Assignment - 12

Using the operators IN, ANY, and ALL.

1) Write a query that selects all customers whose ratings are equal to or greater than ANY of Serres'.
ANS÷

```
mysql> SELECT *
    -> FROM customers
    -> WHERE Rating >= ANY (
    ->      SELECT Rating
    ->      FROM customers
    ->      WHERE Cname = 'Serres'
    -> );
+------+------------+----------+--------+------+
| Cnum | Cname      | City     | Rating | Snum |
+------+------------+----------+--------+------+
|    1 | Cisneros   | New York |      5 | NULL |
|    2 | Serres     | London   |      4 | NULL |
|    4 | Johnson    | London   |      4 | NULL |
|    5 | Williams   | Paris    |      6 | NULL |
|    6 | Davis      | London   |      5 | NULL |
|  101 | John Doe   | New York |      5 |    1 |
|  102 | Jane Smith | Chicago  |      4 |    3 |
|  104 | Lucy Green | Chicago  |      5 |    3 |
| 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 |
| 2007 | Pereira    | Rome     |    100 | 1004 |
| 2008 | Cisneros   | San Jose |    300 | 1007 |
| 2010 | Alice      | New York |    100 | 3001 |
| 2011 | Bob        | London   |    200 | 3002 |
| 2012 | Carol      | Paris    |    300 | 3003 |
| 2013 | Dan        | Rome     |    150 | 3002 |
| 2014 | Eve        | Berlin   |    250 | 3003 |
+------+------------+----------+--------+------+
20 rows in set (0.00 sec)
```

2) Write a query using ANY or ALL that will find all salespeople who have no customers located in their city.

ANS÷

```
mysql> SELECT Sname
    -> FROM salespeople
    -> WHERE Snum NOT IN (
    ->      SELECT DISTINCT Snum
    ->      FROM customers
    ->      WHERE City = salespeople.City
    -> );
+--------+
| Sname  |
+--------+
| Rifkin |
+--------+
1 row in set (0.01 sec)
```

3) Write a query that selects all orders for amounts greater than any for the customers in London.

ANS÷

```
mysql> SELECT *
    -> FROM orders
    -> WHERE Amt > ANY (
    ->      SELECT Amt
    ->      FROM orders
    ->      JOIN customers ON orders.Cnum =
customers.Cnum
    ->      WHERE customers.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 |
| 3008 | 4723.00 | 1990-10-05 | 2006 | 1001 |
| 3009 | 1713.23 | 1990-10-04 | 2002 | 1003 |
```

```
| 3010 | 1309.95 | 1990-10-06 | 2004 | 1002 |
| 3011 | 9891.88 | 1990-10-06 | 2006 | 1001 |
+------+---------+------------+------+------+
7 rows in set (0.00 sec)
```

4) Write the above query using MIN or MAX.
ANS÷

```
mysql> SELECT *
    -> FROM orders
    -> WHERE Amt > (
    ->      SELECT MAX(Amt)
    ->      FROM orders
    ->      JOIN customers ON orders.Cnum =
customers.Cnum
    ->      WHERE customers.City = 'London'
    -> );
+------+----------+------------+------+------+
| Onum | Amt      | Odate      | Cnum | Snum |
+------+----------+------------+------+------+
|  506 | 10000.00 | 2024-02-10 |  204 |    2 |
+------+----------+------------+------+------+
1 row in set (0.00 sec)

mysql> SELECT *
    -> FROM orders
    -> WHERE Amt > (
    ->      SELECT MIN(Amt)
    ->      FROM orders
    ->      JOIN customers ON orders.Cnum =
customers.Cnum
    ->      WHERE customers.City = 'London'
    -> );
+------+----------+------------+------+------+
| Onum | Amt      | Odate      | Cnum | Snum |
+------+----------+------------+------+------+
|  201 |  1200.00 | 2024-01-15 |  106 |    1 |
|  202 |  1800.00 | 2024-01-20 |  108 |    1 |
```

203	2500.00	2024-01-25	107	2
204	3000.00	2024-02-01	110	2
303	2500.00	2024-03-20	203	1
505	2500.00	2024-02-05	204	2
506	10000.00	2024-02-10	204	2
3002	1900.10	1990-10-03	2007	1004
3005	5160.45	1990-10-03	2003	1002
3006	1098.16	1990-10-03	2008	1007
3008	4723.00	1990-10-05	2006	1001
3009	1713.23	1990-10-04	2002	1003
3010	1309.95	1990-10-06	2004	1002
3011	9891.88	1990-10-06	2006	1001
+------+----------+------------+------+------+
14 rows in set (0.00 sec)