Assignment –7

Summarizing Data with Aggregate Functions.

1) Write a query that counts all orders for October 3.

Ans:

```
mysql> select count(*) from orders
    -> where Odate= '1990-10-03';
```

```
mysql> select count(*) from orders
    -> where Odate= '1990-10-03';
+----------+
| count(*) |
+----------+
|        5 |
+----------+
1 row in set (0.00 sec)
```

`COUNT(*)`: Counts the total number of orders.

2) Write a query that counts the number of different non-NULL city values in the Customers table.
Ans:

```
mysql> select count(distinct city) from customers
    -> where city is not null;
```

```
mysql> select count(distinct city) from customers
    -> where city is not null;
+----------------------+
| count(distinct city) |
+----------------------+
|                    4 |
+----------------------+
1 row in set (0.00 sec)
```

```
mysql> select count(distinct city) from customers
    -> where city is not null;
+----------------------+
| count(distinct city) |
+----------------------+
|                    4 |
+----------------------+
1 row in set (0.00 sec)

mysql> select * from customers;
+------+----------+----------+--------+------+
| Cnum | Cname    | City     | Rating | Snum |
+------+----------+----------+--------+------+
| 2001 | Hoffman  | London   |    100 | 1001 |
| 2006 | Clemens  | London   |    100 | 1001 |
| 2002 | Giovanni | Rome     |    200 | 1003 |
| 2003 | Liu      | San Jose |    200 | 1002 |
| 2004 | Grass    | Berlin   |    300 | 1002 |
| 2008 | Cisneros | San Jose |    300 | 1007 |
| 2007 | Pereira  | Rome     |    100 | 1004 |
+------+----------+----------+--------+------+
7 rows in set (0.00 sec)
```

3) Write a query that selects each customer's smallest order.

Ans:

```
mysql> SELECT cnum, MIN(amt) AS smallest_order
   -> FROM orders
   -> GROUP BY cnum;
```

```
mysql> SELECT cnum, MIN(amt) AS smallest_order
    -> FROM orders
    -> GROUP BY cnum;
+------+----------------+
| cnum | smallest_order |
+------+----------------+
| 2008 |          18.69 |
| 2001 |         767.19 |
| 2006 |           4723 |
| 2007 |         1900.1 |
| 2003 |        5160.45 |
| 2002 |        1713.23 |
| 2004 |          75.75 |
+------+----------------+
```

```
mysql>
mysql> SELECT cnum, MIN(amt) AS smallest_order
    -> FROM orders
    -> GROUP BY cnum;
+------+----------------+
| cnum | smallest_order |
+------+----------------+
| 2008 |          18.69 |
| 2001 |         767.19 |
| 2006 |           4723 |
| 2007 |         1900.1 |
| 2003 |        5160.45 |
| 2002 |        1713.23 |
| 2004 |          75.75 |
+------+----------------+
7 rows in set (0.00 sec)

mysql> select * from orders where cnum=2008;
+------+---------+------------+------+------+
| 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 * from orders where cnum=2004;
+------+---------+------------+------+------+
| Onum | Amt     | Odate      | Cnum | Snum |
+------+---------+------------+------+------+
| 3007 |   75.75 | 1990-10-04 | 2004 | 1002 |
| 3010 | 1309.95 | 1990-10-06 | 2004 | 1002 |
+------+---------+------------+------+------+
2 rows in set (0.00 sec)
```

4)
Write a query that selects the first customer, in alphabetical order, whose name begins with G.

```
mysql> select * FROM customers
    -> WHERE cname LIKE 'G%'
    -> order by cname asc limit 1;
+------+----------+------+--------+------+
| Cnum | Cname    | City | Rating | Snum |
+------+----------+------+--------+------+
| 2002 | Giovanni | Rome |    200 | 1003 |
+------+----------+------+--------+------+
1 row in set (0.00 sec)
```

5) Write a query that selects the highest rating in each city.

mysql> SELECT city, MAX(rating) AS highest_rating
-> FROM Customers
-> GROUP BY city;

```
mysql> SELECT city, MAX(rating) AS highest_rating
    -> FROM Customers
    -> GROUP BY city;
+----------+----------------+
| city     | highest_rating |
+----------+----------------+
| London   |            100 |
| Rome     |            200 |
| San Jose |            300 |
| Berlin   |            300 |
+----------+----------------+
4 rows in set (0.00 sec)
```

6) Write a query that counts the number of salespeople registering orders for each day. (If a salesperson has more than one order on a given day, he or she should be counted only once.).

```
mysql>
mysql> select Odate,count(distinct snum) as salesperson_count from orders
    -> group by Odate;
+------------+-------------------+
| Odate      | salesperson_count |
+------------+-------------------+
| 1990-10-03 |                 4 |
| 1990-10-04 |                 2 |
| 1990-10-05 |                 1 |
| 1990-10-06 |                 2 |
+------------+-------------------+
4 rows in set (0.00 sec)
```