SQL ALTER TABLE Statement

The SQL ALTER TABLE command is used to modify the definition (structure) of a table by modifying the definition of its columns. The ALTER command is used to perform the following functions.

- 1) Add, drop, modify table columns 2) Add and drop constraints
- 3) Enable and Disable constraints

Syntax to add a column

ALTER TABLE table_name ADD column_name datatype;
For Example: To add a column "experience" to the employee table, the query would be like

ALTER TABLE employee ADD experience number(3);

Syntax to drop a column

ALTER TABLE table_name DROP column_name;

For Example: To drop the column "location" from the employee table, the query would be like

ALTER TABLE employee DROP location;

Syntax to modify a column

ALTER TABLE table name MODIFY column name datatype;

For Example: To modify the column salary in the employee table, the query would be like

ALTER TABLE employee MODIFY salary number(15,2):

SQL RENAME Command

The SQL RENAME command is used to change the name of the table or a database object.

If you change the object's name any reference to the old name will be affected. You have to manually change the old name to the new name in every reference.

Syntax to rename a table

RENAME old table name To new table name;

For Example: To change the name of the table employee to my_employee, the query would be like

RENAME employee TO my emloyee;

SQL JOINS: Exercise-1 with Solution

Write a SQL statement to prepare a list with salesman name, customer name and their cities for the salesmen and customer who belongs to the same city.

Sample table: salesman

salesman_id	name	city	commission
5001	James Hoog		0.15
5002	Nail Knite		0.13
5005 5006	Pit Alex Mc Lyon Lauson Hen	London Paris	0.11 0.14
5003	Lauson Hen	Rome	0.12
5007	Paul Adam		0.13

Sample table: customer

customer_id	cust_name	city	grade	salesman_id
3002	Nick Rimando	New York	100	5001
3005	Graham Zusi	California	200	5002
3001 3004 3007	Brad Guzan Fabian Johns Brad Davis	London Paris New York	300 200	5005 5006 5001
3009	Geoff Camero	Berlin	100	5003
3008	Julian Green	London	300	5002
3003	Jozy Altidor	Moscow	200	5007

Sample Solution:

```
SELECT salesman.name AS "Salesman",

customer.cust_name, customer.city

FROM salesman,customer

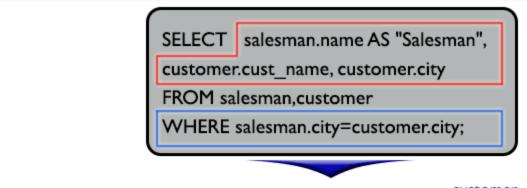
WHERE salesman.city=customer.city;

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```

Salesman cust_name James Hoog Nick Rimando James Hoog Brad Davis Pit Alex Julian Green	city New York New York London
--	--

Mc Lyon Fabian Johnson Paris Nail Knite Fabian Johnson Paris Pit Alex Brad Guzan London

Explanation:



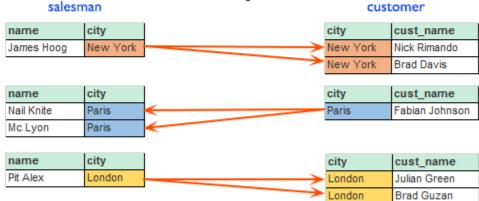
salesman

salesman_id	name	city	commission
5001	James Hoog	New York	0.15
5002	Nail Knite	Paris	0.13
5005	Pit Alex	London	0.11
5006	Mc Lyon	Paris	0.14
5003	Lauson Hense		0.12
5007	Paul Adam	Rome	0.13

customer

customer_id	cust_name	city	grade	salesman_id
3002	Nick Rimando	New York	100	5001
3005	Graham Zusi	California	200	5002
3004	Fabian Johnson	Paris	300	5006
3007	Brad Davis	New York	200	5001
3009	Geoff Cameron	Berlin	100	5003
3008	Julian Green	London	300	5002
3001	Brad Guzan	London		5005
3003	Jozy Altidore	Moscow	200	5007

salesman



Salesman	cust_name	city
James Hoog	Brad Davis	New York
James Hoog	Nick Rimando	New York
Nail Knite	Fabian Johnson	Paris
Pit Alex	Brad Guzan	London
Pit Alex	Julian Green	London
Mc Lyon	Fabian Johnson	Paris

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SQL JOINS: Exercise-4 with Solution

Write a SQL statement to find the list of customers who appointed a salesman for their jobs who gets a commission from the company is more than 12%.

Sample table: customer

customer_id	cust_name	city	grade	salesman_id
3002	Nick Rimando	New York	100	5001
3005	Graham Zusi	California	200	5002
3001 3004 3007	Brad Guzan Fabian Johns Brad Davis	London Paris New York	300 200	5005 5006 5001
3009	Geoff Camero	Berlin	100	5003
3008	Julian Green	London	300	5002
3003	Jozy Altidor	Moscow	200	5007

Sample table: salesman

salesman_id	name	city	commission
5001	James Hoog	New York	0.15
5002	Nail Knitě	Paris	0.13
5005	Pit Alex	London	0.11
5006	Mc Lyon	Paris	0.14
5003	Lausón Hen		0.12
5007	Paul Adam	Rome	$0.\overline{13}$

Sample Solution:

```
SELECT a.cust_name AS "Customer Name",
a.city, b.name AS "Salesman", b.commission

FROM customer a

INNER JOIN salesman b

ON a.salesman_id=b.salesman_id

WHERE b.commission>.12;

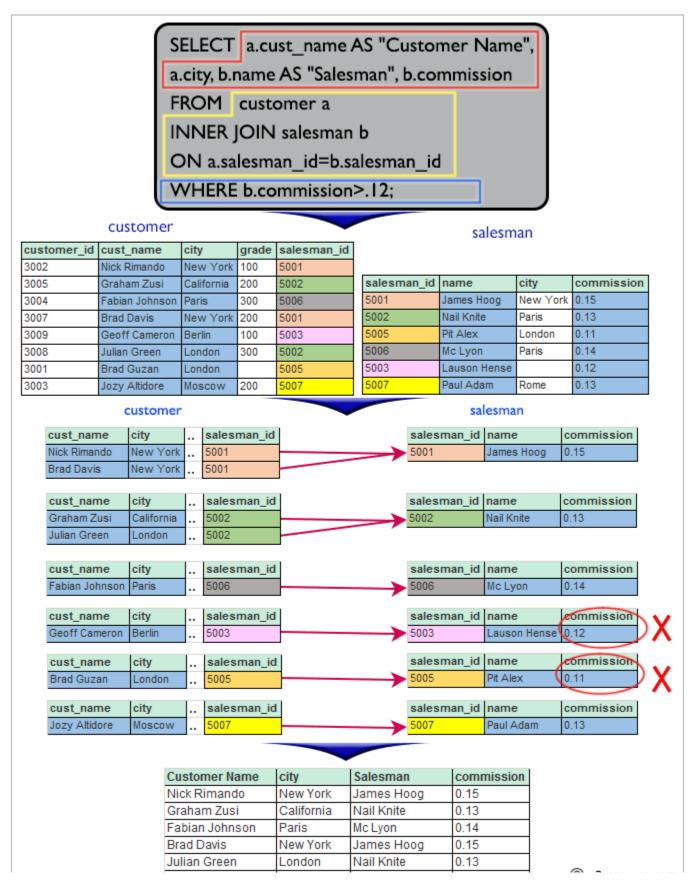
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```

Customer Name	city	Salesman	commission
Nick Rimando	New York	James Hoog	0.15

```
Brad Davis New York James Hoog 0.15
Graham Zusi California Nail Knite 0.13
Julian Green London Nail Knite 0.13
Fabian Johnson Paris Mc Lyon 0.14
Jozy Altidor Moscow Paul Adam 0.13
```

Explanation:

```
SELECT a.cust_name AS "Customer Name",
a.city, b.name AS "Salesman", b.commission
FROM customer a
INNER JOIN salesman b
ON a.salesman_id=b.salesman_id
WHERE b.commission>.12;
```



SQL JOINS: Exercise-5 with Solution

Write a SQL statement to find the list of customers who appointed a salesman for their jobs who does not live in the same city where their customer lives, and gets a commission is above 12%.

Sample table: customer

customer_id	cust_name	city	grade	salesman_id
3002 3005 3001 3004 3007 3009	Nick Rimando Graham Zusi Brad Guzan Fabian Johns Brad Davis Geoff Camero	New York California London Paris New York Berlin	100 200 300 200 100	5001 5002 5005 5006 5001 5003
3008 3003	Julian Green Jozy Altidor	London Moscow	300 200	5002 5007

Sample table: salesman

salesman_id	name	city	commission
5001 5002 5005 5006 5003 5007	James Hoog Nail Knite Pit Alex Mc Lyon Lauson Hen Paul Adam	New York Paris London Paris Rome	0.15 0.13 0.11 0.14 0.12 0.13

Sample Solution:

```
SELECT a.cust_name AS "Customer Name",
a.city, b.name AS "Salesman", b.city,b.commission

FROM customer a

INNER JOIN salesman b

ON a.salesman_id=b.salesman_id

WHERE b.commission>.12

AND a.city<>b.city;
```

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Output of the Query:

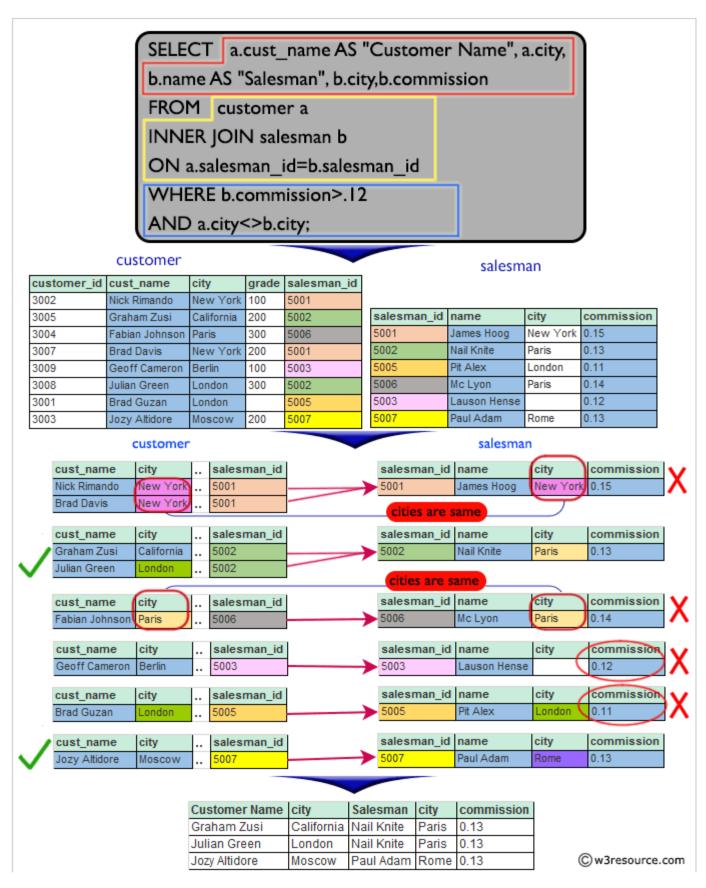
Customer Name city Salesman city commission Graham Zusi California Nail Knite Paris 0.13 Julian Green London Nail Knite Paris 0.13 Jozy Altidor Moscow Paul Adam Rome 0.13

Explanation:

SELECT a.cust_name AS "Customer Name", a.city, b.name AS "Salesman", b.city,b.commission

FROM customer a
INNER JOIN salesman b
ON a.salesman_id=b.salesman_id

WHERE b.commission>.12
AND a.city<>b.city;



SQL JOINS: Exercise-2 with Solution

Write a SQL statement to make a list with order no, purchase amount, customer name and their cities for those orders which order amount between 500 and 2000.

Sample table: orders

ord_no	purch_amt	ord_date	customer_id	salesman_id
70001 70009	150.5 270.65	2012-10-05 2012-09-10	3005 3001	5002 5005
70002 70004 70007	65.26 110.5 948.5	2012-10-05 2012-08-17 2012-09-10	3002 3009 3005	5001 5003 5002
70005 70008	2400.6 5760	2012-09-10 2012-09-10 2012-09-10	3007 3002	5001 5001
70010 70003 70012	1983.43 2480.4 250.45	2012-10-10 2012-10-10 2012-06-27	3004 3009 3008	5006 5003
70012 70011 70013	75.29 3045.6	2012-06-27 2012-08-17 2012-04-25	3003 3002	5002 5007 5001

Sample table: customer

${\tt customer_id}$	cust_name	city	grade	salesman_id
3002	Nick Rimando	New York	100	5001
3005	Graham Zusi	California	200	5002
3001	Brad Guzan	London		5005
3004	Fabian Johns	Paris	300	5006
3007	Brad Davis	New York	200	5001
3009	Geoff Camero	Berlin	100	5003
3008	Julian Green	London	300	5002
3003	Jozy Altidor	Moscow	200	5007

Sample Solution:

```
SELECT a.ord_no,a.purch_amt,
b.cust_name,b.city
FROM orders a,customer b
WHERE a.customer_id=b.customer_id
AND a.purch_amt BETWEEN 500 AND 2000;
Copy
```

ord_no purch_amt cust_name city 70007 948.50 Graham Zusi California 70010 1983.43 Fabian Johnson Paris

Explanation:

```
SELECT a.ord_no,a.purch_amt,
b.cust_name,b.city
FROM orders a,customer b
WHERE a.customer_id=b.customer_id
AND a.purch_amt BETWEEN 500 AND 2000;
```

SELECT a.ord_no,a.purch_amt,

b.cust_name,b.city

FROM orders a, customer b

WHERE a.customer_id=b.customer_id

AND a.purch_amt BETWEEN 500 AND 2000;

orders

ord_no	purch_amt	ord_date	customer_id	salesman_id
70001	150.50	2012-10-05	3005	5002
70009	270.65	2012-09-10	3001	5005
70002	65.26	2012-10-05	3002	5001
70004	110.50	2012-08-17	3009	5003
70007	948.50	2012-09-10	3005	5002
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
70012	250.45	2012-06-27	3008	5002
70011	75.29	2012-08-17	3003	5007
70013	3045.60	2012-04-25	3002	5001

customer

customer_id	cust_name	city	grade	salesman_id
3002	Nick Rimando	New York	100	5001
3005	Graham Zusi	California	200	5002
3004	Fabian Johnson	Paris	300	5006
3007	Brad Davis	New York	200	5001
3009	Geoff Cameron	Berlin	100	5003
3008	Julian Green	London	300	5002
3001	Brad Guzan	London		5005
3003	Jozy Altidore	Moscow	200	5007

orders

ord_no	purch_amt	ord_date	customer_id {
70001	150.50	2012-10-05	3005
70009	270.65	2012-09-10	3001
70002	65.26	2012-10-05	3002
70004	110.50	2012-08-17	3009
70007	948.50	2012-09-10	> 3005
70005	2400.60	2012-07-27	3007
70008	5760.00	2012-09-10	3002
70010	1983.43	2012-10-10	> 3004

customer

customer_id	cust_name	city	grade	salesman_id
3002	Nick Rimando	New York	100	5001
3005	Graham Zusi	California	200	5002
3004	Fabian Johnson	Paris	300	5006
3007	Brad Davis	New York	200	5001
3009	Geoff Cameron	Berlin	100	5003
3008	Julian Green	London	300	5002
3001	Brad Guzan	London		5005
3003	Jozy Altidore	Moscow	200	5007

ord_no	purch_amt	cust_name	city
70007	948.50	Graham Zusi	California
70010	1983.43	Fabian Johnson	Paris

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SQL JOINS: Exercise-3 with Solution

Write a SQL statement to know which salesman are working for which customer.

Sample table: customer

customer_id	cust_name	city	grade	salesman_id
3002 3005 3001	Nick Rimando Graham Zusi Brad Guzan	New York California London	100 200	5001 5002 5005
3004 3007 3009 3008 3003	Fabian Johns Brad Davis Geoff Camero Julian Green Jozy Altidor	Paris New York Berlin London Moscow	300 200 100 300 200	5006 5001 5003 5002 5007

Sample table: salesman

salesman_id	name	city	commission
5001 5002	James Hoog Nail Knite	New York Paris	0.15 0.13
5002 5005 5006	Pit Alex	London Paris	0.13 0.11 0.14
5003	Mc Lyon Lauson Hen		0.12
5007	Paul Adam	Rome	0.13

Sample Solution:

```
SELECT a.cust_name AS "Customer Name",
a.city, b.name AS "Salesman", b.commission

FROM customer a

INNER JOIN salesman b

ON a.salesman_id=b.salesman_id;

Copy
```

Customer Name city	Salesman	commission
Nick Rimando New York	James Hoog	0.15
Brad Davis New York		0.15
Graham Zusi California	Nail Knitě	0.13
Julian Green London	Nail Knite	0.13
Fabian Johnson Paris	Mc Lyon	0.14

Geoff Cameron Berlin Lauson Hen 0.12 Jozy Altidor Moscow Paul Adam 0.13 Brad Guzan London Pit Alex 0.11

Explanation:

SELECT a.cust_name AS "Customer Name",
a.city,b.name AS "Salesman", b.commission
FROM customer a
INNER JOIN salesman b
ON a.salesman_id=b.salesman_id;

