

## **Laboratory 03**

Jeffrey Daniel Leiva Cascante

Tamara Nicole Rodríguez Luna

Computer engineering department, Tecnológico de Costa Rica

IC4301 – Databases I

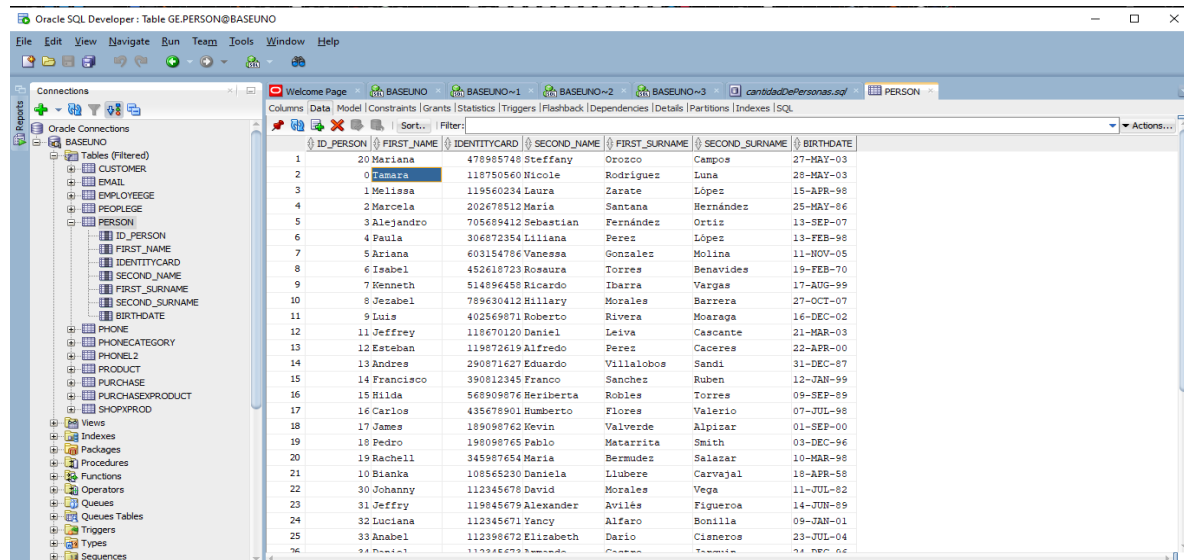
Teacher: Msc. Adriana Álvarez Figueroa.

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:

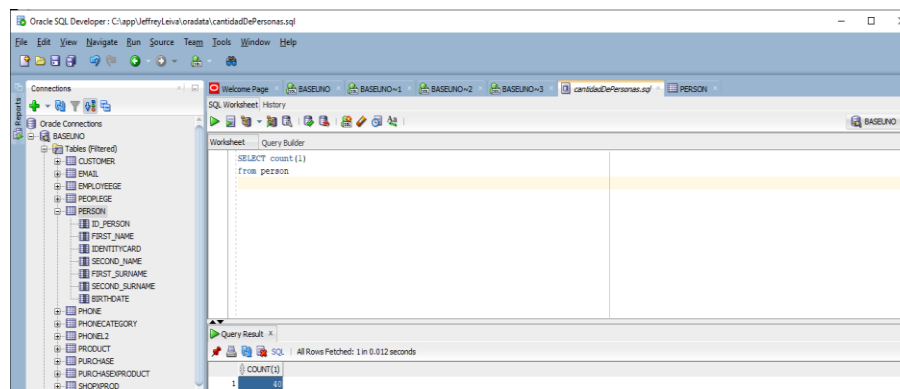
1. Check the total number of people that exist.
  - In these images you can see the table Person full:



The screenshot shows the Oracle SQL Developer interface with the PERSON table selected in the left pane. The main window displays the table's data, including columns for ID\_PERSON, FIRST\_NAME, IDENTITYCARD, SECOND\_NAME, FIRST\_SURNAME, SECOND\_SURNAME, and BIRTHDATE. The data is presented in a grid format with 34 rows.

ID_PERSON	FIRST_NAME	IDENTITYCARD	SECOND_NAME	FIRST_SURNAME	SECOND_SURNAME	BIRTHDATE
1	20 Mariana	478965748	Steffany	Orosco	Campos	27-MAY-03
2	0 Camara	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
5	3 Alejandro	705689412	Sebastian	Fernandez	Ortiz	13-SEP-07
6	4 Paula	306872354	Liliana	Perez	Lopez	13-FEB-98
7	5 Ariana	603154786	Vanessa	Gonzalez	Molina	11-NOV-05
8	6 Isabel	452618723	Roseara	Torres	Benavides	19-FEB-70
9	7 Kenneth	514896458	Ricardo	Ibarra	Vargas	17-AUG-99
10	8 Jezabel	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	Heriberta	Robles	Torres	09-SEP-89
17	16 Carlos	435678901	Humberto	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 Rachel	345987654	Maria	Bermudez	Salazar	10-MAR-98
21	10 Blanka	108565230	Daniela	Llubere	Carvajal	18-APR-98
22	30 Johnny	112345678	David	Morales	Vega	11-JUL-82
23	31 Jeffrey	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	Jarquín	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	Helo	15-APR-62
32	40 Paula	112345682	Digna	Jarquín	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 the result of the query:



The screenshot shows the Oracle SQL Developer interface with a query executed. The query is: `SELECT count(1) from person`. The result is displayed in the 'Query Result' pane, showing a single row with the value 40.

COUNT(1)
40

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:

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-66
5	3 Alejandro	705689412	Sebastian	Fernandez	Ortiz	13-SEP-07
6	4 Paula	306872354	Liliana	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	514896459	Ricardo	Ibarra	Vargas	17-AUG-99
10	8 Jezabel	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	Heriberta	Robles	Torres	09-SEP-89
17	16 Carlos	435678901	Humberto	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	10 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

25	33 Anabel	112398672	Elizabeth	Dario	Cisneros	23-JUL-04
26	34 Daniel	112345673	Armando	Castro	Jarquín	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	Helo	15-APR-62
32	40 Paula	112345682	Digna	Jarquín	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 the result of the query:

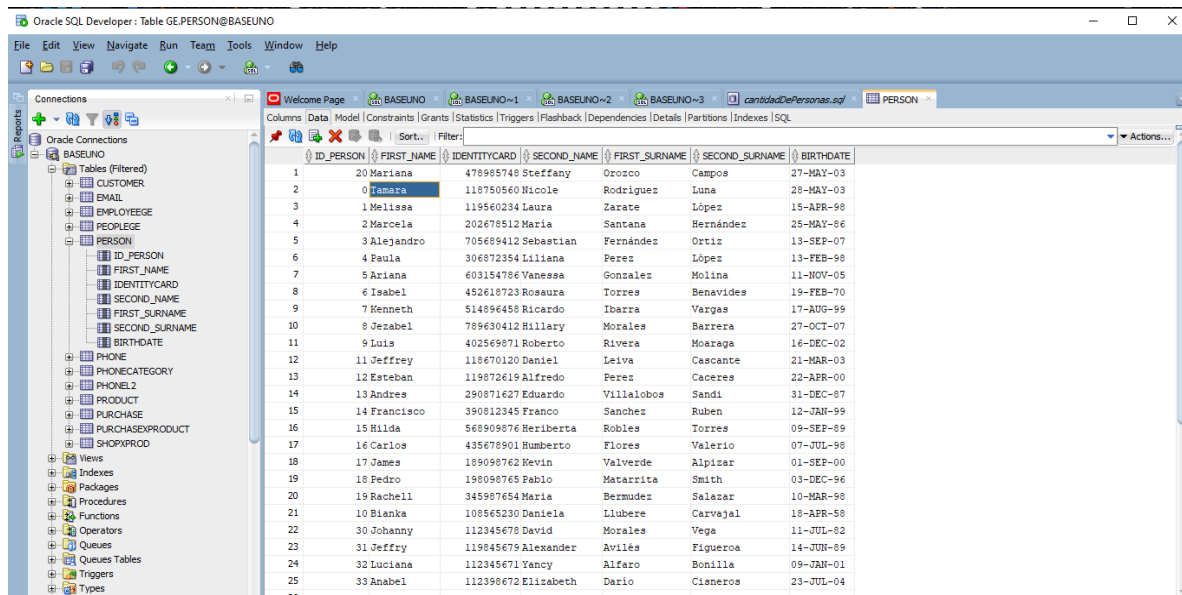
```

SELECT first_name FROM person
WHERE first_name LIKE 'B%'

```

FIRST_NAME
1 Blanca
2 Bernardo
3 Benito

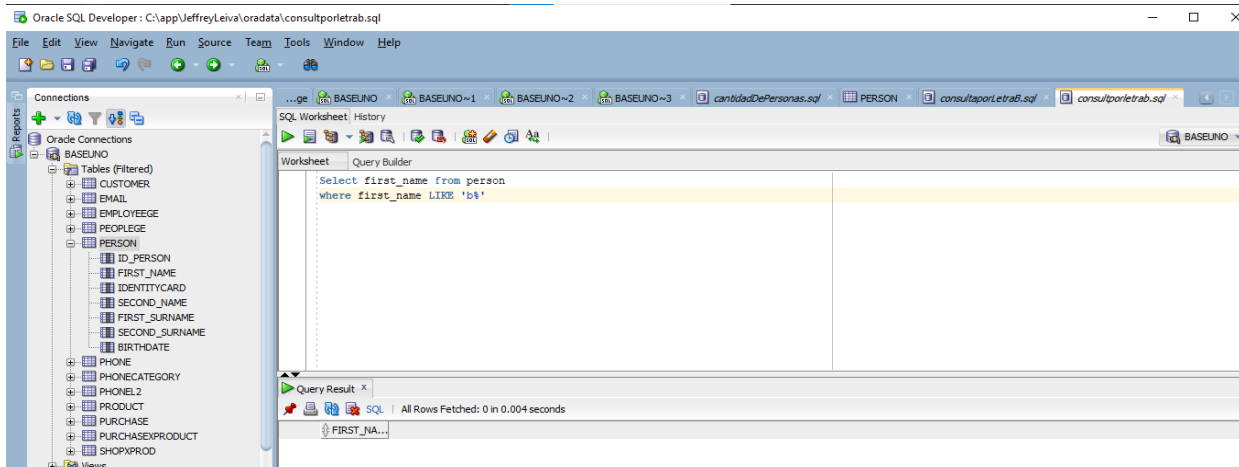
3. Make a sql to get all the people whose name begins with the letter b (in lowercase)



The screenshot shows the Oracle SQL Developer interface. The left sidebar displays a tree view of the database schema, including tables like CUSTOMER, EMPLOYEE, and PERSON. The main window shows a query result for the table PERSON, filtered by the condition WHERE FIRST\_NAME LIKE 'b%'. The results are displayed in a table with columns: ID\_PERSON, FIRST\_NAME, IDENTITYCARD, SECOND\_NAME, FIRST\_SURNAME, SECOND\_SURNAME, and BIRTHDATE. The results are sorted by ID\_PERSON in ascending order.

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
5	3 Alejandro	705689412	Sebastian	Fernandez	Ortiz	13-SEP-07
6	4 Paula	306872354	Liliana	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 Jezabel	789630412	Willary	Morales	Barrera	27-OCT-07
11	9 Luis	402569871	Roberto	Rivera	Moeraga	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	Heriberta	Robles	Torres	09-SEP-89
17	16 Carlos	435678901	Rumberto	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	10 Blanca	108565230	Daniela	Llubere	Carvajal	18-APR-98
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	Jarquín	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	Helo	15-APR-62
32	40 Paula	112345682	Digna	Jarquín	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-98
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 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:



#### 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 table data is displayed in the main window, showing 10 rows of data. The columns are: ID\_PHONE, NUMBER\_PHONE, PHONECATEGORY, and IDPERSON.

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:

Oracle SQL Developer: C:\app\Jeffrey.Leiva\oradata\consultarTelefonoPorPersona.sql

File Edit View Navigate Run Source Team Tools Window Help

Connections

Tables (Filtered)

- CUSTOMER
- EMAIL
- EMPLOYEE
- PEOPLEGE
- PERSON
- PHONE
  - ID\_PHONE
  - NUMBER\_PHONE
  - PHONECATEGORY
  - IDPERSON
- PHONECATEGORY
- PRODUCT
- PURCHASE
- PURCHASEPRODUCT

Reports

All Reports

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

SQL Worksheet: History

Worksheet Query Builder

```
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
```

Script Output x Query Result x

SQL All Rows Fetched: 7 in 0.007 seconds

	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:

Oracle SQL Developer: Table GE.PHONEL2@BASEUNO

File Edit View Navigate Run Team Tools Window Help

Connections

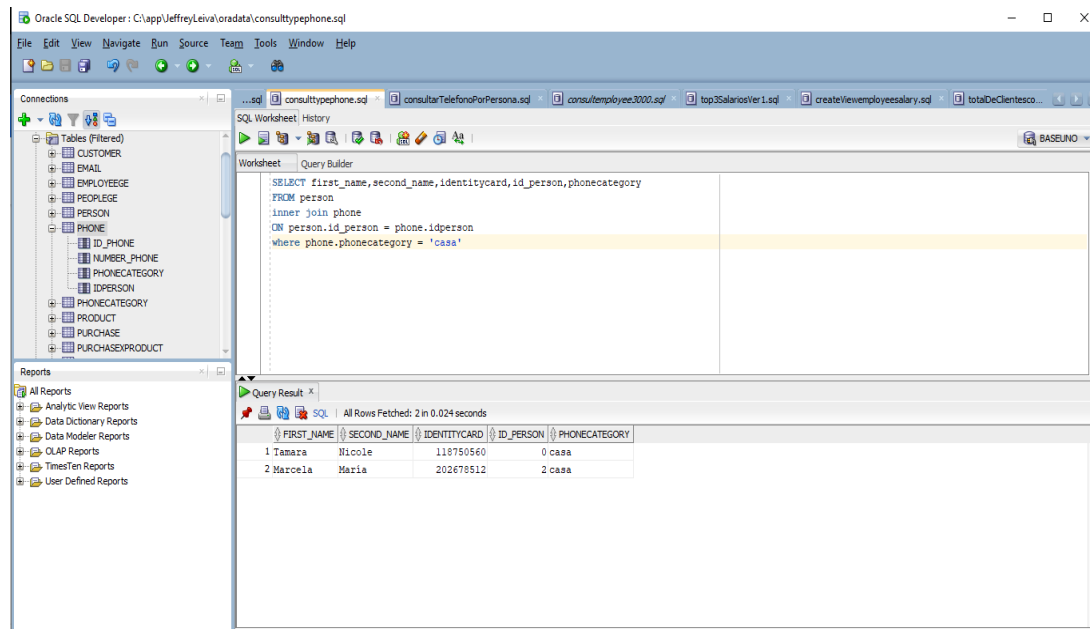
Oracle Connections

- BASEUNO
  - Tables (Filtered)
    - CUSTOMER
    - EMAIL
    - EMPLOYEE
    - PEOPLEGE
    - PERSON
      - ID\_PERSON
      - FIRST\_NAME
      - IDENTITYCARD
      - SECOND\_NAME
      - FIRST\_SURNAME
      - SECOND\_SURNAME
      - BIRTHDATE
    - PHONE
      - ID\_PHONE
      - NUMBER\_PHONE
      - PHONECATEGORY
      - IDPERSON
    - PHONECATEGORY
      - ID\_CATEGORY
      - TYPE\_PHONE
    - PHONEL2
      - ID\_PHONE
      - NUMBER\_PHONE
      - PHONECATEGORY
      - IDPERSON
    - PRODUCT
    - PURCHASE
    - PURCHASEPRODUCT
    - SHOPXPROD
  - Views
  - Indexes
  - Packages
  - Procedures
  - Functions

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

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	22144636 oficina	6
8	7	88375692 celular	7
9	9	25506941 oficina	2
10	10	87509706 celular	5

- This is the result of the query:



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

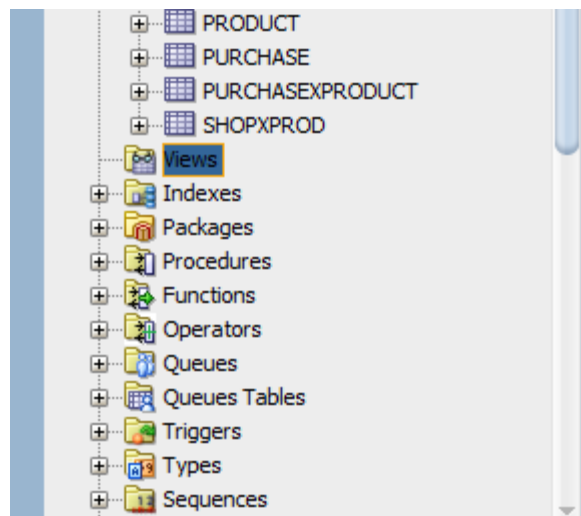
- These are an image of the table person:

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

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-96
5	3 Alejandro	705689412	Sebastian	Fernandez	Ortiz	13-SEP-07
6	4 Paula	306872354	Liliana	Perez	Lopez	13-FEB-98
7	5 Ariana	603154766	Vanessa	Gonzalez	Holina	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	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-97
15	14 Francisco	390812345	Franco	Sanchez	Ruben	12-JAN-99
16	15 Hilda	568909876	Heriberto	Robles	Torres	09-SEP-99
17	16 Carlos	435679901	Humberto	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 Rachel	345987654	Maria	Bermudez	Salazar	10-MAR-98
21	10 Blanka	108565230	Daniela	Llubere	Carvajal	18-APR-98
22	30 Johnny	112345678	David	Morales	Vega	11-JUL-82
23	31 Jeffrey	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	Isabella	Caceres	Torres	24-DEC-98

25	33 Anabel	112390672 Elizabeth	Dario	Cisneros	23-JUL-04
26	34 Daniel	112345673 Armando	Castro	Jarquín	24-DEC-96
27	35 Jeannette	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	Jarquín	Altamirano	14-FEB-63
33	41 Iris	112390683 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:

Oracle SQL Developer: View GE.EMPLOYEESALARY@BASEUNO

Columns | Data | grants | Dependencies | Details | Triggers | SQL | Errors

ID_EMPLOYEE	SALARY_EMPLOYEE	ID_PERSON	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-85

The screenshot shows the Oracle SQL Developer interface with the 'EMPLOYEESALARY' view selected in the schema browser. The view's columns are displayed in the main window, showing a list of employee IDs, salaries, person IDs, and birthdays.



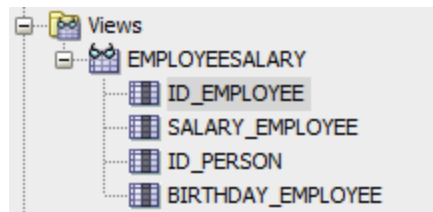
7. Create two views with the top 3 of people with the highest salaries based on the next two queries. What is the difference between them?

```
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:

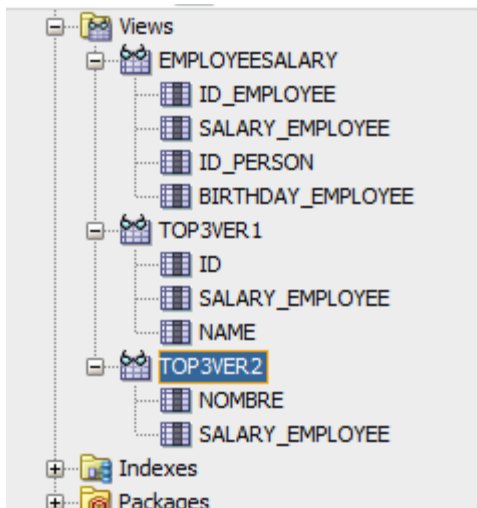


- After the creation of the view 1:

The screenshot shows the Oracle SQL Developer interface. On the left, the 'Views' folder is expanded, showing the EMPLOYEESALARY view. The view's structure is displayed: ID\_EMPLOYEE, SALARY\_EMPLOYEE, ID\_PERSON, and BIRTHDAY\_EMPLOYEE. On the right, the 'Data' tab is selected, showing the data for the EMPLOYEESALARY view. The data is as follows:

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

- After the creation of the view 2:

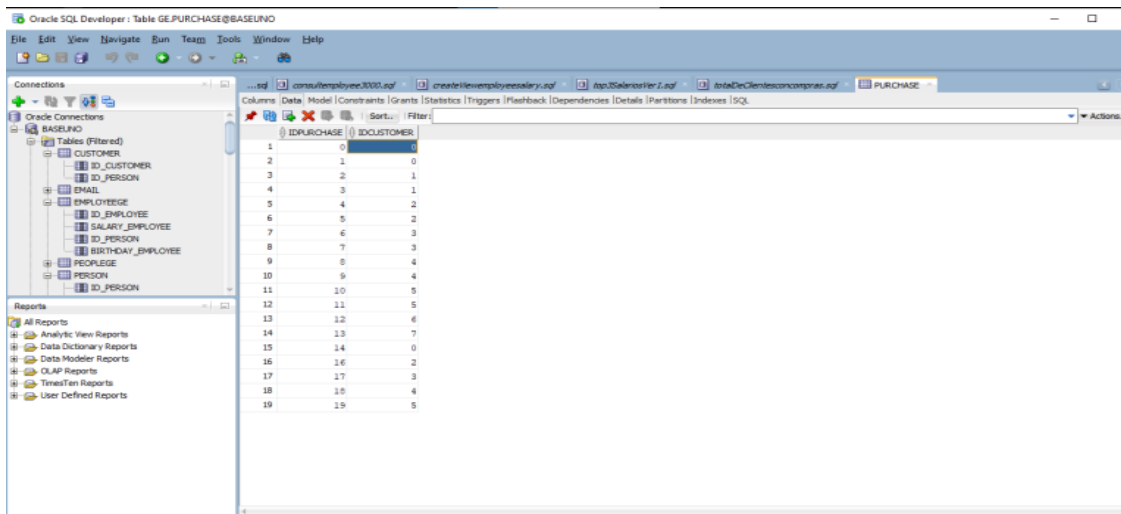


The screenshot shows the Oracle SQL Developer interface. The 'Connections' pane on the left shows the 'Views' folder expanded, with 'TOP3VER2' selected. The main window displays the data for the 'TOP3VER2' view. The data is presented in a table with two columns: 'NOMBRE' and 'SALARY\_EMPLOYEE'. The table contains six rows of data.

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

## 8. Consult the total amount of clients that have purchases

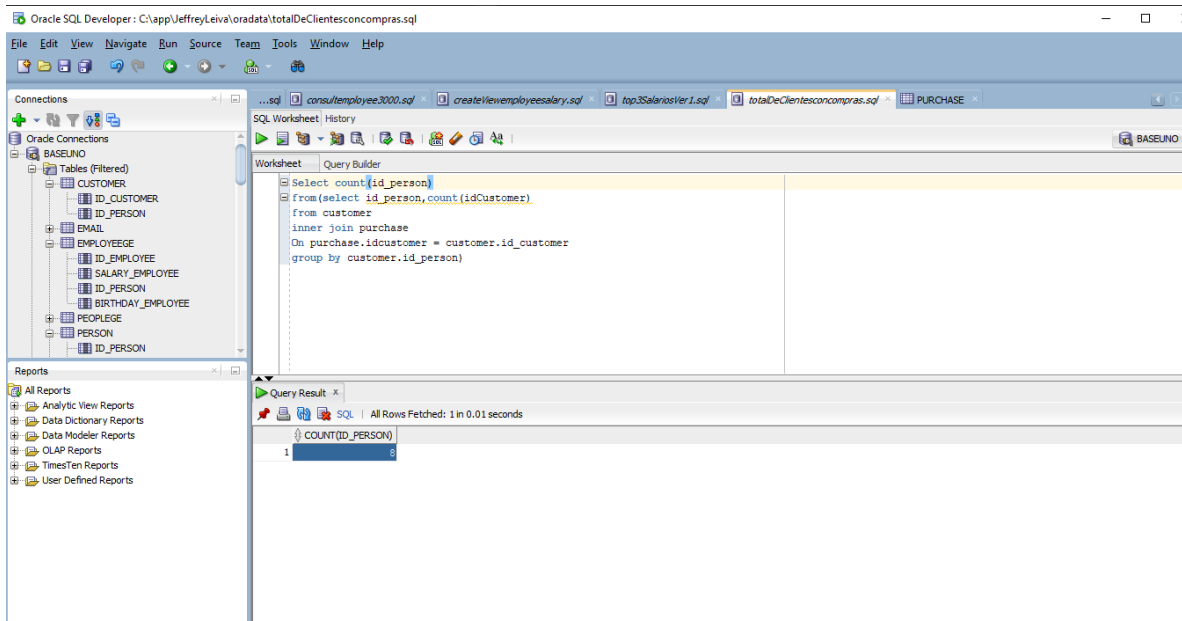
- Here you can see the table of purchases with the id of the customer that made them and the id of the purchase.



The screenshot shows the Oracle SQL Developer interface with the PURCHASE table selected. The table contains 19 rows of data, each with two columns: IDPURCHASE and IDCUSTOMER.

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	15
17	16
18	17
19	18

- Here is the result after the query:



The screenshot shows the Oracle SQL Developer interface with a query executed. The query counts the number of distinct customers who have made purchases. The result is displayed in the Query Result window.

```
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)
19

## 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' pane on the left is expanded to 'BASELINE' and 'Tables (Filtered)'. The 'Query Builder' pane shows a query: `SELECT count(1) from customer`. The 'Query Result' pane shows the result: 1 row with a value of 15.

COUNT(1)
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' pane on the left is expanded to 'BASELINE' and 'Tables (Filtered)'. The 'Query Builder' pane shows a query: `SELECT customer.id_customer, purchaseproduct.idproduct from customer inner join purchase ON customer.id_customer = purchase.idcustomer inner join purchaseproduct ON purchase.idpurchase = purchaseproduct.idpurchase GROUP BY customer.id_customer, purchaseproduct.idproduct`. The 'Query Result' pane shows the result: 19 rows with columns ID\_CUSTOMER and IDPRODUCT.

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

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

File Edit View Navigate Run Source Team Tools 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: SQL Worksheet, History

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: All Rows Fetched: 19 in 0.414 seconds

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\consultarArticuloxCiente.sql

File Edit View Navigate Run Source Team Tools 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: SQL Worksheet, History

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: All Rows Fetched: 19 in 0.414 seconds

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 Source Team Tools Window Help

Connections: Oracle Connections, BASEUNO, Tables (Filtered), CUSTOMER, EMPLOYEE, PEOPLEGE, PERSON, ID\_CUSTOMER, ID\_PERSON, EMAIL, ID\_EMPLOYEE, SALARY\_EMPLOYEE, BIRTHDAY\_EMPLOYEE, ID\_PERSON

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

Columns: Data, Model, Constraints, Grants, Statistics, Triggers, Flashback, Dependencies, Details, Partitions, Indexes, SQL

Sort: Filter: Actions...

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	15
17	16
18	17
19	18

- Here is the result of the query:

The screenshot displays the Oracle SQL Developer interface. The main window shows a SQL Worksheet with the following query:

```
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 results are displayed in the Query Result window, showing 5 rows of data:

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

The interface also shows a tree view of database objects on the left, including PHONE, PHONE\_CATEGORY, TYPE\_PHONE, PHONE2, ID\_PHONE, NUMBER\_PHONE, PHONECATEGORY, IDPERSON, PRODUCT, IDPRODUCT, NAMEPRODUCT, PRICEPRODUCT, PURCHASE, and IDPURCHASE. The Reports panel on the bottom left lists various report types like Analytic View Reports, Data Dictionary Reports, Data Modeler Reports, OLAP Reports, TimesTen Reports, and User Defined Reports.