

# Excs SQL Part 4 Arnau Meseguer

1.

```
SQL> select city, count(distinct department_id) as num_dept
  2  from locations
  3  join departments on locations.location_id = departments.location_id
 4* group by city;

CITY          NUM_DEPT
-----        -----
London         1
Munich         1
Oxford          1
Seattle         21
South San Francisco 1
Southlake       1
Toronto         1

7 rows selected.
```

Natural join

```
SQL> SELECT LOCATION_ID, COUNT(DEPARTMENT_ID) AS NUM_DEPARTMENTS
  2  FROM LOCATIONS
  3  NATURAL JOIN DEPARTMENTS
 4* GROUP BY LOCATION_ID;

LOCATION_ID    NUM_DEPARTMENTS
-----        -----
1400             1
1500             1
1700            21
1800             1
2400             1
2500             1
2700             1

7 rows selected.
```

2.

```

SQL> select city, count(department_id) from locations
  2  left join departments on locations.location_id = departments.location_id
  3* group by city;

CITY          COUNT(DEPARTMENT_ID)
-----  -----
Sao Paulo          0
Toronto            1
London             1
Munich             1
Sydney              0
Stretford           0
Geneva              0
Southlake            1
Singapore            0
Mexico City          0
Hiroshima            0
Bern                0
Bombay               0
Utrecht              0
Tokyo                0
South San Francisco    1
Beijing              0
Seattle              21
South Brunswick        0
Oxford                1
Roma                  0
Venice                0
Whitehorse             0

23 rows selected.

```

Natural join

```

SQL> SELECT COUNTRY_NAME, LOCATION_ID
  2  FROM COUNTRIES
  3* NATURAL JOIN LOCATIONS;

COUNTRY_NAME          LOCATION_ID
-----  -----
Italy                  1000
Italy                  1100
Japan                 1200
Japan                 1300
United States of America 1400
United States of America 1500
United States of America 1600
United States of America 1700
Canada                1800
Canada                1900
China                 2000
India                 2100
Australia              2200
Singapore              2300
United Kingdom          2400
United Kingdom          2500
United Kingdom          2600
Germany                2700
Brazil                 2800
Switzerland             2900
Switzerland             3000
Netherlands             3100
Mexico                 3200

23 rows selected.

```

### 3.

```

SQL> select city, count(department_id) as num_dept from locations
  2  join departments on locations.location_id = departments.location_id
  3* group by city having count(department_id) > 1;

```

CITY	NUM_DEPT
Seattle	21

### Natural join

### 4.

## Natural join

```

SQL> SELECT DEPARTMENT_NAME, COUNTRY_NAME, COUNT(*) AS NUM_EMPLOYEES
  2  FROM DEPARTMENTS
  3  NATURAL JOIN LOCATIONS
  4  NATURAL JOIN COUNTRIES
  5* GROUP BY DEPARTMENT_NAME, COUNTRY_NAME;

```

DEPARTMENT_NAME	COUNTRY_NAME	NUM_EMPLOYEES
Shipping	United States of America	1
Administration	United States of America	1
Purchasing	United States of America	1
Executive	United States of America	1
Corporate Tax	United States of America	1
Contracting	United States of America	1
Government Sales	United States of America	1
Marketing	Canada	1
Operations	United States of America	1
Retail Sales	United States of America	1
Construction	United States of America	1
IT Helpdesk	United States of America	1
Treasury	United States of America	1
Benefits	United States of America	1
IT Support	United States of America	1
Recruiting	United States of America	1
Payroll	United States of America	1
IT	United States of America	1
Finance	United States of America	1
Control And Credit	United States of America	1
NOC	United States of America	1
Human Resources	United Kingdom	1
Accounting	United States of America	1
Shareholder Services	United States of America	1
Manufacturing	United States of America	1
Sales	United Kingdom	1
Public Relations	Germany	1

27 rows selected.

## 5.

6.

```
SQL> SELECT COUNTRY_NAME AS "Pais", COUNT(EMPLOYEE_ID) AS "Número d'empleats"
  2  FROM COUNTRIES
  3  JOIN LOCATIONS ON COUNTRIES.COUNTRY_ID = LOCATIONS.COUNTRY_ID
  4  JOIN DEPARTMENTS ON LOCATIONS.LOCATION_ID = DEPARTMENTS.LOCATION_ID
  5  JOIN EMPLOYEES ON DEPARTMENTS.DEPARTMENT_ID = EMPLOYEES.DEPARTMENT_ID
  6* GROUP BY COUNTRY_NAME HAVING COUNT(EMPLOYEE_ID) > 0;
```

Pais	Número d'empleats
Germany	1
United States of America	68
Canada	2
United Kingdom	35

## Natural join

```

SQL> SELECT COUNTRY_NAME, COUNT(*) AS NUM_EMPLOYEES
  2  FROM COUNTRIES
  3  NATURAL JOIN LOCATIONS
  4  NATURAL JOIN DEPARTMENTS
  5* GROUP BY COUNTRY_NAME;

```

COUNTRY_NAME	NUM_EMPLOYEES
Germany	1
United States of America	23
Canada	1
United Kingdom	2

7.

```

SQL> SELECT COUNTRY_NAME, COUNT(EMPLOYEE_ID) AS NUM_EMPLOYEES
  2  FROM COUNTRIES
  3  LEFT JOIN LOCATIONS ON COUNTRIES.COUNTRY_ID = LOCATIONS.COUNTRY_ID
  4  LEFT JOIN DEPARTMENTS ON LOCATIONS.LOCATION_ID = DEPARTMENTS.LOCATION_ID
  5  LEFT JOIN EMPLOYEES ON DEPARTMENTS.DEPARTMENT_ID = EMPLOYEES.DEPARTMENT_ID
  6* GROUP BY COUNTRY_NAME;

```

COUNTRY_NAME	NUM_EMPLOYEES
Israel	0
Brazil	0
Argentina	0
Malaysia	0
Singapore	0
Italy	0
Netherlands	0
Egypt	0
Japan	0
Germany	1
Denmark	0
France	0
Mexico	0
Zimbabwe	0
United States of America	68
Australia	0
Kuwait	0
Canada	2
Zambia	0
Belgium	0
China	0
United Kingdom	35
Switzerland	0
Nigeria	0
India	0

25 rows selected.

8.

```

SQL> SELECT E.FIRST_NAME || ' ' || E.LAST_NAME AS "Nom",
  2 TO_CHAR(E.HIRE_DATE, 'DD/MM/YY') AS "Data con",
  3 M.FIRST_NAME || ' ' || M.LAST_NAME AS "Cap",
  4 D.DEPARTMENT_NAME AS "Departament del cap",
  5 J.JOB_TITLE AS "Ocupació del cap"
 6 FROM EMPLOYEES E
 7 LEFT JOIN EMPLOYEES M ON E.MANAGER_ID = M.EMPLOYEE_ID
 8 LEFT JOIN DEPARTMENTS D ON M.DEPARTMENT_ID = D.DEPARTMENT_ID
 9 LEFT JOIN JOBS J ON M.JOB_ID = J.JOB_ID
10* ORDER BY "Nom";

```

Nom	Datacon	Cap	Departamentdelcap	Ocupaciódelcap
Adam Fripp	10/04/05	Steven King	Executive	President
Alana Walsh	24/04/06	Kevin Mourgos	Shipping	Stock Manager
Alberto Errazuriz	10/03/05	Steven King	Executive	President
Alexander Hunold	03/01/06	Lex De Haan	Executive	Administration Vice President
Alexander Khoo	18/05/03	Den Raphaely	Purchasing	Purchasing Manager
Alexis Bull	20/02/05	Adam Fripp	Shipping	Stock Manager
Allan McEwen	01/08/04	Karen Partners	Sales	Sales Manager
Alyssa Hutton	19/03/05	Eleni Zlotkey	Sales	Sales Manager
Amit Banda	21/04/08	Alberto Errazuriz	Sales	Sales Manager
Anthony Cabrio	07/02/07	Adam Fripp	Shipping	Stock Manager
Britney Everett	03/03/05	Shanta Vollman	Shipping	Stock Manager
Bruce Ernst	21/05/07	Alexander Hunold	IT	Programmer
Charles Johnson	04/01/08	Eleni Zlotkey	Sales	Sales Manager
Christopher Olsen	30/03/06	John Russell	Sales	Sales Manager
Clara Vishney	11/11/05	Alberto Errazuriz	Sales	Sales Manager
Curtis Davies	29/01/05	Kevin Mourgos	Shipping	Stock Manager
Daniel Faviet	16/08/02	Nancy Greenberg	Finance	Finance Manager
Danielle Greene	19/03/07	Alberto Errazuriz	Sales	Sales Manager
David Austin	25/06/05	Alexander Hunold	IT	Programmer
David Bernstein	24/03/05	John Russell	Sales	Sales Manager
David Lee	23/02/08	Alberto Errazuriz	Sales	Sales Manager
Den Raphaely	07/12/02	Steven King	Executive	President
Diana Lorentz	07/02/07	Alexander Hunold	IT	Programmer
Donald O'Connell	21/06/07	Kevin Mourgos	Shipping	Stock Manager
Douglas Grant	13/01/08	Kevin Mourgos	Shipping	Stock Manager
Eleni Zlotkey	29/01/08	Steven King	Executive	President
Elizabeth Bates	24/03/07	Gerald Cambrault	Sales	Sales Manager
Ellen Abel	11/05/04	Eleni Zlotkey	Sales	Sales Manager
Gerald Cambrault	15/10/07	Steven King	Executive	President
Girard Geoni	03/02/08	Matthew Weiss	Shipping	Stock Manager
Guy Himuro	15/11/06	Den Raphaely	Purchasing	Purchasing Manager
Harrison Bloom	23/03/06	Gerald Cambrault	Sales	Sales Manager
Hazel Philtanker	06/02/08	Payam Kaufling	Shipping	Stock Manager
Hermann Baer	07/06/02	Neena Kochhar	Executive	Administration Vice President
Irene Mikkilineni	28/09/06	Matthew Weiss	Shipping	Stock Manager
Ismael Sciarra	30/09/05	Nancy Greenberg	Finance	Finance Manager
Jack Livingston	23/04/06	Eleni Zlotkey	Sales	Sales Manager
James Landry	14/01/07	Matthew Weiss	Shipping	Stock Manager
James Marlow	16/02/05	Adam Fripp	Shipping	Stock Manager

## 9.

```

SQL> SELECT E.FIRST_NAME || ' ' || E.LAST_NAME AS "Nom",
  2 TO_CHAR(JH.START_DATE, 'DD Month YYYY', 'NLS_DATE_LANGUAGE=SPANISH') AS "Data inici",
  3 TO_CHAR(JH.END_DATE, 'DD Month YYYY', 'NLS_DATE_LANGUAGE=SPANISH') AS "Data fi",
  4 D.DEPARTMENT_NAME AS "Departament",
  5 J.JOB_TITLE AS "Ocupació"
 6 FROM JOB_HISTORY JH
 7 JOIN EMPLOYEES E ON JH.EMPLOYEE_ID = E.EMPLOYEE_ID
 8 JOIN DEPARTMENTS D ON JH.DEPARTMENT_ID = D.DEPARTMENT_ID
 9 JOIN JOBS J ON JH.JOB_ID = J.JOB_ID
10* ORDER BY JH.START_DATE ASC, "Nom";

```

Nom	Datainici	Datafi	Departament	Ocupació
Jennifer Whalen	17 Septiembre 1995	17 Junio 2001	Executive	Administration Assistant
Neena Kochhar	21 Septiembre 1997	27 Octubre 2001	Accounting	Public Accountant
Lex De Haan	13 Enero 2001	24 Julio 2006	IT	Programmer
Neena Kochhar	28 Octubre 2001	15 Marzo 2005	Accounting	Accounting Manager
Jennifer Whalen	01 Julio 2002	31 Diciembre 2006	Executive	Public Accountant
Michael Hartstein	17 Febrero 2004	19 Diciembre 2007	Marketing	Marketing Representative
Den Raphaely	24 Marzo 2006	31 Diciembre 2007	Shipping	Stock Clerk
Jonathon Taylor	24 Marzo 2006	31 Diciembre 2006	Sales	Sales Representative
Jonathon Taylor	01 Enero 2007	31 Diciembre 2007	Sales	Sales Manager
Payam Kaufling	01 Enero 2007	31 Diciembre 2007	Shipping	Stock Clerk

10 rows selected.

## 10.

Departament	Nom del Cap	Empleat Sense Departament
Accounting	Shelley Higgins	Sense Departament
Administration	Jennifer Whalen	Sense Departament
Benefits		Sense Departament
Construction		Sense Departament
Contracting		Sense Departament
Control And Credit		Sense Departament
Corporate Tax		Sense Departament
Executive	Steven King	Sense Departament
Finance	Nancy Greenberg	Sense Departament
Government Sales		Sense Departament
Human Resources	Susan Mavris	Sense Departament
IT	Alexander Hunold	Sense Departament
IT Helpdesk		Sense Departament
IT Support		Sense Departament
Manufacturing		Sense Departament
Marketing	Michael Hartstein	Sense Departament
NOC		Sense Departament
Operations		Sense Departament
Payroll		Sense Departament
Public Relations	Hermann Baer	Sense Departament
Purchasing	Den Raphaely	Sense Departament
Recruiting		Sense Departament
Retail Sales		Sense Departament
Sales	John Russell	Sense Departament
Shareholder Services		Sense Departament
Shipping	Adam Fripp	Sense Departament
Treasury		Sense Departament

27 rows selected.