



CES 30 - Técnicas de Banco de Dados

Atividade 2

Alunos

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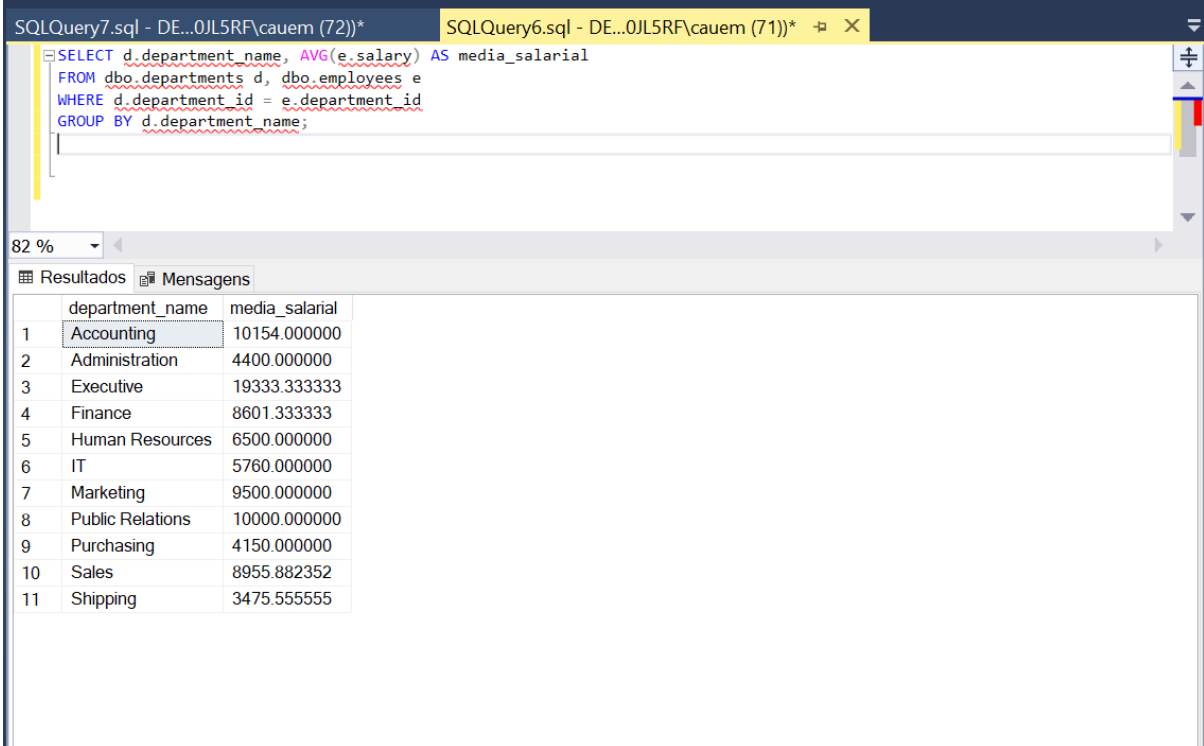
Professores

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1. Mostrar a média salarial de cada departamento.



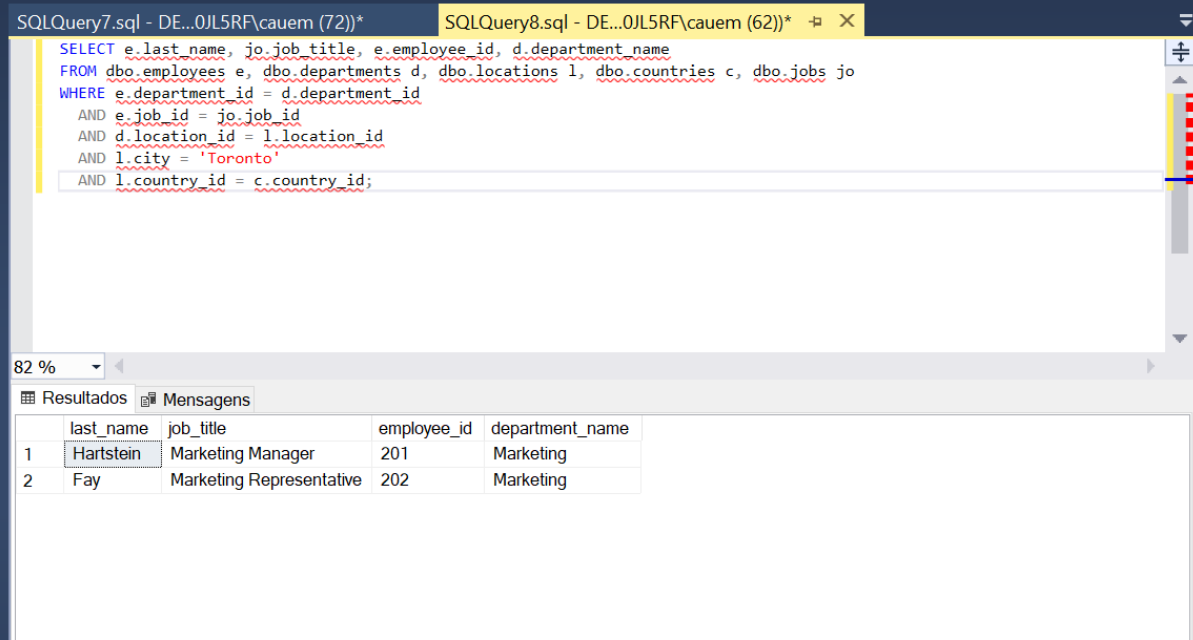
The screenshot displays the SQL Server Enterprise Manager interface. At the top, two query windows are open: 'SQLQuery7.sql - DE...0JL5RF\cauem (72))*' and 'SQLQuery6.sql - DE...0JL5RF\cauem (71))*'. The active window shows the following SQL query:

```
SELECT d.department_name, AVG(e.salary) AS media_salarial
FROM dbo.departments d, dbo.employees e
WHERE d.department_id = e.department_id
GROUP BY d.department_name;
```

Below the query editor, the 'Resultados' (Results) tab is selected, showing a table with two columns: 'department_name' and 'media_salarial'. The table contains 11 rows of data, with 'Accounting' selected as the first row.

	department_name	media_salarial
1	Accounting	10154.000000
2	Administration	4400.000000
3	Executive	19333.333333
4	Finance	8601.333333
5	Human Resources	6500.000000
6	IT	5760.000000
7	Marketing	9500.000000
8	Public Relations	10000.000000
9	Purchasing	4150.000000
10	Sales	8955.882352
11	Shipping	3475.555555

10. Crie uma consulta para exibir o sobrenome, o cargo, o número e o nome do departamento de todos os funcionários que trabalhem em Toronto.



The screenshot shows a SQL Server Enterprise Manager window with two tabs: 'SQLQuery7.sql - DE...0JL5RF\cauem (72))*' and 'SQLQuery8.sql - DE...0JL5RF\cauem (62))*'. The active tab displays the following SQL query:

```
SELECT e.last name, jo.job title, e.employee id, d.department name
FROM dbo.employees e, dbo.departments d, dbo.locations l, dbo.countries c, dbo.jobs jo
WHERE e.department id = d.department id
AND e.job id = jo.job id
AND d.location id = l.location id
AND l.city = 'Toronto'
AND l.country id = c.country id;
```

Below the query editor, the 'Resultados' (Results) pane shows the query results in a table format. The table has four columns: 'last_name', 'job_title', 'employee_id', and 'department_name'. There are two rows of data:

	last_name	job_title	employee_id	department_name
1	Hartstein	Marketing Manager	201	Marketing
2	Fay	Marketing Representative	202	Marketing

11. Crie uma consulta que exiba o nome, o cargo, o nome do departamento, o salário e a classificação de todos os funcionários.

SQLQuery7.sql - DE...0JL5RF\cauem (72))* X SQLQuery6.sql - DE...0JL5RF\cauem (71))*

```

SELECT e.first_name, e.last_name, j.job_title, d.department_name, e.salary, gs.GRADE_LEVEL
FROM dbo.employees e, dbo.jobs j, dbo.departments d, dbo.grad_sal gs
WHERE e.job_id = j.job_id
AND e.department_id = d.department_id
AND e.salary BETWEEN gs.LOWEST_SAL AND gs.HIGHEST_SAL;

```

82 %

Resultados Mensagens

	first_name	last_name	job_title	department_name	salary	GRADE_LEVEL
1	Shelli	Baida	Purchasing Clerk	Purchasing	2900.00	A
2	Sigal	Tobias	Purchasing Clerk	Purchasing	2800.00	A
3	Guy	Himuro	Purchasing Clerk	Purchasing	2600.00	A
4	Karen	Colmenares	Purchasing Clerk	Purchasing	2500.00	A
5	Irene	Mikkilineni	Stock Clerk	Shipping	2700.00	A
6	James	Landry	Stock Clerk	Shipping	2400.00	A
7	Steven	Markle	Stock Clerk	Shipping	2200.00	A
8	Mozhe	Atkinson	Stock Clerk	Shipping	2800.00	A
9	James	Marlow	Stock Clerk	Shipping	2500.00	A
10	T.J.	Olson	Stock Clerk	Shipping	2100.00	A
11	Michael	Rogers	Stock Clerk	Shipping	2900.00	A
12	Ki	Gee	Stock Clerk	Shipping	2400.00	A
13	Hazel	Philtanker	Stock Clerk	Shipping	2200.00	A
14	John	Seo	Stock Clerk	Shipping	2700.00	A
15	Joshua	Patel	Stock Clerk	Shipping	2500.00	A
16	Randall	Matos	Stock Clerk	Shipping	2600.00	A
17	Peter	Vargas	Stock Clerk	Shipping	2500.00	A
18	Martha	Sullivan	Shipping Clerk	Shipping	2500.00	A
19	Girard	Geoni	Shipping Clerk	Shipping	2800.00	A
20	Timothy	Gates	Shipping Clerk	Shipping	2900.00	A

Consultar executada com êxito. DESKTOP-N0JL5RF\SQL EXPRESS ... DESKTOP-N0JL5RF\cauem ... HR 00:00:00 /106 linhas

Resultados Mensagens

	first_name	last_name	job_title	department_name	salary	GRADE_LEVEL
19	Girard	Geoni	Shipping Clerk	Shipping	2800.00	A
20	Timothy	Gates	Shipping Clerk	Shipping	2900.00	A
21	Randall	Perkins	Shipping Clerk	Shipping	2500.00	A
22	Vance	Jones	Shipping Clerk	Shipping	2800.00	A
23	Donald	OConnell	Shipping Clerk	Shipping	2600.00	A
24	Douglas	Grant	Shipping Clerk	Shipping	2600.00	A
25	David	Austin	Programmer	IT	4800.00	B
26	Valli	Pataballa	Programmer	IT	4800.00	B
27	Diana	Lorentz	Programmer	IT	4200.00	B
28	Alexander	Khoo	Purchasing Clerk	Purchasing	3100.00	B
29	Kevin	Mourgos	Stock Manager	Shipping	5800.00	B
30	Julia	Nayer	Stock Clerk	Shipping	3200.00	B
31	Laura	Bissot	Stock Clerk	Shipping	3300.00	B
32	Jason	Mallin	Stock Clerk	Shipping	3300.00	B
33	Renske	Ladwig	Stock Clerk	Shipping	3600.00	B
34	Stephen	Stiles	Stock Clerk	Shipping	3200.00	B
35	Trenna	Rajs	Stock Clerk	Shipping	3500.00	B
36	Curtis	Davies	Stock Clerk	Shipping	3100.00	B
37	Winston	Taylor	Shipping Clerk	Shipping	3200.00	B
38	Jean	Fleaur	Shipping Clerk	Shipping	3100.00	B
39	Nandita	Sarchand	Shipping Clerk	Shipping	4200.00	B
40	Alexis	Bull	Shipping Clerk	Shipping	4100.00	B
41	Julia	Dellinger	Shipping Clerk	Shipping	3400.00	B
42	Anthony	Cabrio	Shipping Clerk	Shipping	3000.00	B
43	Kelly	Chung	Shipping Clerk	Shipping	3800.00	B
44	Jennifer	Dilly	Shipping Clerk	Shipping	3600.00	B

Ativar

	first_name	last_name	job_title	department_name	salary	GRADE_LEVEL
43	Kelly	Chung	Shipping Clerk	Shipping	3800.00	B
44	Jennifer	Dilly	Shipping Clerk	Shipping	3600.00	B
45	Sarah	Bell	Shipping Clerk	Shipping	4000.00	B
46	Britney	Everett	Shipping Clerk	Shipping	3900.00	B
47	Samuel	McCain	Shipping Clerk	Shipping	3200.00	B
48	Alana	Walsh	Shipping Clerk	Shipping	3100.00	B
49	Kevin	Feeney	Shipping Clerk	Shipping	3000.00	B
50	Jennifer	Whalen	Administration ...	Administration	4400.00	B
51	Alexander	Hunold	Programmer	IT	9000.00	C
52	Bruce	Ernst	Programmer	IT	6000.00	C
53	Daniel	Faviet	Accountant	Finance	9000.00	C
54	John	Chen	Accountant	Finance	8200.00	C
55	Ismael	Sciarra	Accountant	Finance	7700.00	C
56	Jose Ma...	Urman	Accountant	Finance	7800.00	C
57	Luis	Popp	Accountant	Finance	6900.00	C
58	Matthew	Weiss	Stock Manager	Shipping	8000.00	C
59	Adam	Fripp	Stock Manager	Shipping	8200.00	C
60	Payam	Kaufling	Stock Manager	Shipping	7900.00	C
61	Shanta	Vollman	Stock Manager	Shipping	6500.00	C
62	David	Bernstein	Sales Represe...	Sales	9500.00	C
63	Peter	Hall	Sales Represe...	Sales	9000.00	C
64	Christop...	Olsen	Sales Represe...	Sales	8000.00	C
65	Nanette	Cambrault	Sales Represe...	Sales	7500.00	C
66	Oliver	Tuvault	Sales Represe...	Sales	7000.00	C
67	Patrick	Sully	Sales Represe...	Sales	9500.00	C
68	Allan	McEwen	Sales Represe...	Sales	9000.00	C

Ativar 

	first_name	last_name	job_title	department_name	salary	GRADE_LEVEL
67	Patrick	Sully	Sales Represe...	Sales	9500.00	C
68	Allan	McEwen	Sales Represe...	Sales	9000.00	C
69	Lindsey	Smith	Sales Represe...	Sales	8000.00	C
70	Louise	Doran	Sales Represe...	Sales	7500.00	C
71	Sarath	Sewall	Sales Represe...	Sales	7000.00	C
72	Danielle	Greene	Sales Represe...	Sales	9500.00	C
73	Mattea	Marvins	Sales Represe...	Sales	7200.00	C
74	David	Lee	Sales Represe...	Sales	6800.00	C
75	Sundar	Ande	Sales Represe...	Sales	6400.00	C
76	Amit	Banda	Sales Represe...	Sales	6200.00	C
77	Tayler	Fox	Sales Represe...	Sales	9600.00	C
78	William	Smith	Sales Represe...	Sales	7400.00	C
79	Elizabeth	Bates	Sales Represe...	Sales	7300.00	C
80	Sundita	Kumar	Sales Represe...	Sales	6100.00	C
81	Alyssa	Hutton	Sales Represe...	Sales	8800.00	C
82	Jonathon	Taylor	Sales Represe...	Sales	8600.00	C
83	Jack	Livingston	Sales Represe...	Sales	8400.00	C
84	Charles	Johnson	Sales Represe...	Sales	6200.00	C
85	Pat	Fay	Marketing Rep...	Marketing	6000.00	C
86	Susan	Mavris	Human Resourc...	Human Resourc...	6500.00	C
87	William	Gietz	Public Account...	Accounting	8300.00	C
88	Nancy	Greenberg	Finance Mana...	Finance	12008...	D
89	Den	Raphaely	Purchasing Ma...	Purchasing	11000...	D
90	John	Russell	Sales Manager	Sales	14000...	D
91	Karen	Partners	Sales Manager	Sales	13500...	D
92	Alberto	Errazuriz	Sales Manager	Sales	12000...	D

Ativar 

	first_name	last_name	job_title	department_name	salary	GRADE_LEVEL
82	Jonathon	Taylor	Sales Represe...	Sales	8600.00	C
83	Jack	Livingston	Sales Represe...	Sales	8400.00	C
84	Charles	Johnson	Sales Represe...	Sales	6200.00	C
85	Pat	Fay	Marketing Rep...	Marketing	6000.00	C
86	Susan	Mavris	Human Resourc...	Human Resourc...	6500.00	C
87	William	Gietz	Public Account...	Accounting	8300.00	C
88	Nancy	Greenberg	Finance Mana...	Finance	12008...	D
89	Den	Raphaely	Purchasing Ma...	Purchasing	11000...	D
90	John	Russell	Sales Manager	Sales	14000...	D
91	Karen	Partners	Sales Manager	Sales	13500...	D
92	Alberto	Errazuriz	Sales Manager	Sales	12000...	D
93	Gerald	Cambrault	Sales Manager	Sales	11000...	D
94	Eleni	Zlotkey	Sales Manager	Sales	10500...	D
95	Peter	Tucker	Sales Represe...	Sales	10000...	D
96	Janette	King	Sales Represe...	Sales	10000...	D
97	Clara	Vishney	Sales Represe...	Sales	10500...	D
98	Lisa	Ozer	Sales Represe...	Sales	11500...	D
99	Harrison	Bloom	Sales Represe...	Sales	10000...	D
100	Ellen	Abel	Sales Represe...	Sales	11000...	D
101	Michael	Hartstein	Marketing Man...	Marketing	13000...	D
102	Hermann	Baer	Public Relation...	Public Relations	10000...	D
103	Shelley	Higgins	Accounting Ma...	Accounting	12008...	D
104	Steven	King	President	Executive	24000...	E
105	Neena	Kochhar	Administration ...	Executive	17000...	E
106	Lex	De Haan	Administration ...	Executive	17000...	E

20. Exiba os nomes e as datas de admissão de todos os funcionários admitidos antes de seus gerentes, juntamente com os nomes e as datas de admissão dos respectivos gerentes. Denomine as colunas como Nome Funcionario, Admissao Funcionario, Nome Gerente e Admissao Gerente, respectivamente.

SQLQuery9.sql - DE...0JL5RF\cauem (69))* X SQLQuery8.sql - DE...0JL5RF\cauem (62))*

```
SELECT e1.first_name + ' ' + e1.last_name AS Nome_Funcionario, e1.hire_date AS Admissao_Funcionario, e2.first_name + ' ' + e2.last_name AS Nome_Gerente, e2.hire_date AS Admissao_Gerente
FROM dbo.employees e1
JOIN dbo.employees e2 ON e1.manager_id = e2.employee_id
WHERE e1.hire_date < e2.hire_date;
```

82 %

Resultados Mensagens

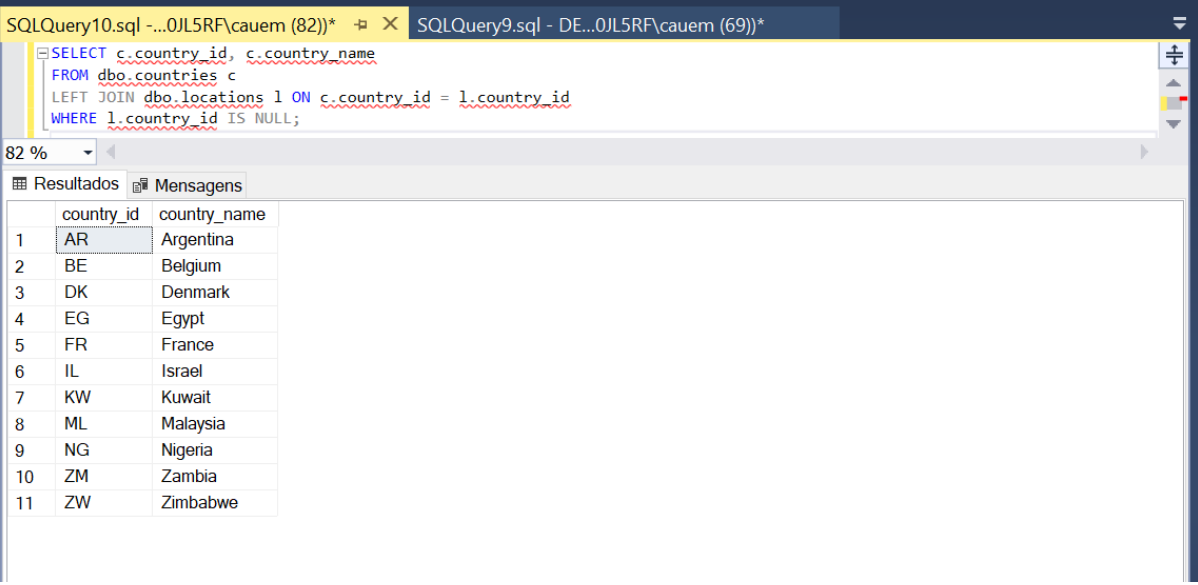
	Nome_Funcionario	Admissao_Funcionario	Nome_Gerente	Admissao_Gerente
1	Lex De Haan	2001-01-13	Steven King	2003-06-17
2	Den Raphaely	2002-12-07	Steven King	2003-06-17
3	Payam Kaufling	2003-05-01	Steven King	2003-06-17
4	Jennifer Whalen	2003-09-17	Neena Kochhar	2005-09-21
5	Susan Mavris	2002-06-07	Neena Kochhar	2005-09-21
6	Hermann Baer	2002-06-07	Neena Kochhar	2005-09-21
7	Shelley Higgins	2002-06-07	Neena Kochhar	2005-09-21
8	Nancy Greenberg	2002-08-17	Neena Kochhar	2005-09-21
9	David Austin	2005-06-25	Alexander Hunold	2006-01-03
10	Daniel Faviet	2002-08-16	Nancy Greenberg	2002-08-17
11	Nandita Sarchand	2004-01-27	Adam Fripp	2005-04-10
12	Alexis Bull	2005-02-20	Adam Fripp	2005-04-10
13	James Marlow	2005-02-16	Adam Fripp	2005-04-10
14	Sarah Bell	2004-02-04	Shanta Vollman	2005-10-10
15	Britney Everett	2005-03-03	Shanta Vollman	2005-10-10
16	Renske Ladwig	2003-07-14	Shanta Vollman	2005-10-10
17	Trenna Rajs	2003-10-17	Kevin Mourgog	2007-11-16
18	Curtis Davies	2005-01-29	Kevin Mourgog	2007-11-16
19	Randall Matos	2006-03-15	Kevin Mourgog	2007-11-16
20	Peter Vargas	2006-07-09	Kevin Mourgog	2007-11-16
21	Alana Walsh	2006-04-24	Kevin Mourgog	2007-11-16
22	Kevin Feeney	2006-05-23	Kevin Mourgog	2007-11-16
23	Donald OConnell	2007-06-21	Kevin Mourgog	2007-11-16
24	Janette King	2004-01-30	Karen Partners	2005-01-05
25	Patrick Sully	2004-03-04	Karen Partners	2005-01-05
26	Allan McEwen	2004-08-01	Karen Partners	2005-01-05
27	Lisa Ozer	2005-03-11	Gerald Cambrault	2007-10-15
28	Harrison Bloom	2006-03-23	Gerald Cambrault	2007-10-15
29	Taylor Fox	2006-01-24	Gerald Cambrault	2007-10-15
30	William Smith	2007-02-23	Gerald Cambrault	2007-10-15
31	Elizabeth Bates	2007-03-24	Gerald Cambrault	2007-10-15
32	Ellen Abel	2004-05-11	Eleni Zlotkey	2008-01-29
33	Alyssa Hutton	2005-03-19	Eleni Zlotkey	2008-01-29
34	Jonathon Taylor	2006-03-24	Eleni Zlotkey	2008-01-29
35	Jack Livingston	2006-04-23	Eleni Zlotkey	2008-01-29
36	Kimberely Grant	2007-05-24	Eleni Zlotkey	2008-01-29
37	Charles Johnson	2008-01-04	Eleni Zlotkey	2008-01-29

Consulta executada com êxito. DESKTOP-N0JL5RF\SQLSERVER ... DESKTOP-N0JL5RF\cauem ... HR 00:00:00 37 linhas

Resultados Mensagens

	Nome_Funcionario	Admissao_Funcionario	Nome_Gerente	Admissao_Gerente
17	Trenna Rajs	2003-10-17	Kevin Mourgog	2007-11-16
18	Curtis Davies	2005-01-29	Kevin Mourgog	2007-11-16
19	Randall Matos	2006-03-15	Kevin Mourgog	2007-11-16
20	Peter Vargas	2006-07-09	Kevin Mourgog	2007-11-16
21	Alana Walsh	2006-04-24	Kevin Mourgog	2007-11-16
22	Kevin Feeney	2006-05-23	Kevin Mourgog	2007-11-16
23	Donald OConnell	2007-06-21	Kevin Mourgog	2007-11-16
24	Janette King	2004-01-30	Karen Partners	2005-01-05
25	Patrick Sully	2004-03-04	Karen Partners	2005-01-05
26	Allan McEwen	2004-08-01	Karen Partners	2005-01-05
27	Lisa Ozer	2005-03-11	Gerald Cambrault	2007-10-15
28	Harrison Bloom	2006-03-23	Gerald Cambrault	2007-10-15
29	Taylor Fox	2006-01-24	Gerald Cambrault	2007-10-15
30	William Smith	2007-02-23	Gerald Cambrault	2007-10-15
31	Elizabeth Bates	2007-03-24	Gerald Cambrault	2007-10-15
32	Ellen Abel	2004-05-11	Eleni Zlotkey	2008-01-29
33	Alyssa Hutton	2005-03-19	Eleni Zlotkey	2008-01-29
34	Jonathon Taylor	2006-03-24	Eleni Zlotkey	2008-01-29
35	Jack Livingston	2006-04-23	Eleni Zlotkey	2008-01-29
36	Kimberely Grant	2007-05-24	Eleni Zlotkey	2008-01-29
37	Charles Johnson	2008-01-04	Eleni Zlotkey	2008-01-29

21. Exiba o ID de país e o nome dos países em que não haja departamentos (use Operadores de Conjunto).



The screenshot shows a SQL Server Enterprise Manager window with two tabs: 'SQLQuery10.sql - ...0\JL5RF\cauem (82))*' and 'SQLQuery9.sql - DE...0\JL5RF\cauem (69))*'. The active tab displays the following SQL query:

```
SELECT c.country_id, c.country_name
FROM dbo.countries c
LEFT JOIN dbo.locations l ON c.country_id = l.country_id
WHERE l.country_id IS NULL;
```

Below the query editor, the 'Resultados' (Results) pane shows a table with 11 rows and 2 columns: 'country_id' and 'country_name'. The zoom level is set to 82%.

	country_id	country_name
1	AR	Argentina
2	BE	Belgium
3	DK	Denmark
4	EG	Egypt
5	FR	France
6	IL	Israel
7	KW	Kuwait
8	ML	Malaysia
9	NG	Nigeria
10	ZM	Zambia
11	ZW	Zimbabwe