

Fall 2020 – Quiz 4 (SQL)

10 points, 10 minutes

MW 3:30 section:

Consider the following tables in the beers database shown in class.

Beers(name, manf)

Likes(drinker, beer)

Assume that database does not support except and intersect, like MySQL.

1. [5 points] Write an SQL query to find out, for each manufacturer, how many drinkers like the beers made by the manufacturer.

```
Select manf, count(drinker)
from Beers, Likes
where Beers.name = Likes.beer group by manf
```

2. [5 points] Write a pseudocode to implement the above query. Suppose both tables have been loaded into memory and you can use “for r in R” to loop over rows in table R. Do not use libraries (e.g., Pandas).

```
Drinker_manf_count = {}
For b in beers:
    For l in likes:
        If b.name == l.beer:
            Drinker_manf_count[b.manf] = Drinker_manf_count.get(b.manf, 0) + 1
```

Makeup:

Consider the following tables in the beers database shown in class.

Beers(name, manf)

Sells(bar, beer, price)

Assume that database does not support except and intersect, like MySQL.

1. [5 points] Write an SQL query to find beers that are not being sold at any bar.
2. [5 points] Write a pseudocode to implement the above query. Suppose both tables have been loaded into memory and you can use “for r in R” to loop over rows in table R. Do not use libraries (e.g., Pandas).

```
Not_sell_beers = []; selling_beers = set()
For s in sells:
    selling_beers.add(s.beer)
For b in Beers:
    If b.name not in selling_beers:
        Not_sell_beers.append(b.name)
```