INF1343, Winter 2012, Week 8 Exercises

Answer the following questions using the "diveshop" database. Unless noted otherwise, you should answer each question with a single query. The desired result is shown after every question.

a) Which country has the largest number of destinations?

```
+---------+------------------+
| country | num_destinations |
+---------+------------------+
| USA     |                5 |
+---------+------------------+
```

```
select country, count(*) as num_destinations
from destination
group by country
order by num_destinations desc
limit 1;
```

b) What are the three cheapest countries by the *average* travel cost of the different destinations in the country? (Just use the travel_cost column in the destination table here.)

```
+---------+----------+
| country | avg_cost |
+---------+----------+
| Mexico  |     1000 |
| USA     |     2500 |
| Brazil  |     3000 |
+---------+----------+
```

```
select country, avg(travel_cost) as avg_cost
from destination
group by country
order by avg_cost limit 3;
```

c) Which states in the United States have more than one customer?

```
+------------+----------+
| state_prov | count(*) |
+------------+----------+
| CA         |        8 |
| CO         |        2 |
+------------+----------+
```

```
select state_prov, count(*)
from customer
where country="U.S.A."
group by state_prov
having count(*) > 1;
```

d) For which skill levels would the average depth of sites be more than 20 meters? (I.e., show the average depth of sites at each skill level, skipping skill levels for which the average depth is less than 20 meters.)

```
+--------------+--------------------+
| skill_level  | avg(depth_m)       |
+--------------+--------------------+
| Advanced     | 31.813499999999994 |
| Intermediate | 26.416000000000007 |
+--------------+--------------------+
```

```
select skill_level, avg(depth_m)
from site
group by skill_level
having avg(depth_m) > 20;
```

e) Which destinations have more than 5 shark species in their sites? List the destinations in the decreasing order by the number of shark species. (This query will require a few joins.)

```
+------------------+-------------------+
| destination_name | num_shark_species |
+------------------+-------------------+
| Santa Barbara    |                 8 |
| New Jersey       |                 8 |
| Florida          |                 6 |
+------------------+-------------------+
```

```
select destination_name, count(*) as num_shark_species
from species
 join site_species using (species_id)
 join site using (site_id)
 join destination using (destination_id)
where species.Category="Shark"
group by destination_id
having num_shark_species > 5
order by num_shark_species desc;
```