Assignment – 16

**************************Creating Tables and Indexes. **************************

1) **Write a command that will enable a user to pull orders grouped by date out of the Orders table quickly.**

```
W3_93236_Neha>SELECT Odate, COUNT(*) AS TotalOrders
    -> FROM ORDERS
    -> GROUP BY Odate
    -> ORDER BY Odate;
+------------+-------------+
| Odate      | TotalOrders |
+------------+-------------+
| 1990-03-10 |           5 |
| 1990-04-10 |           1 |
| 1990-05-10 |           1 |
| 1990-06-10 |           1 |
| 1990-10-04 |           1 |
+------------+-------------+
5 rows in set (0.00 sec)
```

2) **If the Orders table has already been created, how can you force the onum field to be unique (assume all current values are unique)?**

```
W3_93236_Neha>Alter table ORDERS
    -> add unique(Onum);
Query OK, 0 rows affected (0.11 sec)
Records: 0  Duplicates: 0  Warnings: 0

W3_93236_Neha>select * from ORDERS;
+------+---------+------------+------+------+
| Onum | Amt     | Odate      | Cnum | Snum |
+------+---------+------------+------+------+
| 3001 |   18.69 | 1990-03-10 | 2008 | 1007 |
| 3003 |  767.19 | 1990-03-10 | 2001 | 1001 |
| 3002 | 1900.10 | 1990-03-10 | 2007 | 1004 |
| 3005 | 5160.45 | 1990-03-10 | 2003 | 1002 |
| 3006 | 1098.16 | 1990-03-10 | 2008 | 1007 |
| 3009 | 1713.13 | 1990-04-10 | 2002 | 1003 |
| 1007 |   75.75 | 1990-10-04 | 2004 | 1002 |
| 3008 | 4723.00 | 1990-05-10 | 1006 | 1001 |
| 3010 | 1309.95 | 1990-06-10 | 2004 | 1002 |
+------+---------+------------+------+------+
9 rows in set (0.00 sec)

W3_93236_Neha>desc ORDERS;
+-------+------------+------+-----+---------+-------+
| Field | Type       | Null | Key | Default | Extra |
+-------+------------+------+-----+---------+-------+
| Onum  | int        | YES  | UNI | NULL    |       |
| Amt   | float(7,2) | YES  |     | NULL    |       |
| Odate | date       | YES  |     | NULL    |       |
| Cnum  | int        | YES  |     | NULL    |       |
| Snum  | int        | YES  |     | NULL    |       |
+-------+------------+------+-----+---------+-------+
```

3) Create an index that would permit each salesperson to retrieve his or her orders grouped by date quickly.

```
W3_93236_Neha>create index i_ORDERS_Odate on ORDERS(Odate);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

W3_93236_Neha>show indexes from ORDERS;
+--------+------------+----------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+-------
--+------------+
| Table  | Non_unique | Key_name       | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment | Visibl
e | Expression |
+--------+------------+----------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+-------
--+------------+
| orders |          0 | Onum           |            1 | Onum        | A         |           9 |     NULL |   NULL | YES  | BTREE      |         |               | YES
  | NULL       |
| orders |          1 | i_ORDERS_Odate |            1 | Odate       | A         |           5 |     NULL |   NULL | YES  | BTREE      |         |               | YES
  | NULL       |
+--------+------------+----------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+-------
--+------------+
2 rows in set (0.01 sec)
```

4) Let us assume that each salesperson is to have only one customer of a given rating, and that this is currently the case. Enter a command that enforces it.

```
W3_93236_Neha>alter table CUSTOMERS
    -> add unique(Snum,Cnum);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

W3_93236_Neha>alter table CUSTOMERS
    -> add unique(Snum,Rating);
ERROR 1062 (23000): Duplicate entry '1004-200' for key 'customers.Snum_2'
W3_93236_Neha>desc CUSTOMERS;
+--------+-------------+------+-----+---------+-------+
| Field  | Type        | Null | Key | Default | Extra |
+--------+-------------+------+-----+---------+-------+
| Cnum   | int         | YES  |     | NULL    |       |
| Cname  | varchar(10) | YES  |     | NULL    |       |
| City   | varchar(10) | YES  |     | NULL    |       |
| Rating | int         | YES  |     | NULL    |       |
| Snum   | int         | YES  | MUL | NULL    |       |
+--------+-------------+------+-----+---------+-------+
```