Assignment – 5 Solution

Relational and Logical Operators.

1) **Write a query that will give you all orders for more than Rs. 1,000.**

```
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 | 9891.00 | 1990-10-06 | 2006 | 1001 |
+------+---------+------------+------+------+
7 rows in set (0.00 sec)
```

2) **Write a query that will give you the names and cities of all salespeople in London with a commission above .10.**

```
mysql> 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)
```

3) Write a query on the Customers table whose output will exclude all customers with a rating <= 100, unless they are located in Rome.

```
mysql> select * from customer
    -> where rating > 100 or city = "Rome" ;
+------+----------+----------+--------+------+
| 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 |
| 2007 | Pereira  | Rome     |    100 | 1004 |
+------+----------+----------+--------+------+
5 rows in set (0.00 sec)
```

4) What will be the output from the following query?

```
Select * from Orders
        where (amt < 1000 OR
                NOT (odate = '1990-10-03'
                        AND cnum > 2003));
```

```
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 | 9891.00 | 1990-10-06 | 2006 | 1001 |
+------+---------+------------+------+------+
rows in set (0.00 sec)
```

- Selects all columns from the orders table.
- Filters rows where amt is less than 1000.
- OR condition checks if the date is not '1990-10-03' or customer number (cnum) is ≤ 2003.
- The NOT negates the condition inside it.
- Retrieves orders based on either amount, or specific date and customer number conditions.

5) What will be the output of the following query?

```
Select * from Orders
        where NOT ((odate = '1990-10-03' OR snum
            >1006) AND amt >= 1500);
```

```
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 | 9891.00 | 1990-10-06 | 2006 | 1001 |
+------+---------+------------+------+------+
8 rows in set (0.00 sec)
```

- Selects all columns from the orders table.
- Filters rows where a condition is not true (using NOT).
- The condition checks if odate = '1990-10-03' or snum > 1006.
- AND the amt >= 1500.
- Retrieves rows where either the date, sales number, or amount conditions do not match.

6) What is a simpler way to write this query?

Select snum, sname, city, comm From Salespeople
where (comm > .12 OR comm <.14);

```
mysql> select snum, sname, city, comm from salespeople
    -> where comm between 0.12 and 0.14;
+------+--------+----------+------+
| snum | sname  | city     | comm |
+------+--------+----------+------+
| 1002 | Serres | San Jose | 0.13 |
+------+--------+----------+------+
1 row in set (0.03 sec)
```