--inline views

CREATE VIEW VISTA_EMPLE AS SELECT * FROM EMPLOYEES ORDER BY SALARY DESC;

SELECT FIRST_NAME,SALARY FROM VISTA_EMPLE WHERE SALARY > 5000;

	FIRST_NAME	SALARY
1	Steven	24000
2	Neena	17000
3	Lex	17000
4	John	14000
5	Karen	13500
6	Michael	13000

SELECT FIRST_NAME,SALARY FROM (SELECT * FROM EMPLOYEES ORDER BY SALARY DESC) WHERE SALARY > 5000;

	FIRST_NAME	SALARY
1	Steven	24000
2	Neena	17000
3	Lex	17000
4	John	14000
5	Karen	13500
6	Michael	13000

CREATE TABLE REGIONES1 AS SELECT * FROM REGIONS;

SELECT * FROM REGIONES1;

CREATE VIEW VIEW_REGIONES AS SELECT * FROM REGIONES1;

View VIEW_REGIONES creado.

INSERT INTO VIEW_REGIONES VALUES(5,'ANTARTICA');

```
1 fila insertadas.
```

INSERT INTO (SELECT * FROM REGIONES1) VALUES(6,'AUSTRALIA');

```
1 fila insertadas.
```

UPDATE (SELECT * FROM REGIONES1 WHERE REGION_ID> 3) SET
REGION_NAME=LOWER(REGION_NAME);

```
1 fila insertadas.
```

SELECT * FROM REGIONES1

	REGION_ID	REGION_NAME
1	1	Europe
2	2	Americas
3	3	Asia
4	4	middle east and africa
5	5	ttttt
6	5	antartica

/******insert all*******/

DROP TABLE NOM_EMPLES;

DROP TABLE SALARIOS;

CREATE TABLE NOM_EMPLES (COD_EMPLE NUMBER, FIRST_NAME VARCHAR2(100));

CREATE TABLE SALARIOS (COD_EMPLE NUMBER, SALARY NUMBER);

INSERT ALL

  INTO NOM_EMPLES VALUES (EMPLOYEE_ID,FIRST_NAME)

  INTO SALARIOS VALUES (EMPLOYEE_ID,SALARY)

SELECT * FROM EMPLOYEES;

```
214 filas insertadas.
```

SELECT * FROM NOM_EMPLES;

	COD_EMPLE	FIRST_NAME
1	100	Steven
2	101	Neena
3	102	Lex
4	103	Alexander
5	104	Bruce
6	105	David

SELECT * FROM SALARIOS;

	COD_EMPLE	SALARY
1	100	24000
2	101	17000
3	102	17000
4	103	9000
5	104	6000
6	105	4800

```
INSERT ALL
  INTO NOM_EMPLES VALUES (1,'HOLA')
  INTO SALARIOS VALUES (1,100)
SELECT 1 FROM DUAL;
```

2 filas insertadas.

```
/*********insert condicionales************/
DROP TABLE EMPLES_JEFES;
DROP TABLE EMPLES_MANDOS;
DROP TABLE EMPLES_NORMALES;
DROP TABLE FINANCIERO;
CREATE TABLE EMPLES_JEFES (COD_EMPLE NUMBER, NOMBRE VARCHAR2(100), SALARIO
NUMBER);
CREATE TABLE EMPLES_MANDOS (COD_EMPLE NUMBER, NOMBRE VARCHAR2(100), SALARIO
NUMBER,DEPARTAMENTO NUMBER);
CREATE TABLE EMPLES_NORMALES (COD_EMPLE NUMBER, NOMBRE VARCHAR2(100),
SALARIO NUMBER,RESPONSABLE NUMBER);
CREATE TABLE FINANCIERO (COD_EMPLE NUMBER, NOMBRE VARCHAR2(100), SALARIO
NUMBER,RESPONSABLE NUMBER);
```

Table EMPLES_JEFES creado.

Table EMPLES_MANDOS creado.

Table EMPLES_NORMALES creado.

```
INSERT ALL
  WHEN SALARY > 10000 THEN
    INTO EMPLES_JEFES VALUES(EMPLOYEE_ID, FIRST_NAME||' '||LAST_NAME, SALARY)
  WHEN SALARY BETWEEN  8000 AND 10000 THEN
    INTO EMPLES_MANDOS  VALUES(EMPLOYEE_ID, FIRST_NAME||' '||LAST_NAME,
SALARY,DEPARTMENT_ID)
  WHEN SALARY < 8000 THEN
```

INTO EMPLES_NORMALES VALUES(EMPLOYEE_ID, FIRST_NAME||' '||LAST_NAME, SALARY, MANAGER_ID)

WHEN DEPARTMENT_ID=100 THEN

INTO FINANCIERO VALUES(EMPLOYEE_ID, FIRST_NAME||' '||LAST_NAME, SALARY, MANAGER_ID)

```
113 filas insertadas.
```
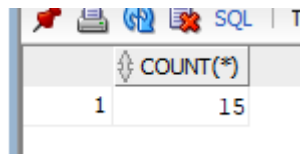
SELECT COUNT(*) FROM EMPLES_JEFES;

COUNT(*)
1   15

SELECT COUNT(*) FROM EMPLES_MANDOS;
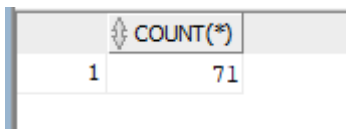
COUNT(*)
1   21

SELECT COUNT(*) FROM EMPLES_NORMALES;
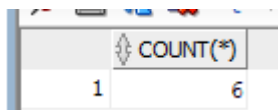
COUNT(*)
1   71

SELECT COUNT(*) FROM FINANCIERO;

COUNT(*)
1   6

--CLAUSULA WITH

SELECT E.FIRST_NAME AS NOMBRE, DC.NUM_EMPLE AS NUMERO_EMPLEADOS,E.DEPARTMENT_ID

FROM EMPLOYEES E,

(SELECT DEPARTMENT_ID, COUNT(*) AS NUM_EMPLE FROM EMPLOYEES GROUP BY DEPARTMENT_ID) DC

WHERE E.DEPARTMENT_ID = DC.DEPARTMENT_ID;

NOMBRE	NUMERO_EMPLEADOS	DEPARTMENT_ID
1 Steven	3	90
2 Neena	3	90
3 Lex	3	90
4 Alexander	5	60
5 Bruce	5	60
6 David	5	60

WITH VISTA_NUM_EMPLE AS

   (SELECT DEPARTMENT_ID, COUNT(*) AS NUM_EMPLE FROM EMPLOYEES GROUP BY DEPARTMENT_ID)

SELECT E.FIRST_NAME AS NOMBRE, DC.NUM_EMPLE AS NUMERO_EMPLEADOS,E.DEPARTMENT_ID

FROM EMPLOYEES E, VISTA_NUM_EMPLE DC

WHERE E.DEPARTMENT_ID = DC.DEPARTMENT_ID;

NOMBRE	NUMERO_EMPLEADOS	DEPARTMENT_ID
1 Steven	3	90
2 Neena	3	90
3 Lex	3	90
4 Alexander	5	60
5 Bruce	5	60
6 David	5	60

Se realiza lo mismo pero con una clausula with que lo hace mas fácil de leer.

```sql
WITH SUM_SALARIO AS (SELECT DEPARTMENT_ID,SUM(SALARY) AS
SALARIO_DEPARTAMENTO FROM EMPLOYEES GROUP BY DEPARTMENT_ID),

    NUM_EMPLE AS (SELECT DEPARTMENT_ID,COUNT(*) AS NUM_EMPLEADOS FROM
EMPLOYEES GROUP BY DEPARTMENT_ID),

    NUM_EMPLE_TOTAL AS (SELECT COUNT(*) AS TOTAL_EMPLEADOS FROM EMPLOYEES)

SELECT DEPARTMENT_NAME,
SALARIO_DEPARTAMENTO,NUM_EMPLEADOS,TOTAL_EMPLEADOS

FROM

DEPARTMENTS NATURAL JOIN SUM_SALARIO NATURAL JOIN
NUM_EMPLE,NUM_EMPLE_TOTAL;
```

	DEPARTMENT_NAME	SALARIO_DEPARTAMENTO	NUM_EMPLEADOS	TOTAL_EMPLEADOS
1	Executive	58000	3	107
2	IT	28800	5	107
3	Finance	51608	6	107
4	Purchasing	24900	6	107
5	Shipping	156400	45	107
6	Sales	304500	34	107

```sql
--ROLL UP

SELECT DEPARTMENT_ID, SUM(SALARY)

FROM EMPLOYEES WHERE DEPARTMENT_ID IS NOT NULL

GROUP BY ROLLUP(DEPARTMENT_ID);
```

	DEPARTMENT_ID	SUM(SALARY)
7	10	4400
8	20	19000
9	40	6500
10	70	10000
11	110	20308
12	(null)	684416

```sql
SELECT DEPARTMENT_ID,JOB_ID,SUM(SALARY)

FROM EMPLOYEES

GROUP BY ROLLUP(DEPARTMENT_ID,JOB_ID)

order by department_id,job_id;
```

	DEPARTMENT_ID	JOB_ID	SUM(SALARY)
28	110	AC_ACCOUNT	8300
29	110	AC_MGR	12008
30	110	(null)	20308
31	(null)	SA_REP	7000
32	(null)	(null)	7000
33	(null)	(null)	691416

SELECT CITY,DEPARTMENT_NAME,COUNT(*)

FROM LOCATIONS NATURAL JOIN DEPARTMENTS JOIN EMPLOYEES USING (DEPARTMENT_ID)

GROUP BY CITY,DEPARTMENT_NAME

ORDER BY CITY,DEPARTMENT_NAME;

	CITY	DEPARTMENT_NAME	EMPLEADOS
16	Southlake	(null)	5
17	Toronto	Marketing	2
18	Toronto	(null)	2
19	(null)	Accounting	2
20	(null)	Administration	1
21	(null)	Executive	3

SELECT CITY,DEPARTMENT_NAME,COUNT(*) AS EMPLEADOS

FROM LOCATIONS NATURAL JOIN DEPARTMENTS JOIN EMPLOYEES USING (DEPARTMENT_ID)

GROUP BY CUBE(CITY,DEPARTMENT_NAME)

ORDER BY CITY,DEPARTMENT_NAME;

	CITY	DEPARTMENT_NAME	JOB_ID	EMPLEADOS
25	Seattle	Finance	(null)	6
26	Seattle	Purchasing	PU_CLERK	5
27	Seattle	Purchasing	PU_MAN	1
28	Seattle	Purchasing	(null)	6
29	Seattle	(null)	AC_ACCOUNT	1
30	Seattle	(null)	AC_MGR	1

SELECT CITY,DEPARTMENT_NAME,JOB_ID,COUNT(*) AS EMPLEADOS

FROM LOCATIONS NATURAL JOIN DEPARTMENTS JOIN EMPLOYEES USING (DEPARTMENT_ID)

GROUP BY CUBE(CITY,DEPARTMENT_NAME,JOB_ID)

ORDER BY CITY,DEPARTMENT_NAME,JOB_ID;

	DEPARTMENT_ID	JOB_ID		SUM(SALARY)	GROUPING(DEPARTMENT_ID)	GROUPING(JOB_ID)
78	(null)	Purchasing	PU_MAN			1
79	(null)	Purchasing	(null)			6
80	(null)	Sales	SA_MAN			5
81	(null)	Sales	SA_REP			29
82	(null)	Sales	(null)			34
83	(null)	Shipping	SH_CLERK			20
84	(null)	Shipping	ST_CLERK			20
85	(null)	Shipping	ST_MAN			5
86	(null)	Shipping	(null)			45
87	(null)	(null)	AC_ACCOUNT			1
88	(null)	(null)	AC_MGR			1
89	(null)	(null)	AD_ASST			1
90	(null)	(null)	AD_PRES			1
91	(null)	(null)	AD_VP			2
92	(null)	(null)	FI_ACCOUNT			5
93	(null)	(null)	FI_MGR			1
94	(null)	(null)	HR_REP			1
95	(null)	(null)	IT_PROG			5
96	(null)	(null)	MK_MAN			1
97	(null)	(null)	MK_REP			1

SELECT
DEPARTMENT_ID,JOB_ID,SUM(SALARY),GROUPING(DEPARTMENT_ID),GROUPING(JOB_ID)

FROM EMPLOYEES

GROUP BY ROLLUP(DEPARTMENT_ID,JOB_ID)

order by department_id,job_id;

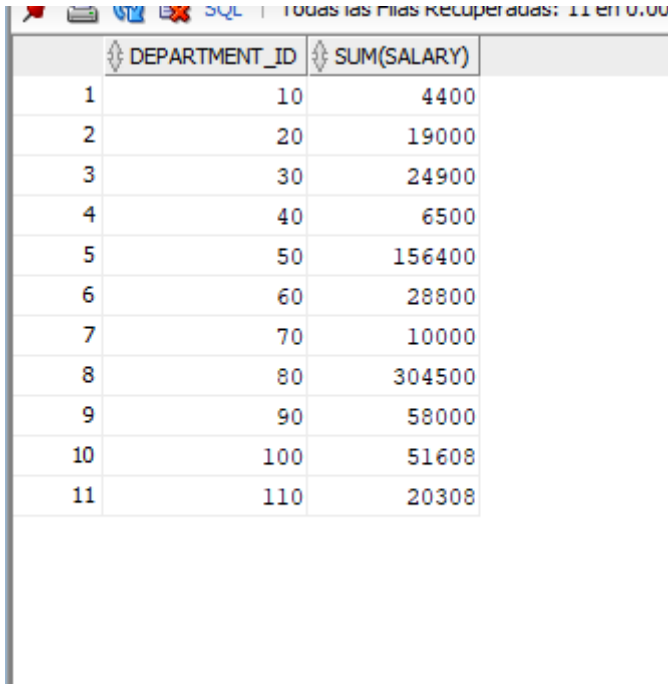|	DEPARTMENT_ID	JOB_ID	SUM(SALARY)	GROUPING(DEPARTMENT_ID)	GROUPING(JOB_ID)
1	10	AD_ASST	4400	0	0
2	10	(null)	4400	0	1
3	20	MK_MAN	13000	0	0
4	20	MK_REP	6000	0	0
5	20	(null)	19000	0	1
6	30	PU_CLERK	13900	0	0
7	30	PU_MAN	11000	0	0
8	30	(null)	24900	0	1
9	40	HR_REP	6500	0	0
10	40	(null)	6500	0	1
11	50	SH_CLERK	64300	0	0
12	50	ST_CLERK	55700	0	0
13	50	ST_MAN	36400	0	0
14	50	(null)	156400	0	1
15	60	IT_PROG	28800	0	0
16	60	(null)	28800	0	1
17	70	PR_REP	10000	0	0
18	70	(null)	10000	0	1
19	80	SA_MAN	61000	0	0
20	80	SA_REP	243500	0	0

```
SELECT DECODE(GROUPING(JOB_ID),1,'TOTAL
DEPARTAMENTO:'||DEPARTMENT_ID,DEPARTMENT_ID) AS "DEPARTAMENTO",

DECODE(GROUPING(DEPARTMENT_ID),1,'TOTAL:',job_id) AS "TRABAJO",

SUM(SALARY) AS "TOTAL SALARIO"

FROM EMPLOYEES

WHERE DEPARTMENT_ID IS NOT NULL

GROUP BY ROLLUP(DEPARTMENT_ID,JOB_ID)

order by department_id,job_id;
```

	DEPARTAMENTO	TRABAJO	TOTAL SALARIO
1	10	AD_ASST	4400
2	TOTAL DEPARTAMENTO:10	(null)	4400
3	20	MK_MAN	13000
4	20	MK_REP	6000
5	TOTAL DEPARTAMENTO:20	(null)	19000
6	30	PU_CLERK	13900
7	30	PU_MAN	11000
8	TOTAL DEPARTAMENTO:30	(null)	24900
9	40	HR_REP	6500
10	TOTAL DEPARTAMENTO:40	(null)	6500
11	50	SH_CLERK	64300
12	50	ST_CLERK	55700
13	50	ST_MAN	36400
14	TOTAL DEPARTAMENTO:50	(null)	156400
15	60	IT_PROG	28800
16	TOTAL DEPARTAMENTO:60	(null)	28800
17	70	PR_REP	10000
18	TOTAL DEPARTAMENTO:70	(null)	10000
19	80	SA_MAN	61000
20	80	SA_REP	243500

---GROUPING SETS

SELECT DEPARTMENT_ID,SUM(SALARY)

FROM EMPLOYEES

WHERE DEPARTMENT_ID IS NOT NULL

GROUP BY GROUPING SETS(DEPARTMENT_ID)

order by department_id;

	DEPARTMENT_ID	SUM(SALARY)
1	10	4400
2	20	19000
3	30	24900
4	40	6500
5	50	156400
6	60	28800
7	70	10000
8	80	304500
9	90	58000
10	100	51608
11	110	20308

SELECT DEPARTMENT_ID,JOB_ID,SUM(SALARY)

FROM EMPLOYEES

WHERE DEPARTMENT_ID IS NOT NULL

GROUP BY DEPARTMENT_ID,JOB_ID

order by department_id;

	DEPARTMENT_ID	JOB_ID	SUM(SALARY)
1	10	AD_ASST	4400
2	20	MK_MAN	13000
3	20	MK_REP	6000
4	30	PU_CLERK	13900
5	30	PU_MAN	11000
6	40	HR_REP	6500
7	50	SH_CLERK	64300
8	50	ST_CLERK	55700
9	50	ST_MAN	36400
10	60	IT_PROG	28800
11	70	PR_REP	10000
12	80	SA_MAN	61000
13	80	SA_REP	243500
14	90	AD_PRES	24000
15	90	AD_VP	34000
16	100	FI_ACCOUNT	39600
17	100	FI_MGR	12008
18	110	AC_ACCOUNT	8300
19	110	AC_MGR	12008

SELECT DEPARTMENT_ID,JOB_ID,SUM(SALARY)

FROM EMPLOYEES

WHERE DEPARTMENT_ID IS NOT NULL

GROUP BY GROUPING SETS(DEPARTMENT_ID,JOB_ID)

order by department_id;

	DEPARTMENT_ID	JOB_ID	SUM(SALARY)
1	10	(null)	4400
2	20	(null)	19000
3	30	(null)	24900
4	40	(null)	6500
5	50	(null)	156400
6	60	(null)	28800
7	70	(null)	10000
8	80	(null)	304500
9	90	(null)	58000
10	100	(null)	51608
11	110	(null)	20308
12	(null)	ST_CLERK	55700
13	(null)	SA_MAN	61000

SELECT NULL,DEPARTMENT_ID,SUM(SALARY) FROM EMPLOYEES GROUP BY DEPARTMENT_ID

UNION ALL

SELECT JOB_ID,NULL,SUM(SALARY) FROM EMPLOYEES GROUP BY JOB_ID;

	NULL	DEPARTMENT_ID	SUM(SALARY)
1	(null)	90	58000
2	(null)	60	28800
3	(null)	100	51608
4	(null)	30	24900
5	(null)	50	156400
6	(null)	80	304500
7	(null)	(null)	7000
8	(null)	10	4400
9	(null)	20	19000
10	(null)	40	6500
11	(null)	70	10000
12	(null)	110	20308
13	AD_PRES	(null)	24000
14	AD_VP	(null)	34000
15	IT_PROG	(null)	28800
16	FI_MGR	(null)	12008
17	FI_ACCOUNT	(null)	39600
18	PU_MAN	(null)	11000
19	PU_CLERK	(null)	13900
20	ST_MAN	(null)	36400

ES igual al anterior pero grouping set tiene mejor rendimiento.

SELECT DEPARTMENT_ID,JOB_ID,MANAGER_ID,SUM(SALARY)

FROM EMPLOYEES

WHERE DEPARTMENT_ID IS NOT NULL

GROUP BY GROUPING SETS((DEPARTMENT_ID,JOB_ID),(DEPARTMENT_ID,MANAGER_ID))

	DEPARTMENT_ID	JOB_ID	MANAGER_ID	SUM(SALARY)
1	90	(null)	(null)	24000
2	90	(null)	100	34000
3	60	(null)	102	9000
4	60	(null)	103	19800
5	100	(null)	101	12008
6	100	(null)	108	39600
7	30	(null)	100	11000
8	30	(null)	114	13900
9	50	(null)	100	36400
10	50	(null)	120	22100
11	50	(null)	121	25400
12	50	(null)	122	23600
13	50	(null)	123	25900
14	50	(null)	124	23000
15	80	(null)	100	61000
16	80	(null)	145	51000
17	80	(null)	146	51000
18	80	(null)	147	46600
19	80	(null)	148	51900
20	80	(null)	149	43000

warehouse.sql

--pivot

DROP TABLE PIVOT;

CREATE TABLE PIVOT (

  CODIGO   NUMBER,

  CLIENTE   NUMBER,

  PRODUCTO VARCHAR2(100),

  CANTIDAD   NUMBER

);

INSERT INTO PIVOT VALUES (1, 1, 'AGUACATES', 10);

INSERT INTO PIVOT VALUES (2, 1, 'BANANAS', 20);

INSERT INTO PIVOT VALUES (3, 1, 'MANZANA', 30);

INSERT INTO PIVOT VALUES (4, 2, 'AGUACATES', 40);

INSERT INTO PIVOT VALUES (5, 2, 'MANZANA', 50);

INSERT INTO PIVOT VALUES (6, 3, 'AGUACATES', 60);

INSERT INTO PIVOT VALUES (7, 3, 'BANANAS', 70);

INSERT INTO PIVOT VALUES (8, 3, 'MANZANA', 80);

INSERT INTO PIVOT VALUES (9, 3, 'NARANJA', 90);

INSERT INTO PIVOT VALUES (10, 4, 'AGUACATES', 100);

COMMIT;

SELECT * FROM PIVOT;

SELECT *

FROM   (SELECT PRODUCTO, CANTIDAD FROM   pivot)

PIVOT (count(CANTIDAD) FOR (PRODUCTO) IN
('AGUACATES','BANANAS','MANZANA','NARANJA'));

	'AGUACATES'	'BANANAS'	'MANZANA'	'NARANJA'
1	4	2	3	1

SELECT *

FROM   (SELECT PRODUCTO, CANTIDAD FROM   pivot)

PIVOT (SUM(CANTIDAD) AS CANTIDAD FOR (PRODUCTO) IN
('AGUACATES','BANANAS','MANZANA','NARANJA'));

	'AGUACATES'_CANTIDAD	'BANANAS'_CANTIDAD	'MANZANA'_CANTIDAD	'NARANJA'_CANTIDAD
1	210	90	160	90

```sql
SELECT *

FROM   (SELECT CLIENTE,PRODUCTO, CANTIDAD FROM   pivot)

PIVOT  (SUM(CANTIDAD) AS CANTIDAD FOR (PRODUCTO) IN
('AGUACATES','BANANAS','MANZANA','NARANJA'));
```

	CLIENTE	'AGUACATES'_CANTIDAD	'BANANAS'_CANTIDAD	'MANZANA'_CANTIDAD	'NARANJA'_CANTIDAD
1	1	10	20	30	(null)
2	2	40	(null)	50	(null)
3	3	60	70	80	90
4	4	100	(null)	(null)	(null)

```sql
-- y unpivot


DROP TABLE UN_PIVOT;


CREATE TABLE UN_PIVOT AS

SELECT *

FROM   (SELECT CLIENTE,PRODUCTO, CANTIDAD FROM   pivot)

PIVOT  (SUM(CANTIDAD) FOR (PRODUCTO) IN ('AGUACATES' AS "AGUACATES",'BANANAS' AS
"BANANA",'MANZANA' AS "MANZANA",'NARANJA' AS "NARANJA"));


SELECT * FROM UN_PIVOT;
```

	CLIENTE	AGUACATES	BANANA	MANZANA	NARANJA
1	1	10	20	30	(null)
2	2	40	(null)	50	(null)
3	3	60	70	80	90
4	4	100	(null)	(null)	(null)

SELECT * FROM UN_PIVOT

UNPIVOT (CANTIDAD FOR PRODUCTO IN ("AGUACATES","BANANA","MANZANA","NARANJA"))

ORDER BY CLIENTE,PRODUCTO;

	CLIENTE	PRODUCTO	CANTIDAD
1	1	AGUACATES	10
2	1	BANANA	20
3	1	MANZANA	30
4	2	AGUACATES	40
5	2	MANZANA	50
6	3	AGUACATES	60
7	3	BANANA	70
8	3	MANZANA	80
9	3	NARANJA	90
10	4	AGUACATES	100