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ECE-464 Databases HW1

Queries

1) select DISTINCT reserves.bid, boats.bname, count(*) from reserves inner
   join boats using(bid) group by reserves.bid;

```
+-----+-----------+----------+
| bid | bname     | count(*) |
+-----+-----------+----------+
| 101 | Interlake |        2 |
| 102 | Interlake |        3 |
| 103 | Clipper   |        3 |
| 104 | Clipper   |        5 |
| 105 | Marine    |        3 |
| 106 | Marine    |        3 |
| 109 | Driftwood |        4 |
| 112 | Sooney    |        1 |
| 110 | Klapser   |        3 |
| 107 | Marine    |        1 |
| 111 | Sooney    |        1 |
| 108 | Driftwood |        1 |
+-----+-----------+----------+
12 rows in set (0.00 sec)
```

2) select s.sname, s.sid from sailors s where not exists (select b.bid
   from boats b where b.color = 'red' and not exists (select * from
   reserves r where r.bid = b.bid and r.sid = s.sid));

```
Empty set (0.00 sec)
```

3) select distinct s.sid, s.sname from sailors s, reserves r, boats b
   where r.bid = b.bid and s.sid = r.sid and b.color = "red" and s.sid not
   in(select s.sid from sailors s, reserves r, boats b where s.sid=r.sid
   and r.bid=b.bid and b.color != "red");

```
+-----+----------+
| sid | sname    |
+-----+----------+
|  23 | emilio   |
|  24 | scruntus |
|  35 | figaro   |
|  61 | ossola   |
|  62 | shaun    |
+-----+----------+
5 rows in set (0.00 sec)
```

4) select boats.bid, boats.bname, count(*) from boats inner join reserves
   using(bid) group by boats.bid order by count(*) desc limit 1;

```
+------+----------+----------+
| bid  | bname    | count(*) |
+------+----------+----------+
| 104  | Clipper  |        5 |
+------+----------+----------+
1 row in set (0.00 sec)
```

5) select sid, sname from sailors where not exists(select * from reserves
   where reserves.sid=sailors.sid and reserves.bid in (select bid from
   boats where color='red'));

```
+------+----------+
| sid  | sname    |
+------+----------+
|   29 | brutus   |
|   32 | andy     |
|   58 | rusty    |
|   60 | jit      |
|   71 | zorba    |
|   74 | horatio  |
|   85 | art      |
|   90 | vin      |
|   95 | bob      |
+------+----------+
9 rows in set (0.00 sec)
```

6) select avg(age) from sailors where rating=10;

```
mysql> select avg(age) from sailors where rating=10;
+----------+
| avg(age) |
+----------+
|  35.0000 |
+----------+
1 row in set (0.00 sec)
```

7) select rating, sname, sid, age from (select rating, sid, sname, age,
rank() over (partition by rating order by age) as r from sailors) as t
where r=1;

```
+--------+----------+------+------+
| rating | sname    | sid  | age  |
+--------+----------+------+------+
|      1 | scruntus |   24 |   33 |
|      1 | brutus   |   29 |   33 |
|      3 | art      |   85 |   25 |
|      3 | dye      |   89 |   25 |
|      7 | ossola   |   61 |   16 |
|      7 | horatio  |   64 |   16 |
|      8 | andy     |   32 |   25 |
|      8 | stum     |   59 |   25 |
|      9 | horatio  |   74 |   25 |
|      9 | dan      |   88 |   25 |
|     10 | rusty    |   58 |   35 |
|     10 | jit      |   60 |   35 |
|     10 | shaun    |   62 |   35 |
|     10 | zorba    |   71 |   35 |
+--------+----------+------+------+
14 rows in set (0.01 sec)
```

8) select sid, sname, bid, c from (select sid, sname, bid, c, rank() over
(partition by bid order by c desc) as rnk from (select s.sid, s.sname,
b.bid, count(*) as c from sailors s, reserves r, boats b where b.bid =
r.bid and s.sid = r.sid group by b.bid, s.sid) as t_1) as t_2 where
rnk = 1;

```
+-----+----------+-----+---+
| sid | sname    | bid | c |
+-----+----------+-----+---+
|  22 | dusting  | 101 | 1 |
|  64 | horatio  | 101 | 1 |
|  22 | dusting  | 102 | 1 |
|  31 | lubber   | 102 | 1 |
|  64 | horatio  | 102 | 1 |
|  22 | dusting  | 103 | 1 |
|  31 | lubber   | 103 | 1 |
|  74 | horatio  | 103 | 1 |
|  22 | dusting  | 104 | 1 |
|  23 | emilio   | 104 | 1 |
|  24 | scruntus | 104 | 1 |
|  31 | lubber   | 104 | 1 |
|  35 | figaro   | 104 | 1 |
|  23 | emilio   | 105 | 1 |
|  35 | figaro   | 105 | 1 |
|  59 | stum     | 105 | 1 |
|  60 | jit      | 106 | 2 |
|  88 | dan      | 107 | 1 |
|  89 | dye      | 108 | 1 |
|  59 | stum     | 109 | 1 |
|  60 | jit      | 109 | 1 |
|  89 | dye      | 109 | 1 |
|  90 | vin      | 109 | 1 |
|  88 | dan      | 110 | 2 |
|  88 | dan      | 111 | 1 |
|  61 | ossola   | 112 | 1 |
+-----+----------+-----+---+
26 rows in set (0.00 sec)
```