

Assignment –1

Creating sample tables and inserting values

```
CREATE TABLE SALESPeOPLE (  
    Snum INT(4),  
    Sname VARCHAR(10),  
    City VARCHAR(10),  
    Comm FLOAT(3,2)  
);
```

```
INSERT INTO SALESPeOPLE (Snum, Sname, City, Comm) VALUES  
(1001, 'Peel', 'London', 0.12),  
(1002, 'Serres', 'San Jose', 0.13),  
(1004, 'Motika', 'London', 0.11),  
(1007, 'Rifkin', 'Barcelona', 0.15),  
(1003, 'Axelrod', 'New York', 0.10);
```

```
CREATE TABLE CUSTOMERS (  
    Cnum INT(4),  
    Cname VARCHAR(10),  
    City VARCHAR(10),  
    Rating INT(4),  
    Snum INT(4)  
);
```

```
INSERT INTO CUSTOMERS (Cnum, Cname, City, Rating, Snum) VALUES  
(2001, 'Hoffman', 'London', 100, 1001),  
(2002, 'Giovanni', 'Rome', 200, 1003),  
(2003, 'Liu', 'San Jose', 200, 1002),  
(2004, 'Grass', 'Berlin', 300, 1002),  
(2006, 'Clemens', 'London', 100, 1001),  
(2008, 'Cisneros', 'San Jose', 300, 1007),  
(2007, 'Pereira', 'Rome', 100, 1004);
```

```
CREATE TABLE ORDERS (  
    Onum INT(4),  
    Amt FLOAT(7,2),  
    Odate DATE,  
    Cnum INT(4),  
    Snum INT(4)  
);
```

```
INSERT INTO ORDERS (Onum, Amt, Odate, Cnum, Snum) VALUES  
(3001, 18.69, '1990-10-03', 2008, 1007),  
(3003, 767.19, '1990-10-03', 2001, 1001),  
(3002, 1900.10, '1990-10-03', 2007, 1004),  
(3005, 5160.45, '1990-10-03', 2003, 1002),  
(3006, 1098.16, '1990-10-03', 2008, 1007),  
(3009, 1713.23, '1990-10-04', 2002, 1003),  
(3007, 75.75, '1990-10-04', 2004, 1002),  
(3008, 4723.00, '1990-10-05', 2006, 1001),  
(3010, 1309.95, '1990-10-06', 2004, 1002),  
(3011, 9891.88, '1990-10-06', 2006, 1001);
```

Assignment –2

Introducing Relational Databases.

1) Which field of the Customers table is the primary key?

ANS: CNUM

2) What is the 4th column of the Customers table?

ANS: RATING

3) What is another word for row? For column?

ANS: Another word for row is Entity or tuple.

Another word for column is Attribute.

4) Why isn't it possible to see the first five rows of a table?

ANS: MySQL tables are unordered by default, and unless you explicitly use an ORDER BY clause

Assignment –3

Overview of SQL.

1) Does ANSI recognize the data type DATE?

Ans: Yes, ANSI SQL does recognize the DATE data type.

2) Which subdivision of SQL is used to insert values in tables?

Ans: The subdivision of SQL used to insert values into tables is DML

INSERT, UPDATE, DELETE, and SELECT are all part of DML.

Assignment –4

Retrieving Information from Tables.

```
SELECT Onum, Amt, Odate
FROM ORDERS;
```

```
+-----+-----+-----+
| Onum | Amt   | Odate   |
+-----+-----+-----+
| 3001 | 18.69 | 1990-10-03 |
| 3003 | 767.19 | 1990-10-03 |
| 3002 | 1900.10 | 1990-10-03 |
| 3005 | 5160.45 | 1990-10-03 |
| 3006 | 1098.16 | 1990-10-03 |
| 3009 | 1713.23 | 1990-10-04 |
| 3007 | 75.75 | 1990-10-04 |
| 3008 | 4723.00 | 1990-10-05 |
| 3010 | 1309.95 | 1990-10-06 |
| 3011 | 9891.88 | 1990-10-06 |
+-----+-----+-----+
```

10 rows in set (0.00 sec)

```
SELECT * FROM CUSTOMERS WHERE Snum = 1001;
```

```
+-----+-----+-----+-----+-----+
| Cnum | Cname | City   | Rating | Snum |
+-----+-----+-----+-----+-----+
| 2001 | Hoffman | London | 100 | 1001 |
| 2006 | Clemens | London | 100 | 1001 |
+-----+-----+-----+-----+-----+
```

2 rows in set (0.00 sec)

```
SELECT City, Sname, Snum, Comm FROM SALESPeople;
```

```

+-----+-----+-----+-----+
| City   | Sname  | Snum | Comm |
+-----+-----+-----+-----+
| London | Peel   | 1001 | 0.12 |
| San Jose | Serres | 1002 | 0.13 |
| London | Motika | 1004 | 0.11 |
| Barcelona | Rifkin | 1007 | 0.15 |
| New York | Axelrod | 1003 | 0.10 |
+-----+-----+-----+-----+
5 rows in set (1.79 sec)

```

```

select rating from customers where city = 'san jose';
+-----+
| rating |
+-----+
| 200 |
| 300 |
+-----+
2 rows in set (0.00 sec)

```

```

SELECT DISTINCT snum FROM ORDERS;
+-----+
| snum |
+-----+
| 1007 |
| 1001 |
| 1004 |
| 1002 |
| 1003 |
+-----+
5 rows in set (0.71 sec)

```

Assignment –5 Relational and Logical Operators.

```

mysql> SELECT * FROM ORDERS WHERE amt > 1000;
+-----+-----+-----+-----+
| Onum | Amt   | Odate   | Cnum | Snum |
+-----+-----+-----+-----+
| 3002 | 1900.10 | 1990-10-03 | 2007 | 1004 |
| 3005 | 5160.45 | 1990-10-03 | 2003 | 1002 |
| 3006 | 1098.16 | 1990-10-03 | 2008 | 1007 |
| 3009 | 1713.23 | 1990-10-04 | 2002 | 1003 |
| 3008 | 4723.00 | 1990-10-05 | 2006 | 1001 |
| 3010 | 1309.95 | 1990-10-06 | 2004 | 1002 |
| 3011 | 9891.88 | 1990-10-06 | 2006 | 1001 |
+-----+-----+-----+-----+
7 rows in set (0.00 sec)

```

```

SELECT sname, city FROM SALESPeOPLE WHERE city = 'london' AND comm > 0.10;
+-----+-----+
| sname | city |
+-----+-----+

```

```
| Peel | London |
| Motika | London |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM CUSTOMERS
-> WHERE rating <=100 AND city = 'ROME';
+-----+-----+-----+-----+
| Cnum | Cname | City | Rating | Snum |
+-----+-----+-----+-----+
| 2007 | Pereira | Rome | 100 | 1004 |
+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT * FROM ORDERS WHERE (
-> amt < 1000 OR NOT(odate = '1990-10-03' AND cnum > 2003));
+-----+-----+-----+-----+
| Onum | Amt | Odate | Cnum | Snum |
+-----+-----+-----+-----+
| 3001 | 18.69 | 1990-10-03 | 2008 | 1007 |
| 3003 | 767.19 | 1990-10-03 | 2001 | 1001 |
| 3005 | 5160.45 | 1990-10-03 | 2003 | 1002 |
| 3009 | 1713.23 | 1990-10-04 | 2002 | 1003 |
| 3007 | 75.75 | 1990-10-04 | 2004 | 1002 |
| 3008 | 4723.00 | 1990-10-05 | 2006 | 1001 |
| 3010 | 1309.95 | 1990-10-06 | 2004 | 1002 |
| 3011 | 9891.88 | 1990-10-06 | 2006 | 1001 |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

```
mysql> SELECT * FROM ORDERS WHERE
-> NOT((odate = '1990-10-03' OR snum >=1006) AND amt >=1500);
+-----+-----+-----+-----+
| Onum | Amt | Odate | Cnum | Snum |
+-----+-----+-----+-----+
| 3001 | 18.69 | 1990-10-03 | 2008 | 1007 |
| 3003 | 767.19 | 1990-10-03 | 2001 | 1001 |
| 3006 | 1098.16 | 1990-10-03 | 2008 | 1007 |
| 3009 | 1713.23 | 1990-10-04 | 2002 | 1003 |
| 3007 | 75.75 | 1990-10-04 | 2004 | 1002 |
| 3008 | 4723.00 | 1990-10-05 | 2006 | 1001 |
| 3010 | 1309.95 | 1990-10-06 | 2004 | 1002 |
| 3011 | 9891.88 | 1990-10-06 | 2006 | 1001 |
+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

```
mysql> SELECT snum, sname, city, comm FROM SALESPeople WHERE comm NOT BETWEEN 0.12 AND
0.14;
+-----+-----+-----+
| snum | sname | city | comm |
+-----+-----+-----+
| 1001 | Peel | London | 0.12 |
| 1004 | Motika | London | 0.11 |
| 1007 | Rifkin | Barcelona | 0.15 |
| 1003 | Axelrod | New York | 0.10 |
+-----+-----+-----+
```

Assignment –6

Using Special Operators in Conditions.

```
mysql> SELECT *  
-> FROM ORDERS  
-> WHERE Odate = '1990-10-03' OR Odate = '1990-10-04';
```

Onum	Amt	Odate	Cnum	Snum
3001	18.69	1990-10-03	2008	1007
3003	767.19	1990-10-03	2001	1001
3002	1900.10	1990-10-03	2007	1004
3005	5160.45	1990-10-03	2003	1002
3006	1098.16	1990-10-03	2008	1007
3009	1713.23	1990-10-04	2002	1003
3007	75.75	1990-10-04	2004	1002

7 rows in set (0.00 sec)

```
mysql> SELECT *  
-> FROM ORDERS  
-> WHERE Odate IN('1990-10-03', '1990-10-04');
```

Onum	Amt	Odate	Cnum	Snum
3001	18.69	1990-10-03	2008	1007
3003	767.19	1990-10-03	2001	1001
3002	1900.10	1990-10-03	2007	1004
3005	5160.45	1990-10-03	2003	1002
3006	1098.16	1990-10-03	2008	1007
3009	1713.23	1990-10-04	2002	1003
3007	75.75	1990-10-04	2004	1002

7 rows in set (0.00 sec)

```
mysql> SELECT *  
-> FROM CUSTOMERS  
-> WHERE snum IN (  
->   SELECT snum  
->   FROM SALESPeOPLE  
->   WHERE sname = 'Peel' OR sname = 'Motika'  
-> );
```

Cnum	Cname	City	Rating	Snum
2001	Hoffman	London	100	1001
2006	Clemens	London	100	1001
2007	Pereira	Rome	100	1004

3 rows in set (0.02 sec)

```
mysql> SELECT *  
-> FROM CUSTOMERS  
-> WHERE Cname REGEXP '^[A-G]';
```

```

+-----+-----+-----+-----+
| Cnum | Cname  | City   | Rating | Snum |
+-----+-----+-----+-----+
| 2002 | Giovanni | Rome   | 200    | 1003 |
| 2004 | Grass    | Berlin  | 300    | 1002 |
| 2006 | Clemens  | London  | 100    | 1001 |
| 2008 | Cisneros | San Jose | 300    | 1007 |
+-----+-----+-----+-----+
4 rows in set (0.02 sec)

```

```

mysql> SELECT *
      -> FROM CUSTOMERS
      -> WHERE cname LIKE 'C%';
+-----+-----+-----+-----+
| Cnum | Cname  | City   | Rating | Snum |
+-----+-----+-----+-----+
| 2006 | Clemens | London  | 100    | 1001 |
| 2008 | Cisneros | San Jose | 300    | 1007 |
+-----+-----+-----+-----+
2 rows in set (0.00 sec)

```

```

mysql> SELECT *
      -> FROM ORDERS
      -> WHERE amt >0;
+-----+-----+-----+-----+
| Onum | Amt    | Odate   | Cnum | Snum |
+-----+-----+-----+-----+
| 3001 | 18.69  | 1990-10-03 | 2008 | 1007 |
| 3003 | 767.19 | 1990-10-03 | 2001 | 1001 |
| 3002 | 1900.10 | 1990-10-03 | 2007 | 1004 |
| 3005 | 5160.45 | 1990-10-03 | 2003 | 1002 |
| 3006 | 1098.16 | 1990-10-03 | 2008 | 1007 |
| 3009 | 1713.23 | 1990-10-04 | 2002 | 1003 |
| 3007 | 75.75  | 1990-10-04 | 2004 | 1002 |
| 3008 | 4723.00 | 1990-10-05 | 2006 | 1001 |
| 3010 | 1309.95 | 1990-10-06 | 2004 | 1002 |
| 3011 | 9891.88 | 1990-10-06 | 2006 | 1001 |
+-----+-----+-----+-----+
10 rows in set (0.00 sec)

```

```

mysql> SELECT *
      -> FROM ORDERS
      -> WHERE amt != 0 AND amt IS NOT NULL;
+-----+-----+-----+-----+
| Onum | Amt    | Odate   | Cnum | Snum |
+-----+-----+-----+-----+
| 3001 | 18.69  | 1990-10-03 | 2008 | 1007 |
| 3003 | 767.19 | 1990-10-03 | 2001 | 1001 |
| 3002 | 1900.10 | 1990-10-03 | 2007 | 1004 |
| 3005 | 5160.45 | 1990-10-03 | 2003 | 1002 |
| 3006 | 1098.16 | 1990-10-03 | 2008 | 1007 |
| 3009 | 1713.23 | 1990-10-04 | 2002 | 1003 |
| 3007 | 75.75  | 1990-10-04 | 2004 | 1002 |
| 3008 | 4723.00 | 1990-10-05 | 2006 | 1001 |
| 3010 | 1309.95 | 1990-10-06 | 2004 | 1002 |
| 3011 | 9891.88 | 1990-10-06 | 2006 | 1001 |
+-----+-----+-----+-----+

```

Assignment –7

Summarizing Data with Aggregate Functions.

```
mysql> SELECT count(*) AS total_orders FROM ORDERS
-> WHERE ODATE = '1990-10-03';
```

```
+-----+
| total_orders |
+-----+
|          5 |
+-----+
```

1 row in set (1.79 sec)

```
mysql> SELECT COUNT(DISTINCT city) AS number_city FROM CUSTOMERS
-> WHERE city IS NOT NULL;
```

```
+-----+
| number_city |
+-----+
|           4 |
+-----+
```

1 row in set (0.18 sec)

```
mysql> SELECT * FROM ORDERS o
-> WHERE amt = (
-> SELECT MIN(amt)
-> FROM ORDERS
-> WHERE cnum = o.cnum
-> );
```

```
+-----+-----+-----+-----+
| Onum | Amt   | Odate   | Cnum | Snum |
+-----+-----+-----+-----+
| 3001 | 18.69 | 1990-10-03 | 2008 | 1007 |
| 3003 | 767.19 | 1990-10-03 | 2001 | 1001 |
| 3002 | 1900.10 | 1990-10-03 | 2007 | 1004 |
| 3005 | 5160.45 | 1990-10-03 | 2003 | 1002 |
| 3009 | 1713.23 | 1990-10-04 | 2002 | 1003 |
| 3007 | 75.75 | 1990-10-04 | 2004 | 1002 |
| 3008 | 4723.00 | 1990-10-05 | 2006 | 1001 |
+-----+-----+-----+-----+
```

7 rows in set (0.00 sec)

```
mysql> SELECT * FROM CUSTOMERS
-> WHERE cname LIKE 'G%'
-> ORDER BY cname
-> LIMIT 1;
```

```
+-----+-----+-----+-----+
| Cnum | Cname   | City | Rating | Snum |
+-----+-----+-----+-----+
| 2002 | Giovanni | Rome | 200 | 1003 |
+-----+-----+-----+-----+
```

1 row in set (1.76 sec)

```
mysql> SELECT city, MAX(rating) FROM CUSTOMERS
-> GROUP BY city;
```

city	MAX(rating)
London	100
Rome	200
San Jose	300
Berlin	300

4 rows in set (0.00 sec)

```
mysql> SELECT odate, COUNT(DISTINCT Snum) AS Salespeople FROM ORDERS
-> GROUP BY odate;
```

odate	Salespeople
1990-10-03	4
1990-10-04	2
1990-10-05	1
1990-10-06	2

4 rows in set (0.00 sec)

```
mysql> SELECT ONUM, SNUM, AMT * 0.12 AS Comission FROM ORDERS;
```

ONUM	SNUM	Comission
3001	1007	2.24
3003	1001	92.06
3002	1004	228.01
3005	1002	619.25
3006	1007	131.78
3009	1003	205.59
3007	1002	9.09
3008	1001	566.76
3010	1002	157.19
3011	1001	1187.03

10 rows in set (0.00 sec)

```
mysql> SELECT city, CONCAT('FOR the city', city, ', the highest rating is : ', MAX(rating)) AS output
FROM CUSTOMERS
-> GROUP BY city;
```

city	output
London	FOR the cityLondon, the highest rating is : 100
Rome	FOR the cityRome, the highest rating is : 200
San Jose	FOR the citySan Jose, the highest rating is : 300
Berlin	FOR the cityBerlin, the highest rating is : 300

4 rows in set (0.00 sec)


```
mysql> SELECT rating, cname, cnum FROM CUSTOMERS
-> ORDER BY rating;
```

rating	cname	cnum
100	Hoffman	2001
100	Clemens	2006
100	Pereira	2007
200	Giovanni	2002
200	Liu	2003
300	Grass	2004
300	Cisneros	2008

7 rows in set (0.01 sec)

```
mysql> SELECT odate ,SUM(amt) AS total_amt FROM ORDERS
-> GROUP BY odate
-> ORDER BY total_amt DESC;
```

odate	total_amt
1990-10-06	11201.83
1990-10-03	8944.59
1990-10-05	4723.00
1990-10-04	1788.98

4 rows in set (0.09 sec)

Assignment –8 **Formatting Query output.**

```
mysql> SELECT onum, snum, amt*0.12 AS Commission FROM ORDERS;
```

onum	snum	Commission
3001	1007	2.24
3003	1001	92.06
3002	1004	228.01
3005	1002	619.25
3006	1007	131.78
3009	1003	205.59
3007	1002	9.09
3008	1001	566.76
3010	1002	157.19
3011	1001	1187.03

10 rows in set (0.34 sec)

```
mysql> SELECT
-> CONCAT('For the city ', city, ', the highest rating : ', MAX(rating)) AS result
-> FROM CUSTOMERS
-> GROUP BY city;
```

```
+-----+
| result |
+-----+
| For the city London, the highest rating : 100 |
| For the city Rome, the highest rating : 200 |
| For the city San Jose, the highest rating : 300 |
| For the city Berlin, the highest rating : 300 |
+-----+
4 rows in set (0.00 sec)
```

```
mysql> SELECT
-> rating, cname, cnum
-> FROM CUSTOMERS
-> ORDER BY rating DESC;
```

```
+-----+-----+-----+
| rating | cname | cnum |
+-----+-----+-----+
| 300 | Grass | 2004 |
| 300 | Cisneros | 2008 |
| 200 | Giovanni | 2002 |
| 200 | Liu | 2003 |
| 100 | Hoffman | 2001 |
| 100 | Clemens | 2006 |
| 100 | Pereira | 2007 |
+-----+-----+-----+
7 rows in set (0.00 sec)
```

```
mysql> SELECT
-> COUNT(onum)
-> FROM ORDERS
-> GROUP BY ODATE
-> ORDER BY odate DESC;
```

```
+-----+
| COUNT(onum) |
+-----+
| 2 |
| 1 |
| 2 |
| 5 |
+-----+
4 rows in set (0.00 sec)
```

Assignment – 9

Querying Multiple Tables at Once.

```
mysql> SELECT
-> onum,
-> (SELECT cname FROM customers WHERE customers.cnum = orders.cnum) AS cname
-> FROM orders;
```

```
+-----+-----+
| onum | cname |
+-----+-----+
| 3001 | Cisneros |
| 3003 | Hoffman |
| 3002 | Pereira |
| 3005 | Liu |
| 3006 | Cisneros |
| 3009 | Giovanni |
| 3007 | Grass |
| 3008 | Clemens |
| 3010 | Grass |
| 3011 | Clemens |
+-----+-----+
10 rows in set (0.00 sec)
```

```
mysql> SELECT
-> onum,
-> (SELECT
-> cname FROM CUSTOMERS
-> WHERE customers.cnum = orders.cnum) AS customer_name,
-> (SELECT
-> sname FROM SALESPeOPLE
-> WHERE salespeople.snum = orders.snum) AS salesperson_name
-> FROM ORDERS;
```

```
+-----+-----+-----+
| onum | customer_name | salesperson_name |
+-----+-----+-----+
| 3001 | Cisneros | Rifkin |
| 3003 | Hoffman | Peel |
| 3002 | Pereira | Motika |
| 3005 | Liu | Serres |
| 3006 | Cisneros | Rifkin |
| 3009 | Giovanni | Axelrod |
| 3007 | Grass | Serres |
| 3008 | Clemens | Peel |
| 3010 | Grass | Serres |
| 3011 | Clemens | Peel |
+-----+-----+-----+
10 rows in set (0.00 sec)
```

```
mysql> SELECT
->  onum,
->  (SELECT cname FROM CUSTOMERS WHERE CUSTOMERS.cnum = ORDERS.cnum) AS
customer_name,
->  (SELECT sname FROM SALESPeOPLE s WHERE SALESPeOPLE.snum = ORDERS.snum) AS
salesperson_name
-> FROM
->  ORDERS o;
```

onum	customer_name	salesperson_name
3001	Cisneros	Rifkin
3003	Hoffman	Peel
3002	Pereira	Motika
3005	Liu	Serres
3006	Cisneros	Rifkin
3009	Giovanni	Axelrod
3007	Grass	Serres
3008	Clemens	Peel
3010	Grass	Serres
3011	Clemens	Peel

10 rows in set (0.00 sec)

```
mysql> SELECT
->  o.onum AS order_number,
->  o.snum AS salesperson_number,
->  o.amt AS order_amount,
->  o.amt * 0.12 AS commission_amount
-> FROM
->  orders o
-> WHERE
->  o.cnum IN (
->    SELECT c.cnum
->    FROM customers c
->    WHERE c.rating > 100
->  );
```

order_number	salesperson_number	order_amount	commission_amount
3001	1007	18.69	2.24
3005	1002	5160.45	619.25
3006	1007	1098.16	131.78
3009	1003	1713.23	205.59
3007	1002	75.75	9.09
3010	1002	1309.95	157.19

6 rows in set (0.01 sec)

Assignment – 10
Joining a Table to Itself.

```
mysql> SELECT
-> s1.sname AS salesperson1,
-> s2.sname AS salesperson2,
-> s1.city
-> FROM SALESPEOPLE s1, SALESPEOPLE s2
-> WHERE s1.city = s2.city AND s1.snum < s2.snum;
```

```
+-----+-----+
| salesperson1 | salesperson2 | city |
+-----+-----+
| Peel        | Motika       | London |
+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> SELECT cname, city
-> FROM customers
-> WHERE rating = (
->   SELECT rating
->   FROM customers
->   WHERE cname = 'Hoffman'
-> );
```

```
+-----+-----+
| cname | city |
+-----+-----+
| Hoffman | London |
| Clemens | London |
| Pereira | Rome   |
+-----+-----+
3 rows in set (1.75 sec)
```

Assignment – 11

Subqueries.

```
mysql> SELECT *
-> FROM orders
-> WHERE cnum = (
->   SELECT cnum
->   FROM customers
->   WHERE cname = 'Cisneros'
-> );
```

Onum	Amt	Odate	Cnum	Snum
3001	18.69	1990-10-03	2008	1007
3006	1098.16	1990-10-03	2008	1007

```
2 rows in set (0.00 sec)
```

```
mysql> SELECT DISTINCT c.cname, c.rating
-> FROM customers c
-> JOIN orders o ON c.cnum = o.cnum
-> WHERE o.amt > (
->   SELECT AVG(amt)
->   FROM orders
-> );
```

cname	rating
Liu	200
Clemens	100

```
2 rows in set (0.03 sec)
```

```
mysql> SELECT snum, SUM(amt) AS total_sales
-> FROM orders
-> GROUP BY snum
-> HAVING SUM(amt) > (
->   SELECT MAX(amt)
->   FROM orders
-> );
```

snum	total_sales
1001	15382.07

```
1 row in set (0.00 sec)
```

```
mysql> SELECT *
-> FROM customers
-> WHERE rating >= ANY (
->   SELECT rating
->   FROM customers
->   WHERE snum = (
->     SELECT snum
->     FROM salespeople
->     WHERE sname = 'Serres'
->   )
-> );
```

Cnum	Cname	City	Rating	Snum
2002	Giovanni	Rome	200	1003
2003	Liu	San Jose	200	1002
2004	Grass	Berlin	300	1002
2008	Cisneros	San Jose	300	1007

4 rows in set (0.00 sec)

```
mysql> SELECT *
-> FROM salespeople
-> WHERE city <> ALL (
->   SELECT city
->   FROM customers
->   WHERE customers.snum = salespeople.snum
-> );
```

Snum	Sname	city	comm
1004	Motika	London	0.11
1007	Rifkin	Barcelona	0.15
1003	Axelrod	New York	0.10

3 rows in set (0.00 sec)

```
mysql> SELECT *
-> FROM orders
-> WHERE amt > ANY (
->   SELECT amt
->   FROM orders
->   WHERE cnum IN (
->     SELECT cnum
->     FROM customers
->     WHERE city = 'London'
->   )
-> );
```

Onum	Amt	Odate	Cnum	Snum
3002	1900.10	1990-10-03	2007	1004
3005	5160.45	1990-10-03	2003	1002
3006	1098.16	1990-10-03	2008	1007
3009	1713.23	1990-10-04	2002	1003
3008	4723.00	1990-10-05	2006	1001
3010	1309.95	1990-10-06	2004	1002

3011	9891.88	1990-10-06	2006	1001
------	---------	------------	------	------

7 rows in set (0.00 sec)

```
mysql> SELECT *
-> FROM orders
-> WHERE amt > (
->   SELECT MAX(amt)
->   FROM orders
->   WHERE cnum IN (
->     SELECT cnum
->     FROM customers
->     WHERE city = 'London'
->   )
-> );
```

Empty set (0.00 sec)

```
mysql> SELECT *
-> FROM orders
-> WHERE amt > (
->   SELECT MIN(amt)
->   FROM orders
->   WHERE cnum IN (
->     SELECT cnum
->     FROM customers
->     WHERE city = 'London'
->   )
-> );
```

Onum	Amt	Odate	Cnum	Snum
3002	1900.10	1990-10-03	2007	1004
3005	5160.45	1990-10-03	2003	1002
3006	1098.16	1990-10-03	2008	1007
3009	1713.23	1990-10-04	2002	1003
3008	4723.00	1990-10-05	2006	1001
3010	1309.95	1990-10-06	2004	1002
3011	9891.88	1990-10-06	2006	1001

7 rows in set (0.01 sec)