Problem Set 2

Shuowen Wei

***Simple queries:***

**mysql> select \* from hotel where city='winston-salem';**

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

| hotelNumber | hotelName | city |

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

| 1 | Winston Hotel | Winston-Salem |

| 4 | Twin City Tower | Winston-Salem |

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

2 rows in set (0.00 sec)

**mysql> select \* from room where price<100 and type='D'or type='Q' order by price asc;**

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

| roomNumber | hotelNumber | type | price |

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

| 3 | 1 | Q | 100.00 |

| 1 | 3 | D | 75.00 |

| 2 | 3 | D | 75.00 |

| 1 | 1 | D | 80.00 |

| 2 | 1 | D | 80.00 |

| 1 | 2 | D | 85.00 |

| 2 | 4 | Q | 90.00 |

| 2 | 2 | Q | 90.00 |

| 1 | 4 | D | 90.00 |

| 3 | 2 | Q | 90.00 |

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

10 rows in set (0.00 sec)

**mysql> select \* from booking where datefrom<'2012-02-21' and dateto>'2012-02-21';**

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

| hotelNumber | guestNumber | dateFrom | dateto | roomNumber |

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

| 3 | 2 | 2012-02-20 | 2012-02-23 | 1 |

| 4 | 1 | 2012-02-20 | 2012-02-22 | 3 |

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

2 rows in set (0.00 sec)

***Aggregate functions:***

**mysql> select count(hotelname) from hotel;**

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

| count(hotelname) |

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

| 4 |

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

1 row in set (0.00 sec)

**mysql> select avg(price) from room;**

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

| avg(price) |

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

| 102.1875 |

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

1 row in set (0.00 sec)

**mysql> select sum(price) from room where type='D';**

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

| sum(price) |

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

| 485 |

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

1 row in set (0.00 sec)

**mysql> select count( distinct guestnumber) from booking where datefrom<'2012-03-01' and datefrom>'2012-02-01';**

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

| count( distinct guestnumber) |

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

| 3 |

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

1 row in set (0.00 sec)

***Subqueries and joins:***

**mysql> select sum(r.price) from room r natural join(select \* from booking b natural join(select \* from hotel where hotelname='winston hotel') as w where datefrom<'2012-02-17' and dateto>'2012-02-17')as z;**

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

| sum(r.price) |

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

| 80 |

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

1 row in set (0.01 sec)

**mysql> select \* from booking b natural join(select \* from hotel where hotelname='winston hotel') as w where datefrom<'2012-02-17' and dateto>'2012-02-17';**

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

| hotelNumber | guestNumber | dateFrom | dateto | roomNumber | hotelName | city |

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

| 1 | 1 | 2012-02-15 | 2012-02-18 | 2 | Winston Hotel | Winston-Salem |

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

1 row in set (0.00 sec)

**mysql> select sum(r.price) from room r, hotel h where r.roomnumber not in (select roomnumber from booking b natural join (select \* from hotel h where h.hotelname='winston hotel') as w where b.datefrom<'2012-02-17' and b.dateto>'2012-02-17') and r.hotelnumber=h.hotelnumber and h.hotelname='winston hotel';**

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

| sum(r.price) |

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

| 300 |

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

1 row in set (0.00 sec)

***Grouping:***

**mysql> select hotelnumber, count(hotelnumber) as rooms from room group by hotelnumber;**

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

| hotelnumber | rooms |

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

| 1 | 4 |

| 2 | 4 |

| 3 | 5 |

| 4 | 3 |

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

4 rows in set (0.00 sec)

**mysql> select h.hotelname, count(distinct r.hotelnumber) as numberofroom from room r, hotel h where h.city='winston-salem' group by h.hotelname;**

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

| hotelname | numberofroom |

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

| Twin City Tower | 4 |

| Winston Hotel | 4 |

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

2 rows in set (0.00 sec)

**mysql> select count(datefrom)/count(distinct hotelnumber) as avg from booking b where b.datefrom>'2012-02-01' and b.dateto<'2012-02-20';**

+--------+

| avg |

+--------+

| 1.0000 |

+--------+

1 row in set (0.00 sec)

**mysql> select g.guestname,count(b.guestnumber) as times from guest g,booking b where g.guestnumber=b.guestnumber group by b.guestnumber having count(b.guestnumber)>1;**

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

| guestname | times |

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

| William Turkett | 2 |

| David John | 2 |

| Paul Whitener | 2 |

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

3 rows in set (0.00 sec)

**mysql> select type as mostcommonlyroom, max(typenumber) from (select type, count(type) as typenumber from booking b,hotel h, room r where b.roomnumber=r.roomnumber and b.hotelnumber=r.hotelnumber and b.hotelnumber=h.hotelnumber and h.city='winston-salem' group by type) as a;**

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

| mostcommonlyroom | max(typenumber) |

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

| D | 3 |

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

1 row in set (0.00 sec)