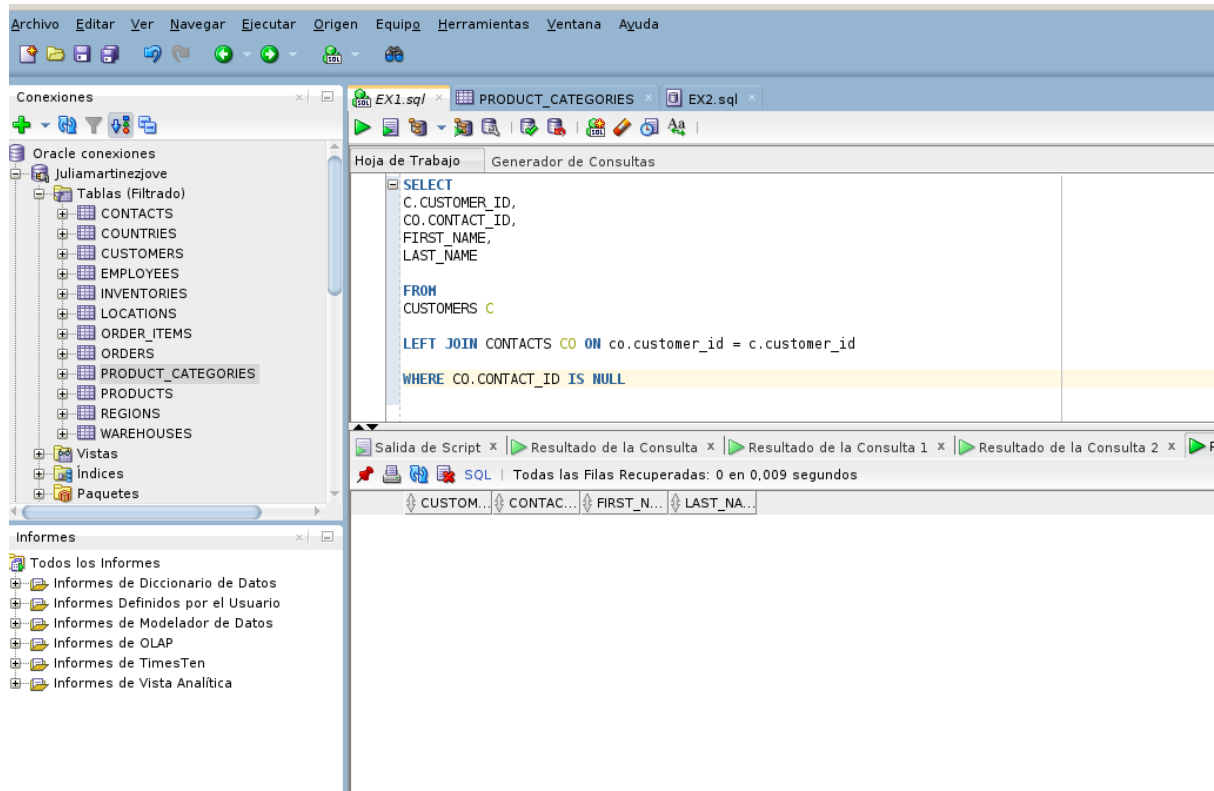
Los resultados obtenidos indican que no hay ningún cliente sin ninguna persona de contacto.

SELECT
C.CUSTOMER_ID,
CO.CONTACT_ID,
FIRST_NAME,
LAST_NAME

FROM
CUSTOMERS C

LEFT JOIN CONTACTS CO ON co.customer_id = c.customer_id

WHERE CO.CONTACT_ID IS NULL



10. ¿Cuál es el Manager (nombre y apellido identificado por el campo manager_id) que menos ha vendido durante 2017?

El manager que menos ha vendido durante 2017 es Jessica Woods con 545057,39 ventas.

```
SELECT
M.MANAGER_ID,
M.FIRST_NAME,
M.LAST_NAME,
M.JOB_TITLE,
```

```
SUM (QUANTITY * UNIT_PRICE)
```

```
FROM
EMPLOYEES M
```

```
JOIN EMPLOYEES E ON e.manager_id = m.employee_id
JOIN ORDERS O ON o.salesman_id = e.employee_id
```

JOIN ORDER_ITEMS OI ON oi.order_id = o.order_id

WHERE M.JOB_TITLE = 'Sales Manager' AND O.ORDER_DATE BETWEEN DATE '2017-01-01' AND DATE '2017-12-31'

GROUP BY

M.MANAGER_ID, M.FIRST_NAME, M.LAST_NAME, M.JOB_TITLE

ORDER BY

5 ASC;

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

```
SELECT
  M.MANAGER_ID,
  M.FIRST_NAME,
  M.LAST_NAME,
  M.JOB_TITLE,

  SUM (QUANTITY * UNIT_PRICE)

FROM
  EMPLOYEES M

JOIN EMPLOYEES E ON e.manager_id = m.employee_id
JOIN ORDERS O ON o.salesman_id = e.employee_id
JOIN ORDER_ITEMS OI ON oi.order_id = o.order_id

WHERE M.JOB_TITLE = 'Sales Manager' AND O.ORDER_DATE BETWEEN DATE '2017-01-01' AND DATE '2017-12-31'

GROUP BY
  M.MANAGER_ID, M.FIRST_NAME, M.LAST_NAME, M.JOB_TITLE

ORDER BY
  5 ASC;
```

The 'Resultado de la Consulta' pane shows the results of the query, with 3 rows recovered in 0.031 seconds. The results are as follows:

	MANAGER_ID	FIRST_NAME	LAST_NAME	JOB_TITLE	SUM(QUANTITY*UNIT_PRICE)
1	1	Jessica	Woods	Sales Manager	545057,39
2	1	Ava	Sullivan	Sales Manager	4486945,72
3	1	Ella	Wallace	Sales Manager	9036047,85