**Exp 2: OLAP Operations:**

mysql> create database airlines;

Query OK, 1 row affected (0.00 sec)

mysql> use airlines;

Database changed

mysql> create table flights(Country varchar(100),State varchar(100),City varchar(100),frequency int(20));

Query OK, 0 rows affected (0.50 sec)

mysql> select \* from flights;

+---------+------------+------------------+-----------+

| Country | State | City | frequency |

+---------+------------+------------------+-----------+

| India | Delhi | East&nbsp;Delhi | 9 |

| India | Maharastra | Nashik | 7 |

| India | Maharastra | Nagpur | 11 |

| India | Maharastra | Pune | 20 |

| India | Maharastra | Mumbai | 30 |

| India | Delhi | West&nbsp;Delhi | 8 |

| India | Delhi | South&nbsp;Delhi | 8 |

| India | Karnataka | Bangalore | 10 |

+---------+------------+------------------+-----------+

8 rows in set (0.00 sec)

**Rollup**

mysql> select Country,State,City,SUM(frequency) as Flight\_frequency from flights group by Country,State,City with ROLLUP

-> ;

+---------+------------+------------------+------------------+

| Country | State | City | Flight\_frequency |

+---------+------------+------------------+------------------+

| India | Delhi | East&nbsp;Delhi | 9 |

| India | Delhi | South&nbsp;Delhi | 8 |

| India | Delhi | West&nbsp;Delhi | 8 |

| India | Delhi | NULL | 25 |

| India | Karnataka | Bangalore | 10 |

| India | Karnataka | NULL | 10 |

| India | Maharastra | Mumbai | 30 |

| India | Maharastra | Nagpur | 11 |

| India | Maharastra | Nashik | 7 |

| India | Maharastra | Pune | 20 |

| India | Maharastra | NULL | 68 |

| India | NULL | NULL | 103 |

| NULL | NULL | NULL | 103 |

+---------+------------+------------------+------------------+

13 rows in set (0.09 sec)

**Drill Down:**

mysql> SELECT country,state,city,sum(frequency) from location where state=’Maharashtra’ group by state;

+---------+------------+-----------+------------------+

| country | state | city | sum(frequency) |

+---------+-------------+-------+------------------+

| india | Maharashtra | Nashik | 68 |

+---------+----------------+-------+------------------+

1 row in set (0.00 sec)

**Slice:**

mysql> select State,SUM(frequency) from flights where State="Maharastra" OR State="Delhi" group by State;

+------------+----------------+

| State | SUM(frequency) |

+------------+----------------+

| Delhi | 25 |

| Maharastra | 68 |

+------------+----------------+

2 rows in set (0.00 sec)

**Dice:**

mysql> Select State,SUM(frequency) from flights where State="Maharastra" and City="Nashik" group by State;

+------------+----------------+

| State | SUM(frequency) |

+------------+----------------+

| Maharastra | 7 |

+------------+----------------+

1 row in set (0.00 sec)