Problem Set 2

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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 |
+--------------+
```
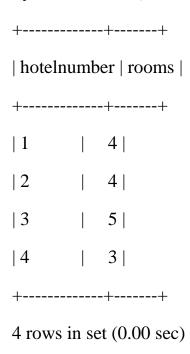
1 row in set (0.01 sec)

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)