

Laboratory 03

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IC4301 – Databases I

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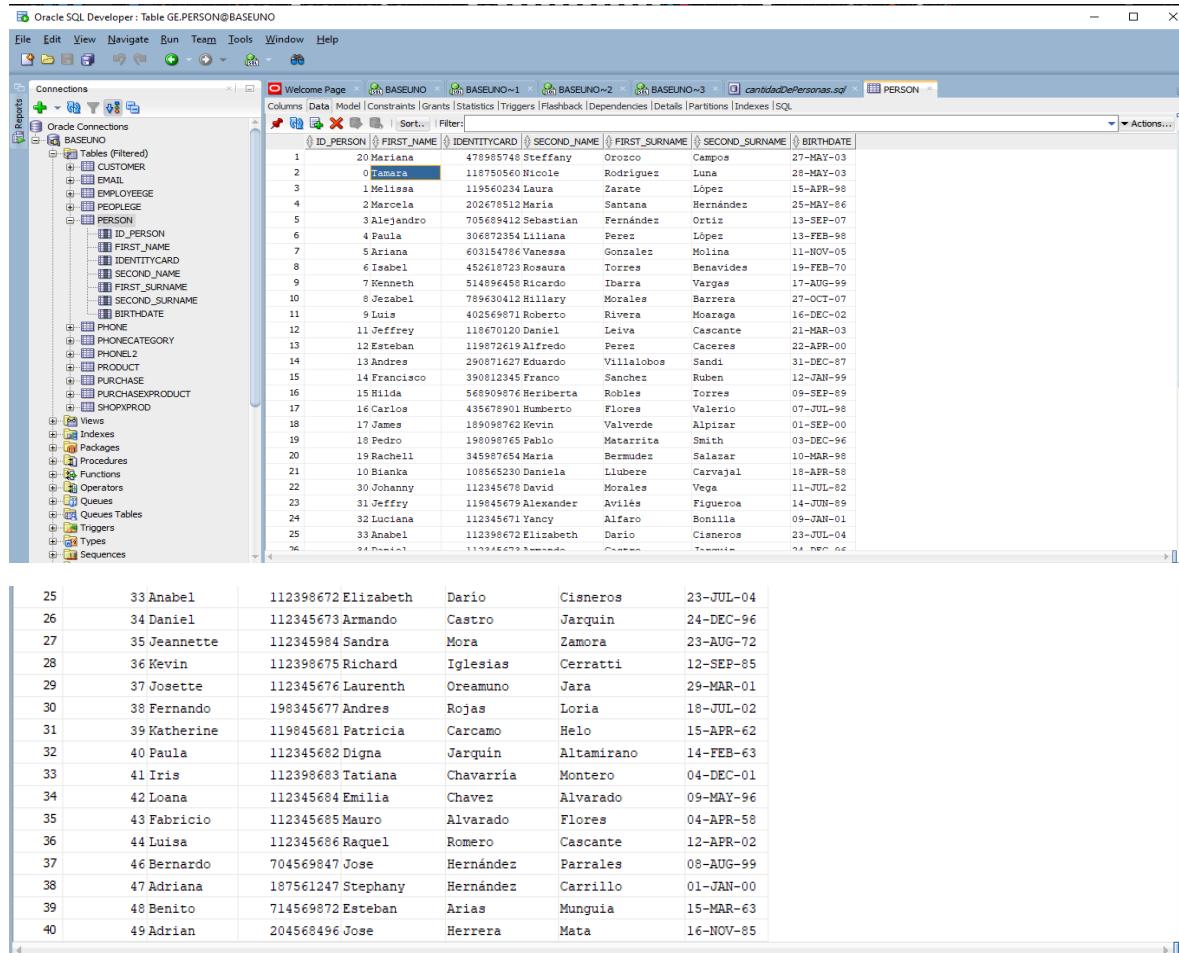
September 20th 2022.

In this document are the evidence of laboratory 03 where you can see the objects created, data inserted, modified, among others.

Evidence:

- Check the total number of people that exist.

- In these images you can see the table Person full:

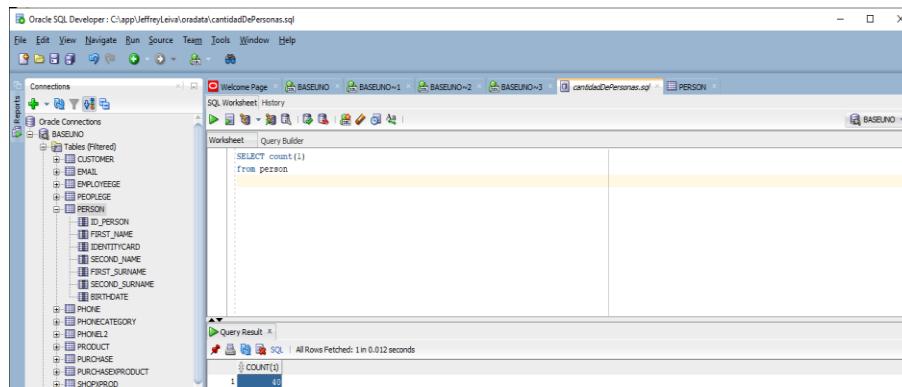


The screenshot shows the Oracle SQL Developer interface with the following details:

- Connections:** BASEUNO
- Tables:** PERSON
- Columns:** ID_PERSON, FIRST_NAME, IDENTITYCARD, SECOND_NAME, FIRST_SURNAME, SECOND_SURNAME, BIRTHDATE
- Data:** The table contains 40 rows of data, each representing a person with their first name, last name, identity card number, and birthdate.

ID_PERSON	FIRST_NAME	IDENTITYCARD	SECOND_NAME	FIRST_SURNAME	SECOND_SURNAME	BIRTHDATE
1	20 Mariana	478985748	Steffany	Orozco	Campos	27-MAY-03
2	0 Tamara	118750560	Nicole	Rodriguez	Luna	28-MAY-03
3	1 Melisa	119560234	Laura	Zarate	Lopez	15-APR-98
4	2 Marcela	202678512	Maria	Santana	Hernandez	25-MAY-86
5	3 Alejandro	705689412	Sebastian	Fernandez	Ortiz	13-SEP-07
6	4 Paula	306872354	Lilianna	Perez	Lopez	13-FEB-98
7	5 Ariana	603154786	Vanessa	Gonzalez	Molina	11-NOV-05
8	6 Isobel	452618723	Roseura	Torres	Benavides	19-FEB-70
9	7 Kenneth	514896458	Ricardo	Ibarra	Vargas	17-AUG-99
10	8 Jeasabel	789630412	Hillary	Morales	Barrera	27-OCT-07
11	9 Luis	402369871	Roberto	Rivera	Moaraga	16-DEC-02
12	11 Jeffrey	118670120	Daniel	Leiva	Cascante	21-MAR-03
13	12 Esteban	119872619	Alfredo	Perez	Caceres	22-APR-00
14	13 Andres	290871627	Eduardo	Villalobos	Sandi	31-DEC-87
15	14 Francisco	390812345	Franco	Sanchez	Ruben	12-JAN-99
16	15 Hilda	56890876	Heriberto	Robles	Torres	09-SEP-89
17	16 Carlos	43567901	Humberto	Flores	Valerio	07-JUL-98
18	17 James	189098762	Kevin	Valverde	Alipizar	01-SEP-00
19	18 Pedro	190098765	Pablo	Materrita	Smith	03-DEC-96
20	19 Rachell	345987654	Maria	Bermudez	Salazar	10-MAR-98
21	20 Blanca	1085685230	Daniela	Llubere	Carvajal	18-APR-98
22	30 Johanny	112345678	David	Morales	Vega	11-JUL-82
23	31 Jeffry	119845679	Alexander	Aviles	Figueroa	14-JUN-89
24	32 Luciana	112345671	Yancy	Alfaro	Bonilla	09-JAN-01
25	33 Anabel	112398672	Elizabeth	Dario	Cisneros	23-JUL-04
26	34 Daniel	112345673	Armando	Castro	Jarquin	24-DEC-96
27	35 Jeannette	112345984	Sandra	Mora	Zamora	23-AUG-72
28	36 Kevin	112398675	Richard	Iglesias	Cerratti	12-SEP-85
29	37 Josette	112345676	Laurenth	Oreamuno	Jara	29-MAR-01
30	38 Fernando	198345677	Andres	Rojas	Loria	18-JUL-02
31	39 Katherine	119845681	Patricia	Carcamo	Heilo	15-APR-62
32	40 Paula	112345682	Digna	Jarquin	Altamirano	14-FEB-63
33	41 Iris	112398683	Tatiana	Chavarria	Montero	04-DEC-01
34	42 Loana	112345684	Emilia	Chavez	Alvarado	09-MAY-96
35	43 Fabricio	112345685	Mauro	Alvarado	Flores	04-APR-58
36	44 Luisa	112345686	Raquel	Romero	Cascante	12-APR-02
37	46 Bernardo	704569847	Jose	Hernandez	Parrales	08-AUG-99
38	47 Adriana	187561247	Stephany	Hernandez	Carrillo	01-JAN-00
39	48 Benito	714569872	Esteban	Arias	Munguia	15-MAR-63
40	49 Adrian	204568496	Jose	Herrera	Mata	16-NOV-85

- This is the result of the query:



The screenshot shows the Oracle SQL Developer interface with the following details:

- Connections:** BASEUNO
- SQL Worksheet:** COUNT(*) from person
- Query Result:** COUNT(1) = 49

COUNT(1)
49

2. Make a sql to get all the people whose name begins with the letter B.
- In these images you can see the table Person full:

Oracle SQL Developer : Table GE.PERSON@BASEUNO

File Edit View Navigate Run Team Tools Window Help

Connections Oracle Connections BASEUNO Tables (Filtered) CUSTOMER EMAIL EMPLOYEEGE PEOPLEGE PERSON ID_PERSON FIRST_NAME IDENTITYCARD SECOND_NAME FIRST_SURNANE SECOND_SURNANE BIRTHDATE PHONE PHONECATEGORY PHONEL2 PRODUCT PURCHASE PURCHASEXPRODUCT SHOPXPROD Views Indexes Packages Functions Operators Queues Queues Tables Triggers Types Sequences

Columns Data Model Constraints Grants Statistics Triggers Flashback Dependencies Details Partitions Indexes SQL Actions...

PERSON

ID_PERSON	FIRST_NAME	IDENTITYCARD	SECOND_NAME	FIRST_SURNANE	SECOND_SURNANE	BIRTHDATE
1	20 Mariana	478985748	Steffany	Orozco	Campos	27-MAY-03
2	0 Tamara	118750560	Nicole	Rodriguez	Luna	28-MAY-03
3	1 Melissa	119560234	Laura	Zarate	Lopez	15-APR-98
4	2 Marcela	202679512	Maria	Santana	Hernandez	25-MAY-86
5	3 Alejandro	705689412	Sebastian	Fernandez	Ortiz	13-SEP-07
6	4 Paula	306872354	Lilliana	Perez	Lopez	13-FEB-98
7	5 Ariana	603154786	Vanessa	Gonzalez	Molina	11-NOV-05
8	6 Isabel	452618723	Rosaura	Torres	Benavides	19-FEB-70
9	7 Kenneth	514896458	Ricardo	Ibarra	Vargas	17-AUG-99
10	8 Jesabel	789630412	Hillary	Morales	Barrera	27-OCT-07
11	9 Luis	402569871	Roberto	Rivera	Moaraga	16-DEC-02
12	11 Jeffrey	118670120	Daniel	Leiva	Cascante	21-MAR-03
13	12 Esteban	119872619	Alfredo	Perez	Caceres	22-APR-00
14	13 Andres	290871627	Eduardo	Villalobos	Sandi	31-DEC-87
15	14 Francisco	390812345	Franco	Sanchez	Ruben	12-JAN-99
16	15 Hilda	568909876	Heriberto	Robles	Torres	09-SEP-89
17	16 Carlos	435679501	Humberto	Flores	Valerio	07-JUL-98
18	17 James	189098762	Kevin	Valverde	Alpizar	01-SEP-00
19	18 Pedro	198098765	Pablo	Matarrrita	Smith	03-DEC-96
20	19 Rachell	345987654	Maria	Bermudez	Saiatar	10-MAR-98
21	20 Blanca	108565230	Daniela	Lubere	Carvajal	18-APR-58
22	30 Johnny	112345678	David	Morales	Vega	11-JUL-82
23	31 Jeffry	119845679	Alexander	Aviles	Figueroa	14-JUN-89
24	32 Luciana	112345671	Yancy	Alfaro	Bonilla	09-JAN-01
25	33 Anabel	112398672	Elizabeth	Dario	Cisneros	23-JUL-04
26	34 Daniel	112345673	Armando	Castro	Jarquin	24-DEC-96
27	35 Jeannette	112345984	Sandra	Mora	Zamora	23-AUG-72
28	36 Kevin	112398675	Richard	Iglesias	Cerratti	12-SEP-85
29	37 Josette	112345676	Laurenth	Oreamuno	Jara	29-MAR-01
30	38 Fernando	198345677	Andres	Rojas	Loria	18-JUL-02
31	39 Katherine	119845681	Patricia	Carcamo	Heilo	15-APR-62
32	40 Paula	112345682	Digna	Jarquin	Altamirano	14-FEB-63
33	41 Iris	112398683	Tatiana	Chavarria	Montero	04-DEC-01
34	42 Loana	112345684	Emilia	Chavez	Alvarado	09-MAY-96
35	43 Fabricio	112345685	Mauro	Alvarado	Flores	04-APR-58
36	44 Luisa	112345686	Raquel	Romero	Cascante	12-APR-02
37	46 Bernardo	704569847	Jose	Hernandez	Parrales	08-AUG-99
38	47 Adriana	187561247	Stephany	Hernandez	Carrillo	01-JAN-00
39	48 Benito	714569872	Esteban	Arias	Munguia	15-MAR-63
40	49 Adrian	204568496	Jose	Herrera	Mata	16-NOV-85

- This is the result of the query:

Oracle SQL Developer : C:\app\JeffreyLeiva\oradata\consultaporLetraB.sql

File Edit View Navigate Run Source Team Tools Window Help

Connections Oracle Connections BASEUNO Tables (Filtered) CUSTOMER EMAIL EMPLOYEEGE PEOPLEGE PERSON ID_PERSON FIRST_NAME IDENTITYCARD SECOND_NAME FIRST_SURNANE SECOND_SURNANE BIRTHDATE PHONE PHONECATEGORY PHONEL2 PRODUCT PURCHASE PURCHASEXPRODUCT SHOPXPROD Views Indexes Packages Procedures Operators Queues Queues Tables Triggers Types Sequences

SQL Worksheet History

Worksheet Query Builder

```
SELECT first_name from person
where first_name LIKE 'B%'
```

Query Result x

FIRST_NAME
1 Bianka
2 Bernardo
3 Benito

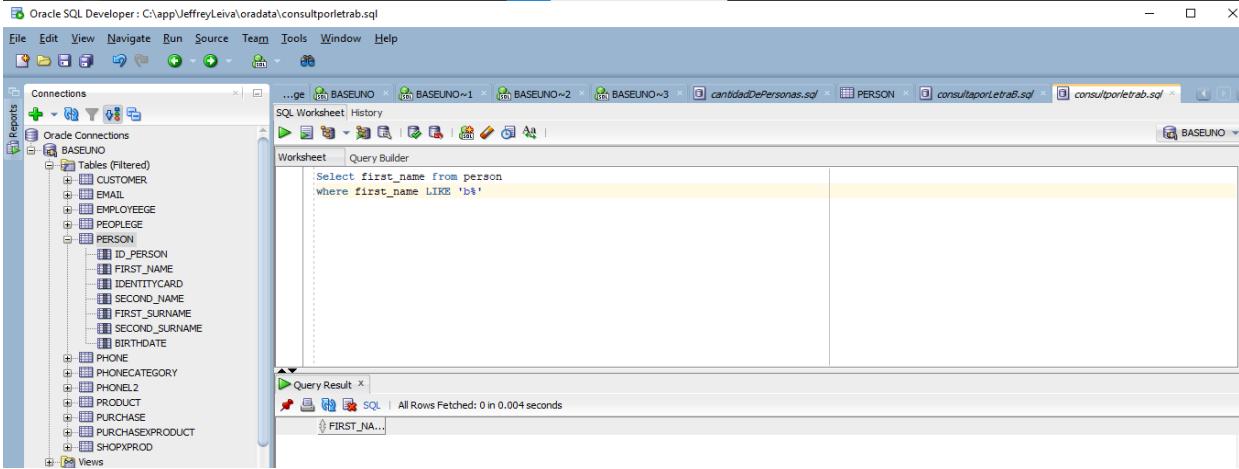
All Rows Fetched: 3 in 0.005 seconds

3. Make a sql to get all the people whose name begins with the letter b (in lowercase)

The screenshot shows the Oracle SQL Developer interface with the 'PERSON' table selected. The table contains 40 rows of data, with the first few rows visible:

ID_PERSON	FIRST_NAME	IDENTITYCARD	SECOND_NAME	FIRST_SURNAME	SECOND_SURNAME	BIRTHDATE
1	20 Mariana	478985748	Steffany	Oroco	Campos	27-MAY-03
2	0 Tamara	118750560	Nicole	Rodriguez	Luna	28-MAY-03
3	1 Melissa	119560234	Laura	Zarate	Lopez	15-APR-98
4	2 Marcela	202679512	Maria	Santana	Hernández	25-MAY-96
5	3 Alejandro	705689412	Sebastian	Fernández	Ortiz	13-SEP-07
6	4 Paula	306872354	Liliana	Perez	López	13-FEB-98
7	5 Ariana	603154786	Vanessa	Gonzalez	Molina	11-NOV-05
8	6 Isabel	452618723	Rosaura	Torres	Benavides	19-FEB-70
9	7 Kenneth	514896458	Ricardo	Ibarra	Vargas	17-AUG-99
10	8 Jezabel	789430412	Hillary	Morales	Barrera	27-OCT-07
11	9 Luis	402569871	Robert	Rivera	Moaraga	16-DEC-02
12	11 Jeffrey	118670120	Daniel	Leiva	Cascante	21-MAR-03
13	12 Esteban	119872619	Alfredo	Perez	Caceres	22-APR-00
14	13 Andres	290871627	Eduardo	Villalobos	Sandi	31-DEC-87
15	14 Francisco	380812345	Franco	Sanchez	Ruben	12-JAN-99
16	15 Hilda	568909876	Heriberto	Robles	Torres	09-SEP-89
17	16 Carlos	435679501	Rumberto	Flores	Valerio	07-JUL-98
18	17 James	189098762	Kevin	Valverde	Alpizar	01-SEP-00
19	18 Pedro	198098765	Pablo	Matarrrita	Smith	03-DEC-96
20	19 Rachell	345897654	Maria	Bermudez	Salazar	10-MAR-98
21	20 Bianka	108565230	Daniela	Llubere	Carvajal	18-APR-88
22	22 30 Johnny	112345678	David	Morales	Vega	11-JUL-82
23	31 Jeffry	119845679	Alexander	Aviles	Figueroa	14-JUN-89
24	32 Luciana	112345671	Yancy	Alfaro	Bonilla	09-JAN-01
25	33 Anabel	112398672	Elizabeth	Dario	Cisneros	23-JUL-04
26	34 Daniel	112345673	Armando	Castro	Jarquin	24-DEC-96
27	35 Jeannette	112345984	Sandra	Mora	Zamora	23-AUG-72
28	36 Kevin	112398675	Richard	Iglesias	Cerratti	12-SEP-85
29	37 Josette	112345676	Laurent	Oreamuno	Jara	29-MAR-01
30	38 Fernando	198345677	Andres	Rojas	Loria	18-JUL-02
31	39 Katherine	119845681	Patricia	Carcamo	Helo	15-APR-62
32	40 Paula	112345682	Digna	Jarquin	Altamirano	14-FEB-63
33	41 Iris	112398683	Tatiana	Chavarria	Montero	04-DEC-01
34	42 Loana	112345684	Emilia	Chavez	Alvarado	09-MAY-96
35	43 Fabricio	112345685	Mauro	Alvarado	Flores	04-APR-58
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39	48 Benito	714569872	Esteban	Arias	Munguia	15-MAR-63
40	49 Adrian	204568496	Jose	Herrera	Mata	16-NOV-85

- This is the result of the query since there are no names with the letter b in lowercase does not show anything, because any name in our table starts with b and by standard in our database place all the names with their initial in capital letter:



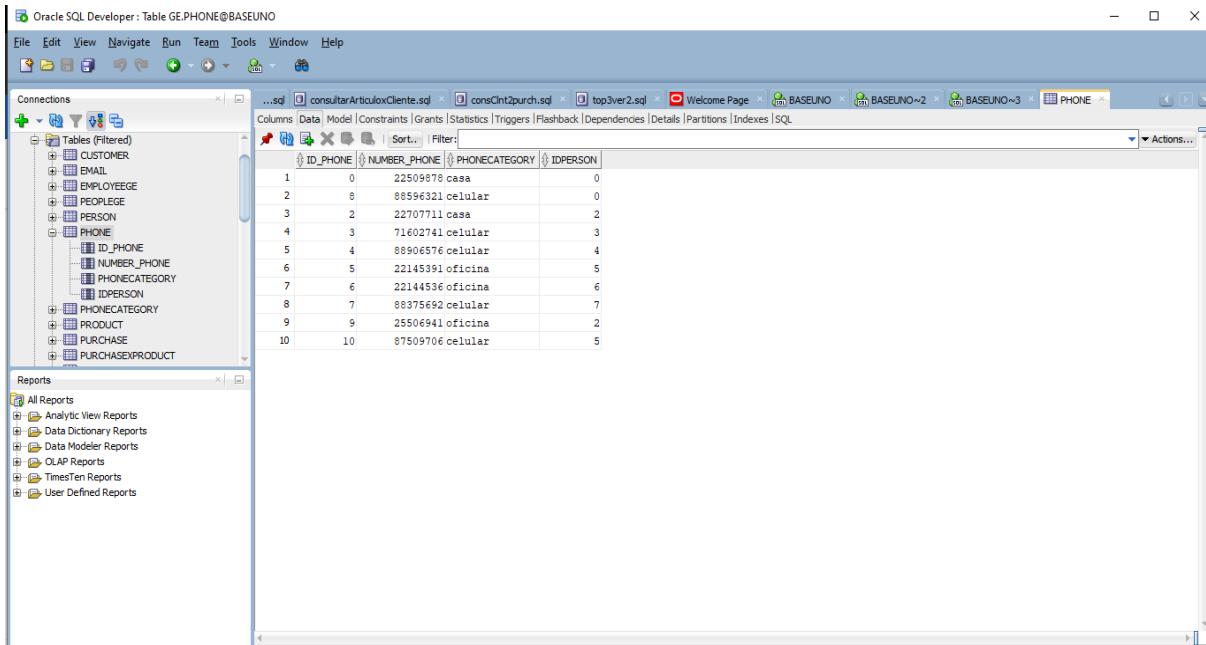
The screenshot shows the Oracle SQL Developer interface. The title bar indicates the connection is to 'BASEUNO' and the file is 'consultaporletrab.sql'. The left sidebar shows the 'Connections' tree with 'BASEUNO' expanded, revealing tables like CUSTOMER, EMAIL, EMPLOYEEGE, PEOPLEGE, PERSON, and PHONE. The central area has a 'Worksheet' tab open with the following SQL code:

```
Select first_name from person
where first_name LIKE 'B%'
```

Below the worksheet is a 'Query Result' tab showing the output of the query.

4. Indicate the total number of phone numbers per person.

- This is an image of the table phone before the query:



The screenshot shows the Oracle SQL Developer interface with the 'PHONE' table selected. The title bar indicates the connection is to 'BASEUNO' and the file is 'PHONE'. The left sidebar shows the 'Connections' tree with 'BASEUNO' expanded, revealing tables like CUSTOMER, EMAIL, EMPLOYEEGE, PEOPLEGE, PERSON, and PHONE. The central area shows the 'PHONE' table data in a grid:

ID_PHONE	NUMBER_PHONE	PHONECATEGORY	IDPERSON
1	0	22509878 casa	0
2	8	88596321 celular	0
3	2	22707711 casa	2
4	3	71602741 celular	3
5	4	88906576 celular	4
6	5	22145391 oficina	5
7	6	22144536 oficina	6
8	7	88375692 celular	7
9	9	25506941 oficina	2
10	10	87509706 celular	5

- This is an image of the result of query:

```

select first_name,second_name,identitycard,count(number_phone)
from PHONE
inner join person
ON person.id_person = phone.idperson
group by first_name,second_name,identitycard

```

FIRST_NAME	SECOND_NAME	IDENTITYCARD	COUNT(NUMBER_PHONE)
1 Paula	Liliana	306872354	1
2 Kenneth	Ricardo	514896458	1
3 Alejandro	Sebastian	705689412	1
4 Ariana	Vanessa	603154786	2
5 Isabel	Rosaura	452618723	1
6 Tamara	Nicole	118750560	2
7 Marcela	Maria	202678512	2

5. Make a sql that returns all the people that have ‘casa’ as their type of phone:

- This is an image of the table phone after the query:

ID_PHONE	NUMBER_PHONE	PHONECATEGORY	IDPERSON
1	0	22509878 casa	0
2	8	88596321 celular	0
3	2	22707711 casa	2
4	3	71602741 celular	3
5	4	88906576 celular	4
6	5	22145391 oficina	5
7	6	22144536 oficina	6
8	7	88375692 celular	7
9	9	25506941 oficina	2
10	10	87509706 celular	5

- This is the result of the query:

The screenshot shows the Oracle SQL Developer interface. In the center, the 'Worksheet' tab displays a SQL query:

```
SELECT first_name,second_name,identitycard,id_person,phonecategory
FROM person
inner join phone
ON person.id_person = phone.idperson
where phone.phonecategory = 'casa'
```

Below the query, the 'Query Result' tab shows the output:

FIRST_NAME	SECOND_NAME	IDENTITYCARD	ID_PERSON	PHONECATEGORY
1 Tamara	Nicole	118750560	0	casa
2 Marcela	Maria	202678512	2	casa

6. Create a view that contains all the people that make less than \$3000:

- These are an image of the table person:

The screenshot shows the Oracle SQL Developer interface with the 'PERSON' table selected. The table has the following columns:

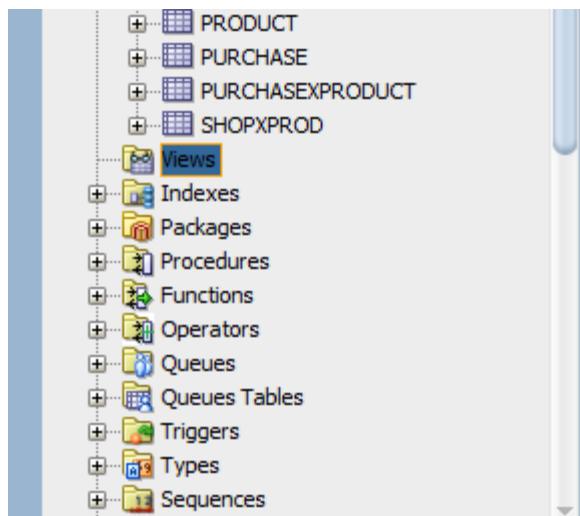
- ID_PERSON
- FIRST_NAME
- IDENTITYCARD
- SECOND_NAME
- FIRST_SURNAME
- SECOND_SURNAME
- BIRTHDATE

The table data is as follows:

ID_PERSON	FIRST_NAME	IDENTITYCARD	SECOND_NAME	FIRST_SURNAME	SECOND_SURNAME	BIRTHDATE
1	20 Mariana	478985748	Steffany	Orozco	Campos	27-MAY-03
2	0 Tamara	118750560	Nicole	Rodriguez	Luna	28-MAY-03
3	1 Melissa	119560234	Laura	Zarate	Lopez	15-APR-98
4	2 Marcela	202678512	Maria	Santana	Hernandez	25-MAY-86
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7	5 Ariana	603154786	Vanessa	Gonzalez	Molina	11-NOV-05
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9	7 Kenneth	514896458	Ricardo	Ibarra	Vargas	17-AUG-99
10	8 Jezabel	789630412	Hillary	Morales	Barrera	27-OCT-07
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12	11 Jeffrey	118670120	Daniel	Leiva	Cascante	21-MAR-03
13	12 Esteban	119872619	Alfredo	Perez	Caceres	22-APR-00
14	13 Andres	290871627	Eduardo	Villalobos	Sandi	31-DEC-87
15	14 Francisco	380812345	Franco	Sanchez	Ruben	12-JAN-99
16	15 Hilda	568909876	Heriberto	Robles	Torres	09-SEP-89
17	16 Carlos	435679501	Rumbero	Flores	Valerio	07-JUL-98
18	17 James	189098762	Kevin	Valverde	Alpizar	01-SEP-00
19	18 Pedro	198098765	Pablo	Matarrita	Smith	03-DEC-96
20	19 Rachell	345987654	Maria	Bermudez	Salazar	10-MAR-98
21	20 Blanca	108565230	Daniela	Llubere	Carvajal	18-APR-58
22	30 Johnny	112345678	David	Morales	Vega	11-JUL-82
23	31 Jeffry	119845679	Alexander	Aviles	Figueroa	14-JUN-89
24	32 Luciana	112345671	Yancy	Alfaro	Bonilla	09-JAN-01
25	33 Anabel	112398672	Elizabeth	Dario	Cisneros	23-JUL-04
26	34 Daniel	112398673	Andrea	Caceres	Torres	24-MAR-06

25	33	Anabel	112398672	Elizabeth	Dario	Cisneros	23-JUL-04
26	34	Daniel	112345673	Armando	Castro	Jarquin	24-DEC-96
27	35	Jeanette	112345984	Sandra	Mora	Zamora	23-AUG-72
28	36	Kevin	112390675	Richard	Iglesias	Cerratti	12-SEP-85
29	37	Josette	112345676	Laurenth	Oreamuno	Jara	29-MAR-01
30	38	Fernando	198345677	Andres	Rojas	Loria	18-JUL-02
31	39	Katherine	119845681	Patricia	Carcamo	Helo	15-APR-62
32	40	Paula	112345682	Digna	Jarquin	Altamirano	14-FEB-63
33	41	Iris	112398683	Tatiana	Chavarria	Montero	04-DEC-01
34	42	Loana	112345684	Emilia	Chavez	Alvarado	09-MAY-96
35	43	Fabricio	112345685	Mauro	Alvarado	Flores	04-APR-58
36	44	Luisa	112345686	Raquel	Romero	Cascante	12-APR-02
37	46	Bernardo	704569847	Jose	Hernández	Parrales	08-AUG-99
38	47	Adriana	187561247	Stephany	Hernández	Carrillo	01-JAN-00
39	48	Benito	714569872	Esteban	Arias	Munguia	15-MAR-63
40	49	Adrian	204568496	Jose	Herrera	Mata	16-NOV-85

- This is an image before the creation of the view:



- This is an image after the query:

The screenshot shows the Oracle SQL Developer interface with the results of a query displayed in a grid. The results are as follows:

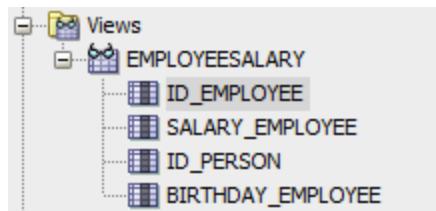
ID_EMPLOYEE	SALARY_EMPLOYEE	BIRTHDAY_EMPLOYEE
1	10	2000 10 18-APR-58
2	46	1500 46 08-AUG-99
3	47	2700 47 01-JAN-00
4	48	2030 48 15-MAR-63
5	49	2900 49 16-NOV-65

7. Create two views with the top 3 of people with the highest salaries based on the next two queries. What is the difference between them?

```
select rownum id,first_name||' '||last_name nombre ,salary from (select
first_name,last_name,salary
from employee order by salary desc) where rownum <=1;
```

```
SELECT first_name||' '||last_name nombre,salary FROM (SELECT
first_name,last_name,salary, RANK() OVER (ORDER BY salary DESC)
salary_rank FROM employee ) WHERE salary_rank <= 1;
```

- Before the creation of the views:



- After the creation of the view 1:

ID	SALARY_EMPLOYEE	NAME
1	805000	Marcela María Santana Hernández
2	747500	Isabel Rosaura Torres Benavides
3	700000	Melissa Laura Zarate López

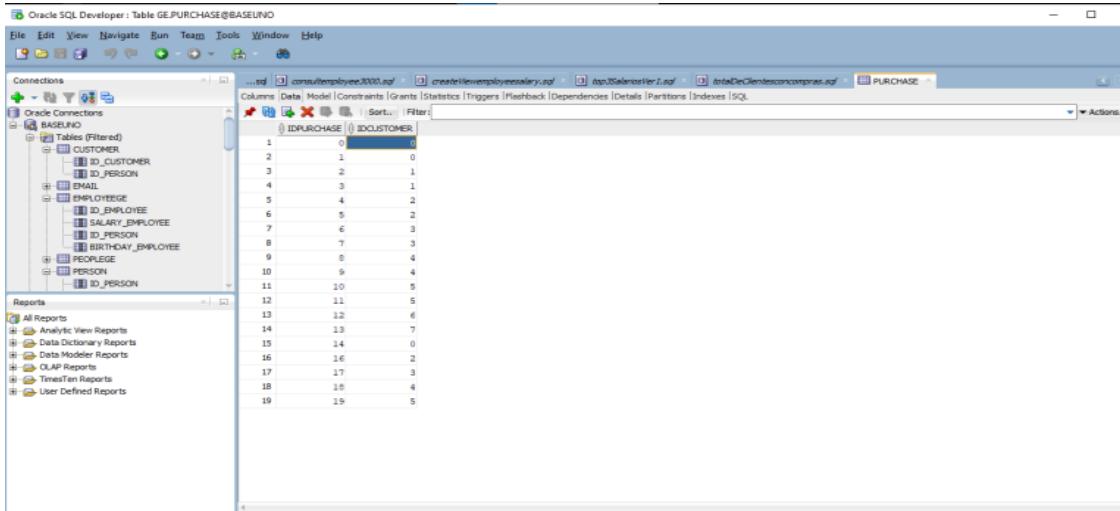
- After the creation of the view 2:

The screenshot shows the Oracle SQL Developer interface. On the left, the Database Navigator displays the schema structure under the 'Views' node. It lists three views: 'EMPLOYEE_SALARY', 'TOP3VER1', and 'TOP3VER2'. 'TOP3VER2' is highlighted with a yellow selection bar. Under 'TOP3VER2', the columns 'NOMBRE' and 'SALARY_EMPLOYEE' are visible. The main workspace shows a query result for the 'TOP3VER2' view. The results are presented in a table with two columns: 'NOMBRE' and 'SALARY_EMPLOYEE'. The data is as follows:

NOMBRE	SALARY_EMPLOYEE
1 Marcela María Santana Hernández	805000
2 Isabel Rosaura Torres Benavides	747500
3 Melissa Laura Zarate López	700000
4 Ariana Vanessa Gonzalez Molina	700000
5 Paula Liliana Pérez López	700000
6 Alejandro Sebastián Fernández Ortiz	700000

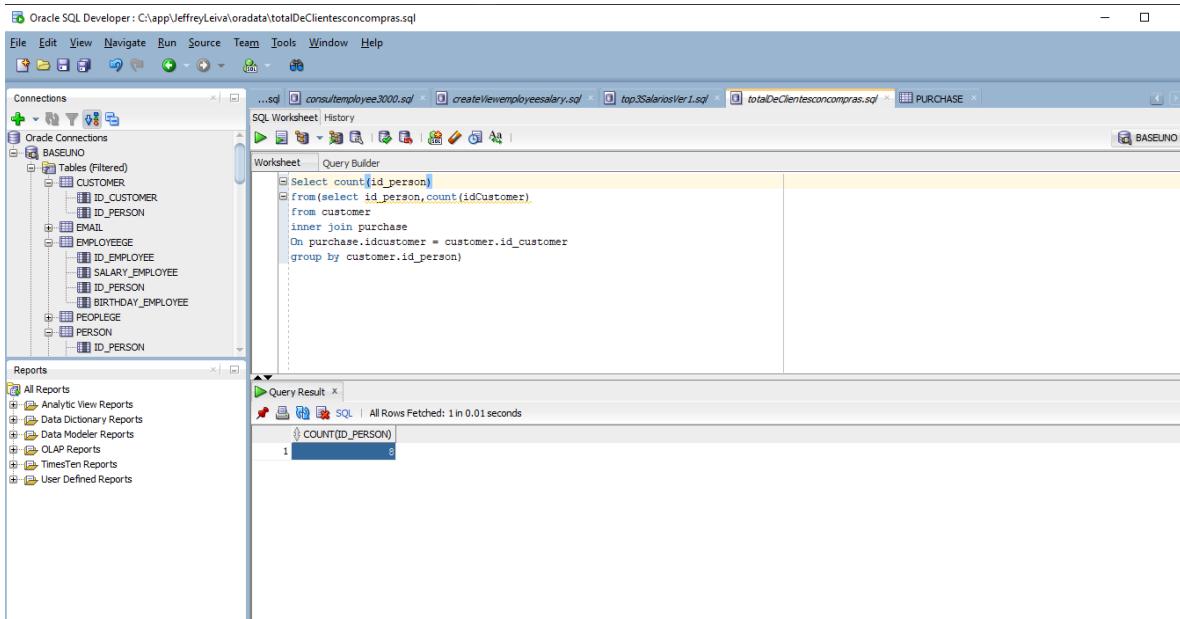
8. Consult the total amount of clients that have purchases

- Here you can see the table of purchases with the id of the customer that made them and the id of the purchase.



IDPURCHASE	IDCUSTOMER
1	0
2	1
3	2
4	3
5	4
6	5
7	6
8	7
9	8
10	9
11	10
12	11
13	12
14	13
15	14
16	16
17	17
18	18
19	19

- Here is the result after the query:



```
SQL Worksheet: History
Select count(id_person)
from (select id_person, count(idCustomer)
      from customer
      inner join purchase
      On purchase.idcustomer = customer.id_customer
      group by customer.id_person)
```

COUNT(ID_PERSON)
1

9. Consult the total amount of clients that exist

- Here is the result of the query:

The screenshot shows the Oracle SQL Developer interface. The 'Connections' tree on the left shows a connection to 'BASEUNO'. The 'Tables (Filtered)' section under 'BASEUNO' includes 'CUSTOMER', 'EMPLOYEE', 'PERSON', and 'EMAIL'. The 'Worksheet' tab in the center contains the following SQL query:

```
SELECT count()
from customer;
```

The 'Query Result' tab at the bottom shows the output:

COUNT()
15

10. List the products bought by a client grouped by client

- Here you can see the result after the query:

The screenshot shows the Oracle SQL Developer interface. The 'Connections' tree on the left shows a connection to 'BASEUNO'. The 'Tables (Filtered)' section under 'BASEUNO' includes 'customer', 'purchase', 'purchasexproduct', and 'person'. The 'Worksheet' tab in the center contains the following SQL query:

```
SELECT customer.id_customer,purchasexproduct.idproduct
from customer
inner join purchase
ON customer.id_customer = purchase.idcustomer
inner join purchasexproduct
ON purchase.idpurchase = purchasexproduct.idpurchase
GROUP By(customer.id_customer,purchasexproduct.idproduct)
```

The 'Query Result' tab at the bottom shows the output:

ID_CUSTOMER	IDPRODUCT	
1	4	11
2	5	2
3	2	4
4	3	6
5	6	5
6	2	3
7	2	13

Oracle SQL Developer : C:\app\JeffreyLeiva\oradata\consultarArticulosCliente.sql

File Edit View Navigate Run Source Team Window Help

Connections Oracle Connections BASEUNO Tables (Filtered) Views Indexes Packages Procedures Functions Operators Queues Queues Tables Triggers Reports All Reports Analytic View Reports Data Dictionary Reports Data Modeler Reports OLAP Reports TimesTen Reports User Defined Reports

Worksheet Query Builder

```
SELECT customer.id_customer, purchasexproduct.idproduct
FROM customer
INNER JOIN purchase
ON customer.id_customer = purchase.idcustomer
INNER JOIN purchasexproduct
ON purchase.idpurchase = purchasexproduct.idpurchase
GROUP BY (customer.id_customer, purchasexproduct.idproduct)
```

Query Result

ID_CUSTOMER	IDPRODUCT
8	1
9	3
10	4
11	0
12	1
13	5
14	4
15	0

Oracle SQL Developer : C:\app\JeffreyLeiva\oradata\consultarArticulosCliente.sql

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Connections Oracle Connections BASEUNO Tables (Filtered) Views Indexes Packages Procedures Functions Operators Queues Queues Tables Triggers Reports All Reports Analytic View Reports Data Dictionary Reports Data Modeler Reports OLAP Reports TimesTen Reports User Defined Reports

Worksheet Query Builder

```
SELECT customer.id_customer, purchasexproduct.idproduct
FROM customer
INNER JOIN purchase
ON customer.id_customer = purchase.idcustomer
INNER JOIN purchasexproduct
ON purchase.idpurchase = purchasexproduct.idpurchase
GROUP BY (customer.id_customer, purchasexproduct.idproduct)
```

Query Result

ID_CUSTOMER	IDPRODUCT
12	1
13	5
14	4
15	0
16	3
17	0
18	5
19	7

11. Make a sql of the clients that have more than two purchases.

- Here you can see the table of purchases, the customers 2,4,5,3 and 0 have 3 or more purchases.

Oracle SQL Developer : Table GE_PURCHASE@BASEUNO

File Edit View Navigate Run Team Tools Window Help

Connections Oracle Connections BASEUNO Tables (Filtered) CUSTOMER EMAIL EMPLOYEE PEOPLE PERSON

PURCHASE

IDPURCHASE	IDCUSTOMER
1	0
2	1
3	2
4	3
5	4
6	5
7	6
8	7
9	8
10	9
11	10
12	11
13	12
14	13
15	14
16	16
17	17
18	18
19	19

Reports All Reports Analytic View Reports Data Dictionary Reports Data Modeler Reports OLAP Reports TimesTen Reports User Defined Reports

- Here is the result of the query:

The screenshot shows the Oracle SQL Developer interface. The top menu bar includes File, Edit, View, Navigate, Run, Source, Team, Tools, Window, and Help. The title bar displays "Oracle SQL Developer : C:\app\JeffreyLeiva\oradata\consClnt2purch.sql". The Connections sidebar lists various database objects like PHONE, PHONECATEGORY, PHONEL2, PRODUCT, and PURCHASE. The Reports sidebar lists All Reports, Analytic View Reports, Data Dictionary Reports, Data Modeler Reports, OLAP Reports, TimesTen Reports, and User Defined Reports. The central area has tabs for SQL Worksheet, History, and Query Builder. The Query Builder tab contains the following SQL code:

```

Select id_customer
from (select customer.id_customer,count(idCustomer)
      from purchase
      inner join customer
      On purchase.idcustomer = customer.id_customer
     GROUP BY (customer.id_customer)
    HAVING count(idCustomer) > 2)

```

The Query Result tab shows the output of the query:

ID_CUSTOMER	COUNT
1	2
2	4
3	5
4	3
5	0