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.

```
W1_Minal_93084>select Odate from orders
    -> group by odate;
+------------+
| Odate      |
+------------+
| 1990-10-03 |
| 1990-10-04 |
| 1990-10-05 |
| 1990-10-06 |
+------------+
4 rows in set (0.01 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)?

```
W1_Minal_93084>alter table orders
    -> add primary key(onum);
Query OK, 0 rows affected (0.20 sec)
Records: 0  Duplicates: 0  Warnings: 0

W1_Minal_93084>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 | Visible | Expression |
+--------+------------+----------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
| orders |          0 | PRIMARY              |            1 | Onum        | A         |          10 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| orders |          0 | unique_onum          |            1 | Onum        | A         |          10 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| orders |          0 | idx_unique_onum      |            1 | Onum        | A         |          10 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| orders |          0 | UQ_Orders_onum       |            1 | Onum        | A         |          10 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| orders |          1 | idx_orders_odate     |            1 | Odate       | A         |           4 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
| orders |          1 | idx_orders_date      |            1 | Odate       | A         |           4 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
| orders |          1 | idx_orders_snum_odate |           1 | Snum        | A         |           5 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
| orders |          1 | idx_orders_snum_odate |           2 | Odate       | A         |           9 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
+--------+------------+----------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
8 rows in set (0.04 sec)
```

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

```
create index i_Date on Orders(Odate);
Query OK, 0 rows affected, 1 warning (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 1

W1_Minal_93084>show index from orders;
+--------+------------+----------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+
| Table  | Non_unique | Key_name             | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment | Visible | Expression |
+--------+------------+----------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
| orders |          0 | PRIMARY              |            1 | Onum        | A         |          10 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| orders |          0 | unique_onum          |            1 | Onum        | A         |          10 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| orders |          0 | idx_unique_onum      |            1 | Onum        | A         |          10 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| orders |          0 | UQ_Orders_onum       |            1 | Onum        | A         |          10 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| orders |          1 | idx_orders_odate     |            1 | Odate       | A         |           4 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
| orders |          1 | idx_orders_date      |            1 | Odate       | A         |           4 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
| orders |          1 | idx_orders_snum_odate |            1 | Snum        | A         |           5 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
| orders |          1 | idx_orders_snum_odate |            2 | Odate       | A         |           9 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
| orders |          1 | i_Date               |            1 | Odate       | A         |           4 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
+--------+------------+----------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
9 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.

```
W1_Minal_93084>create index i_Snum on orders(Snum);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0

W1_Minal_93084>create index i_Snum on customers(Snum);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

W1_Minal_93084>select distinct orders.Snum,Rating from orders,customers
    -> where Orders.Snum = Customers.Snum;
+------+--------+
| Snum | Rating |
+------+--------+
| 1001 |    100 |
| 1003 |    200 |
| 1002 |    200 |
| 1002 |    300 |
| 1007 |    300 |
| 1004 |    100 |
+------+--------+
6 rows in set (0.00 sec)
```