# SQL Practice 2 Multiple tables Joins Nested Queries

Link: <u>https://www.w3resource.com/sql-exercises/</u>

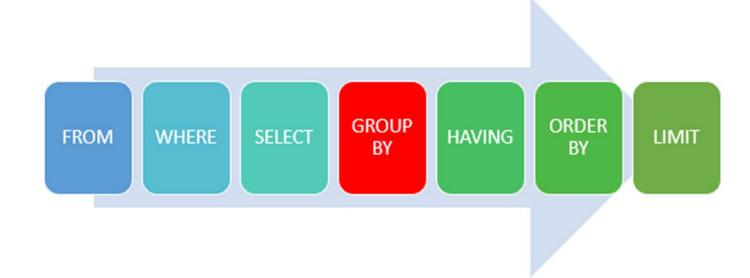
salesman				customer				
salesman_id	name	city	commission	customer_id	customer_name	city	grade	salesman_id
5001	James Hoog	New York	0.15	3002	Nick Rimando	New York	100	5001
5002	Nail Knite	Paris	0.13	3005	Graham Zusi	California	200	5002
5005	Pit Alex	London	0.11	3001	Brad Guzan	London		
5006	Mc Lyon	Paris	0.14	3004	Fabian Johns	Paris	300	5006
5003	Lauson Hen		0.12	3007	Brad Davis	New York	200	5001
5007	Paul Adam	Rome	0.13	3009	Geoff Camero	Berlin	100	
				3008	Julian Green	London	300	5002
				3003	Jozy Altidor	Moncow	200	5007

#### order

order no	purch amt	order date	customer id	salesman id
70001	150.5	2016-10-05	3005	5002
70009	270.65	2016-09-10	3001	
70002	65.26	2016-10-05	3002	5001
70004	110.5	2016-08-17	3009	
70007	948.5	2016-09-10	3005	5002
70005	2400.6	2016-07-27	3007	5001
70008	5760	2016-09-10	3002	5001
70010	1983.43	2016-10-10	3004	5006
70003	2480.4	2016-10-10	3009	
70012	250.45	2016-06-27	3008	5002
70011	75.29	2016-08-17	3003	5007



#### Order of SQL Statement



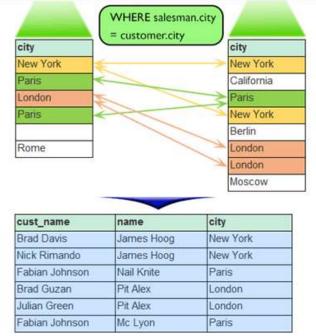
### Query 1

• Find the name and city of those customers and salesmen who lives in the same city.

<u>cust_name</u>	name	city
Nick Rimando	James Hoog	New York
Brad Davis	James Hoog	New York
Julian Green	Pit Alex	London
Fabian Johnson	Mc Lyon	Paris
Fabian Johnson	Nail Knite	Paris
Brad Guzan	Pit Alex	London

SELECT C.cust\_name S.name S.city FROM salesman AS S customer AS C WHERE S.city = C.city

(	sales FRO	sman.na M sale	stomer.cu ame, salesr sman, cust lesman.cit	nan.city	1/12	tomer		)
				customer_id	1	city	grade	salesman_id
-	sales	man		3002	Nick Rimando	New York	100	5001
salesman_id	name	city	commission	3005	Graham Zusi	California	200	5002
5001	James Hoog	New York	0.15	3004	Fabian Johnson	Paris	300	5006
5002	Nail Knite	Paris	0.13	3007	Brad Davis	New York	200	5001
5005	Pit Alex	London	0.11	3009	Geoff Cameron	Berlin	100	5003
5006	Mc Lyon	Paris	0.14	3008	Julian Green	London	300	5002
5003	Lauson Hense		0.12	3001	Brad Guzan	London		5005
5007	Paul Adam	Rome	0.13	3003	Jozy Altidore	Moscow	200	5007



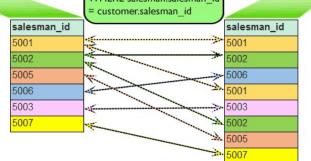
#### Query 2

• Find the names of all customers along with the salesmen who works for them.

<u>cust_name</u>	name
Nick Rimando	James Hoog
Brad Davis	James Hoog
Graham Zusi	Nail Knite
Julian Green	Nail Knite
Fabian Johnson	Mc Lyon
Geoff Cameron	Lauson Hen
Jozy Altidor	Paul Adam
Brad Guzan	Pit Alex

SELECT customer.cust\_name salesman.name
FROM customer salesman
WHERE salesman.salesman\_id = customer.salesman\_id;

(			er,salesma nan.salesm		ustomer.sa	lesman <sub>.</sub>	_id;	5
						omer		¥
				-	cust_name	city	grade	salesman_i
	sales	man		3002	Nick Rimando	New York	100	5001
salesman_id	name	city	commission	3005	Graham Zusi	California	200	5002
5001	James Hoog	New York	0.15	3004	Fabian Johnson	Paris	300	5006
5002	Nail Knite	Paris	0.13	3007	Brad Davis	New York	200	5001
5005	Pit Alex	London	0.11	3009	Geoff Cameron	Berlin	100	5003
	Mc Lyon	Paris	0.14	3008	Julian Green	London	300	5002
5006			0.12	3001	Brad Guzan	London		5005
5006 5003	Lauson Hense							



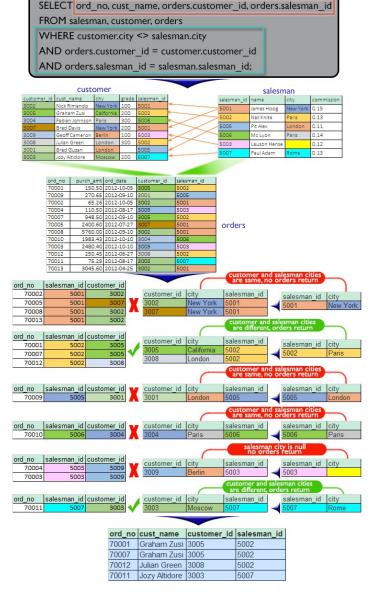
cust_name	name
Nick Rimando	James Hoog
Graham Zusi	Nail Knite
Fabian Johnson	Mc Lyon
Brad Davis	James Hoog
Geoff Cameron	Lauson Hense
Julian Green	Nail Knite
Brad Guzan	Pit Alex
Jozy Altidore	Paul Adam

### Query 3

• Display all those orders by the customers not located in the same cities where their salesmen live.

ord_no	cust_name	customer_id	salesman_id
70004	Geoff Cameron	3009	5003
70003	Geoff Cameron	3009	5003
70011	Jozy Altidor	3003	5007
70001	Graham Zusi	3005	5002
70007	Graham Zusi	3005	5002
70012	Julian Green	3008	5002

SELECT ord\_no cust\_name orders.customer\_id orders.salesman\_id FROM salesman customer orders WHERE customer.city <> salesman.city AND orders.customer\_id = customer.customer\_id AND orders.salesman\_id = salesman.salesman\_id;



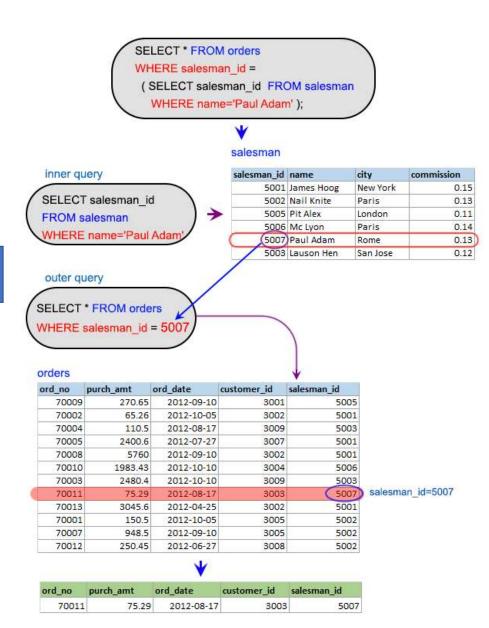
### Query 4 (using subquery)

Display all the orders issued by the salesman 'Paul Adam' from the orders table.

<u>ord_no</u>	purch_amt	ord_date	customer_id	salesman_id
70011	75.29	2012-08-17	3003	5007

SELECT \* FROM orders WHERE salesman\_id = (SELECT salesman\_id FROM salesman WHERE name = 'Paul Adam');

• Can we make this query unnested? If yes how?



# Query 5 (using subquery)

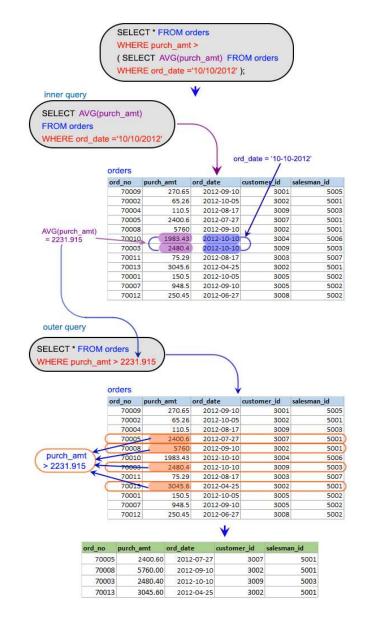
Display all the orders which values are greater than the average order value for 10th October 2012.

<u>ord_no</u>	purch_amt	ord_date	customer_id	salesman_id
70005	2400.60	2012-07-27	3007	5001
70008	5760.00	2012-09-10	3002	5001
70003	2480.40	2012-10-10	3009	5003
70013	3045.60	2012-04-25	3002	5001

#### **SELECT** \*

FROM orders
WHERE purch\_amt >
 (SELECT AVG(purch\_amt)
 FROM orders
 WHERE ord\_date = '2012-10-10');

• Can we make this query unnested? If yes how?



### Query 6 (using subquery)

Find all orders attributed to salesmen in Paris.

ord_no	purch_amt	ord_date	customer_id	salesman_id
70001	150.50	2012-10-05	3005	5002
70007	948.50	2012-09-10	3005	5002
70012	250.45	2012-06-27	3008	5002
70010	1983.43	2012-10-10	3004	5006

SELECT \* FROM orders WHERE salesman\_id IN (SELECT salesman\_id FROM salesman WHERE city ='Paris');

• Can we make this query unnested? If yes how?

# Query 7 (using subquery)

Extract the data from the orders table for the salesman who earned the maximum commission.

<u>ord_no</u>	purch_amt	ord_date	salesman_id
70002	65.26	2012-10-05	5001
70005	2400.60	2012-07-27	5001
70008	5760.00	2012-09-10	5001
70013	3045.60	2012-04-25	5001

SELECT ord\_no, purch\_amt, ord\_date, salesman\_id FROM orders

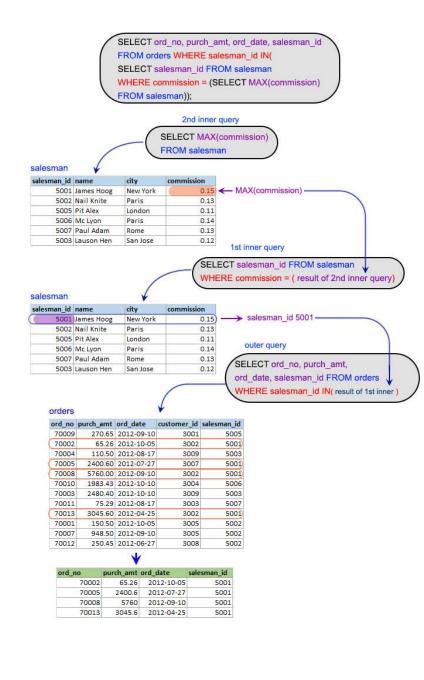
```
WHERE salesman_id IN (
```

```
SELECT salesman_id
FROM salesman
```

```
WHERE commission = (
```

- SELECT MAX(commission)
- FROM salesman)

);



# Query 8 (using subquery)

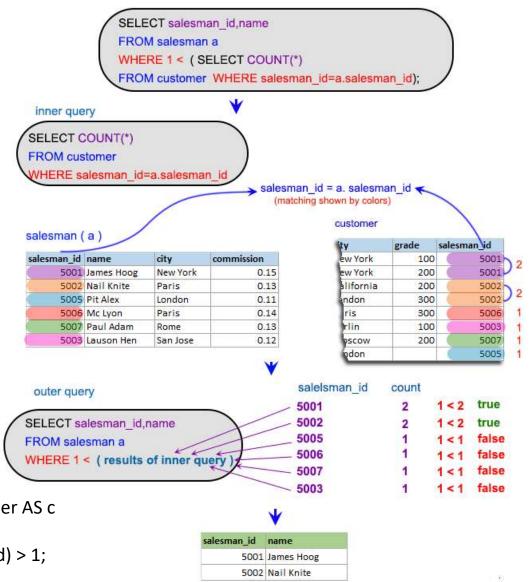
Find the name and ids of all salesmen who had more than one customer.

<u>salesman</u>	id	name
5001	J	ames Hoog
5002		Nail Knite

```
SELECT salesman_id, name
FROM salesman AS a
WHERE 1 <
 (SELECT COUNT(*)
 FROM customer AS c
 WHERE c.salesman_id = a.salesman_id);</pre>
```

• Can we make this query unnested? If yes how?

SELECT c.salesman\_id, s.name FROM salesman AS s, customer AS c
where s.salesman\_id = c.salesman\_id
group by c.salesman\_id, s.name Having count(c.salesman\_id) > 1;



# Query 9 (using subquery)

Write a query to find all the salesmen who worked for only one customer.

salesman_id	name	city	commission
5005	Pit Alex	London	0.11
5006	Mc Lyon	Paris	0.14
5007	Paul Adam	Rome	0.13
5003	Lauson Hen	San Jose	0.12

#### **SELECT** \*

FROM salesman
WHERE salesman\_id IN (
 SELECT DISTINCT salesman\_id
 FROM customer a
 WHERE NOT EXISTS (
 SELECT \* FROM customer b
 WHERE a.salesman\_id = b.salesman\_id
 AND a.cust\_name <> b.cust\_name));

	A	ND a	.cust_	name	<>b.cust	_name));				/		
2nd inne	ar query					(						
		Louist										
1	b.salesn											
	ust name				an_iu							
		T 5		18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1								
customer ( a						customer						
customer_id	cust_nam Nick Rima		sa	lesman	_id			cust_name Nick Rimar		5	alesman 5	_id 001
	Brad Dav				001			Brad Davis				001
	Graham Z				002			Graham Zu				002
	Julian Gre Fabian Jo				002			Julian Gree Fabian Joh				002
	Geoff Can		100		003	3	009	Geoff Came	eron			003
	Jozy Altid				007			Jozy Altido				007
3001	Brad Guza	an		50	005			Brad Guzai				005
customer_id cu	ust_name		sales	man_id				cust_name Nick Riman		Si	alesman	id 001) fal
3002 N	ick Rimand	o )		5001				Brad Davis	uu			001 tru
											and	vice ven
customer_id cu	ist name		salesr	nan_id		customer	_id (	cust_name		s	alesman	
	aham Zusi			5002	~			Graham Zu Julian Gree		277.		002 fal
customer_id cus		city	1	rade sa	alesman_id	customer_id	cust		city	Vork		salesman
	t_name :k Rimando	C LORDA T	1		alesman_id 5001	customer_id 3007	cust	_name d Davis	city New 1	York	grade 200	salesman
3002 Nic 3007 Bra	k Rimando Id Davis	New New	York York	rade sa 100 200	alesman_id 5001 5001	customer_id 3007 3002	cust 7 Brai 2 Nicł	d Davis « Rimando	New ' New '	York	200 100	51
3002 Nic 3007 Bra 3005 Gra	k Rimando Id Davis Iham Zusi	New New Calife	York York ornia	rade sa 100 200 200	alesman_id 5001 5001 5002	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis K Rimando an Green	New New Londe	York on	200 100 300	51
3002 Nic 3007 Bra 3005 Gra	k Rimando Id Davis	New New	York York ornia	rade sa 100 200	alesman_id 5001 5002 5002 5002	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis « Rimando	New ' New '	York on	200 100	51
3002 Nic 3007 Bra 3005 Gra	k Rimando Id Davis Isham Zusi Ian Green	New New Calife	York York ornia	rade sa 100 200 200	alesman_id 5001 5001 5002	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis Rimando an Green ham Zusi salesma	New New Londe Califo	York on	200 100 300 200	51
3002 Nic 3007 Bra 3005 Gra 3008 Jul 1st inner	k Rimando Id Davis Isham Zusi Ian Green	New New Calife	York York ornia on	rade sa 100 200 200 300	alesman_id 5001 5002 5002 5002	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis < Rimando an Green ham Zusi salesma	New New Califo n_id	York on	200 100 300 200	51
3002 Nic 3007 Bra 3005 Gra 3008 Jul 1st inner SELECT	ik Rimando Id Davis Iaham Zusi Ian Green I <b>r query</b>	New New Califo Lond	York York ornia on	rade sa 100 200 200 300 an_id	alesman_id 5001 5002 5002 5002	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis < Rimando an Green ham Zusi salesma	New Califo	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bra 3005 Gra 3008 Jul 1st inner SELECT FROM c	ik Rimando ad Davis aham Zusi ian Green r query r DISTING	New New Califo Lond	York York ornia on	rade sa 100 200 200 300 an_id true	alesman_id 5001 5001 5002 5002	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis < Rimando an Green ham Zusi salesma	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bra 3005 Gra 3008 Jul 1st inner SELECT FROM c	ik Rimando ad Davis aham Zusi ian Green r query r DISTING customer	New New Califo Lond	York York ornia on	rade sa 100 200 200 300 an_id true	alesman_id 5001 5001 5002 5002	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis < Rimando an Green ham Zusi salesma	New Califo	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bra 3005 Gra 3008 Jul 1st inner SELECT FROM c	k Rimando ad Davis aham Zusi ian Green r query DISTING sustomer NOT EX	New New Califo Lond	York York ornia on	rade sa 100 200 200 300 an_id true	alesman_id 5001 5001 5002 5002	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis < Rimando an Green ham Zusi salesma	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Brz 3005 Grz 3008 Jul 1st inner SELECT FROM c WHERE	k Rimando Id Davis Iaham Zusi Ian Green Ir query I DISTING Sustomer NOT EX	New New Calife Lond CT sa a ISTS	York York ornia on ilesma ( resu	rade sa 100 200 200 300 an_id true	alesman_id 5001 5001 5002 5002	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis < Rimando an Green ham Zusi salesma	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bra 3005 Gra 3008 Jul 1st inner SELECT FROM c WHERE outer qu	k Rimando ad Davis aham Zusi ian Green r query DISTING ustomer NOT EX Jery	New New Califo Londo CT sa a SISTS	York York prnia pn ilesma ( resu man	rade sa 100 200 200 300 300 an_id true ilt of q	alesman_id 5001 5002 5002 5002 5002 100 100	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis < Rimando an Green ham Zusi salesma	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando ad Davis aham Zusi ian Green r query DISTING ustomer NOT EX Jery	New New Califo Londo CT sa a ISTS Sales	York York prnia pn ilesma ( resu man V ( 500	rade sa 100 200 200 300 an_id true ult of q	uery ) 03,	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis < Rimando an Green ham Zusi salesma	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando d Davis sham Zusi ian Green r query DISTING USTING USTING SUSTIN SUSTING SUSTING SUSTING SUSTING SUS	New New Califo Londo CT sa a Sales Sales L id II ults of	York York prnia pn ilesma ( resu man V ( 500	rade sa 100 200 200 300 an_id true ult of q	uery ) 03,	customer_id 3007 3002 3008	cust 7 Brac 2 Nick 3 Juli	d Davis < Rimando an Green ham Zusi salesma	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Califu Lond CT sa a Sales Sales Lid II ults of	York York Dornia Don Ilesma ( resu man N ( 500 the inn	rade sa 100 200 200 300 an_id true ult of q	uery )	custome_id         3007           3002         3008           3005         3005	cust 7 Brad 2 Nick 3 Juli 5 Gra	d Davis < Rimando an Green ham Zusi salesma	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando d Davis sham Zusi ian Green r query DISTING USTING USTING SUSTIN SUSTING SUSTING SUSTING SUSTING SUS	New New Calific Lond CT sa a Sales Sales Lists Sales Lists Sales S	York York York on ellesma (resu (resu man V (500 the inm	rade sa 100 200 200 300 an_id true ult of q 06, 500 v	uery ) 03,	custome_id 3007 3002 3008 3005 ) >	cust 7 Brad 2 Nick 3 Juli 5 Gra	d Davis < Rimando an Green ham Zusi salesman 9 9 9 9 9 9 9 9 9 9 9 9 9	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Califu Lond CT sa a Sales Sales 1 id II san id II soon 5001	York York York ornia on (resu (resu man V (500 the inn hame James Nail Kr	rade sa 100 200 200 300 300 an_id true	uery ) 03, y ity New Yor Paris	custome_id 3007 3002 3008 3005 ) >	cust 7 Brad 2 Nick 8 Julii 6 Grad 6 Grad 8 Sion 0.1 0.1	d Davis < Rimando an Green ham Zusi salesma 2 2 3 3 3	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Califd Lond CT sa a ISTS Sales Lid II tan an_id 5001 5002	York York Sornia Son (resu (resu (resu (resu ) Son He inn He inn James James Nail Kr Pit Ale:	rade sa 100 200 200 300 300 4 11 of q 11 of q 10	uery) uery) 03, v dity New Yor Paris London	custome_id 3007 3002 3008 3005 ) >	cust 7 Brad 2 Nick 3 Julii 3 Gra 3 Gra 3 Gra 3 Ora	d Davis k Rimando an Green ham Zusi salesmai 5 5 1	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Califd Lond CT sa a ISTS Sales Sal	York York York ornia on (resu (resu man V (500 the inn hame James Nail Kr	rade sa 100 200 200 300 m_id true ult of q w Hoog tite k n	uery ) 03, y ity New Yor Paris	custome_id 3007 3002 3008 3005 ) >	cust 7 Brad 2 Nick 8 Julii 6 Grad 6 Grad 8 Sion 0.1 0.1	d Davis < Rimando an Green ham Zusi salesma 	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Califi Londo CT sa a a Sales	York York Jornia Jon (resu (resu man V (500 the inn James Nail Kr Nail Kr Mc Lyo	rade sa 100 200 200 300 300 an_id true	uery ) dity New Yor Paris London Paris	custome_id         3007           3002         3008           3000         3005           )         >           (commission)         >	cust 7 Brad 2 Nick 3 Juli 5 Gra 5 Gra 5 Gra 0.1 0.1 0.1 0.1	d Davis k Rimando an Green ham Zusi salesma 9 9 9 9 9 9 9 9 9 9 9 9 9	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Califi Londo CT sa a a Sales	York York Sornia Son (resu (resu (resu (resu ) (500 the inn ) James Nail Kr Pit Ales Mc Lyo Paul A	rade sa 100 200 200 300 300 an_id true	uery ) dity very ) dity city london Paris Rome	custome_id         3007           3002         3008           3000         3005           )         >           (commission)         >	cust 7 Brac 2 Nick 3 Juli 5 Gra 5 Gra 6 Gra 0.1 0.1 0.1 0.1 0.1 0.1	d Davis k Rimando an Green ham Zusi salesma 9 9 9 9 9 9 9 9 9 9 9 9 9	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Calific Lond. CT sa a control to the same control	York York York Jornia Jon ( resu ( resu ( resu Mail Kr Nail Kr Nail Kr Mc Lyo Paul A Lausor	rade sa 100 200 200 300 300 an_id true	etty v v v v v v v v v v v v v	custome_id         3007           3002         3008           3005         3005           k         commission	cust 7 Brad 2 Nick 8 Juli 5 Gra 5 Gra 0.1 0.1 0.1 0.1 0.1	d Davis k Rimando an Green ham Zusi salesma 9 9 9 9 9 9 9 9 9 9 9 9 9	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Calific Lond. CT sa a control to the same control	York York York Idesma (resu (resu (resu man V (500 the inn Nai (500 the inn Nai Kr Pit Ale Paul A Lausor	rade sa 100 200 200 300 an_id true	etty uery ) organization of the second seco	custome_id         3007           3002         3008           3005         3005           k         commission	cust 7 Brad 2 Nick 8 Juli 5 Gra 5 Gra 0.1 0.1 0.1 0.1 0.1	d Davis < Rimando an Green ham Zusi salesma 2 3 3 3 3 3 1 4 3 3 2 2 2 2 2 2 2 2 2 2 2 2 2	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Calific Lond. CT sa a control to the same control	York York York alesma (resu (resu man V (500 the inn Name James Nail Kr Pit Aleo Mc Lyoo Paul A Lausor	rade se 100 200 200 200 300 ann_id true	itesman_id 50010 5002	customer_id           3007           3002           3002           3002           3002           3002           3005           3005           k           city         c	cust 7 Brad 2 Nick 8 Juli 5 Gra 5 Gra 0.1 0.1 0.1 0.1 0.1	d Davis R Jimando an Green ham Zusi salesma 2 2 2 2 2 3 4 4 3 3 4 4 3 2 2 2 3 4 4 3 3 4 3 3 4 3 3 4 5 3 5 5 5 5 5 5 5 5 5 5 5 5 5	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those
3002 Nic 3007 Bre 3008 Jul 1st inner SELECT FROM c WHERE SELECT WHERE S	k Rimando di Davis sham Zusi ian Green r query DISTING sustomer NOT EX Jery * FROM s salesman 005 ) resu salesm	New New Calific Lond. CT sa a control to the same control	York York York Ornia on (resu (resu man V (500 the inn James Nail Kr. V (500 the inn Matter Mc Lyo Paul A Lausor	rade sa 100 200 200 200 200 200 200 100 1	itesman_id 50010 5002	customer_id         3007           3002         3008           3005         3005           x         commission           k         commission           city         c	cust 7 Brad 2 Nick 8 Juli 5 Gra 5 Gra 0.1 0.1 0.1 0.1 0.1	d Devis R Imando an Green salesma 2 5 5 5 5 1 1 4 5 5 2 2 1 1 1 4 5 5 5 1 1 1 1 4 5 5 5 1 1 1 1 1 1 1 1 1 1 1 1 1	New 2 Londs Califo 5003 5005	York on ornia	200 100 300 200 excep	t those

### Query 9: Equivalent Queries

Write a query to find all the salesmen who worked for only one customer.

salesman_id	name	city	commission
5005	Pit Alex	London	0.11
5006	Mc Lyon	Paris	0.14
5007	Paul Adam	Rome	0.13
5003	Lauson Hen	San Jose	0.12

SELECT c.salesman\_id, s.name, s.city, s.commission
FROM salesman s, customer c
where s.salesman\_id = c.salesman\_id
group by c.salesman\_id, s.name
Having count(c.salesman\_id) = 1;

#### SELECT \*

FROM salesman
WHERE salesman\_id NOT IN (
 SELECT a.salesman\_id
 FROM customer a, customer b
 WHERE a.salesman\_id = b.salesman\_id
 AND a.cust\_name <> b.cust\_name);

# Query 10 (using subquery)

Display all the orders that had amounts that were greater than at least one of the orders from September 10th 2012.

ord_no	purch_amt	ord_date	customer_id	salesman_id	
70005	2400.60	2012-07-27	3007	5001	retrieve purch_amt ( 270.65, 5760, 948.5 )
70008	5760.00	2012-09-10	3002	5001	
70010	1983.43	2012-10-10	3004	5006	20
70003	2480.40	2012-10-10	3009	5003	outer query
70013	3045.60	2012-04-25	3002	5001	ELECT * FROM Orders WHERE purch_amt > ANY
70007	948.50	2012-09-10	3005	5002	(270,65, 5760, 948.5)

SELECT \* FROM Orders WHERE purch amt > ANY (SELECT purch amt FROM orders WHERE ord date='2012/09/10'

ord_no	purch_amt	ord_date	customer_id
70009	270.65	2012-09-10	3001
70002	65.26	2012-10-05	3002
70004	110.5	2012-08-17	3009
70005	2400.6	2012-07-27	3007
70008	5760	2012-09-10	3002
70010	1983.43	2012-10-10	3004
70003	2480.4	2012-10-10	3009
70011	75.29	2012-08-17	3003
70013	3045.6	2012-04-25	3002
70001	150.5	2012-10-05	3005
70007	948.5	2012-09-10	3005
70012	250.45	2012-06-27	3008

\*\* > ANY means > the minimum (270.65)

inner query

FROM orders

SELECT purch amt

VHERE ord date='2012/09/10

ord_no	purch_amt	ord_date	customer_id
70009	270.65	2012-09-10	3001
70002	65.26	2012-10-05	3002
70004	110.5	2012-08-17	3009
70005	2400.6	2012-07-27	3007
70008	5760	2012-09-10	3002
70010	1983.43	2012-10-10	3004
70003	2480.4	2012-10-10	3009
70011	75.29	2012-08-17	3003
70013	3045.6	2012-04-25	3002
70001	150.5	2012-10-05	3005
70007	948.5	2012-09-10	3005
70012	250.45	2012-06-27	3008

**SELECT** \*

**FROM** Orders WHERE purch amt > ANY

(SELECT purch amt **FROM** orders **WHERE** ord\_date = '2012-09-10');

ord_no	purch_amt	ord_date	customer_id	salesman_id	
70005	2400.60	2012-07-27	3007	5001	
70008	5760.00	2012-09-10	3002	5001	
70010	1983.43	2012-10-10	3004	5006	
70003	2480.40	2012-10-10	3009	5003	
70013	3045.6	2012-04-25	3002	5001	
70007	948.5	2012-09-10	3005	5002	

L

# Query 11 (using subquery)

display only those customers whose grade are, in fact, higher than every customer in New York.

customer_id	cust_name	city	grade	salesman_id
3008	Julian Green	London	300	5002
3004	Fabian Johnson	Paris	300	5006

SELECT \* FROM customer

WHERE grade > ALL

(SELECT grade FROM customer WHERE city = 'NewYork');

