

INF 551 – Fall 2017 (Morning section)

Quiz 8: SQL, Constraints & Views (10 points), 15 minutes

1. [2 points] Recall that the Frequents(drinker, bar) and Sells(bar, beer, price) tables. Create a view CanDrink(drinker, beer) which lists the drinker-beer pairs such that the drinker frequents at least one bar that serves the beer.

```
create view CanDrink as  
Select f.drinker, s.beer  
from Frequents f, Sells s  
where f.bar = s.bar;
```

2. [3 points] Use the CanDrink view and the Likes(drinker, beer) table to find drinker-beer pair such that the drinker likes a beer but never frequents a bar that serves the beer. You are required to use outer join for this question.

```
select l.drinker, l.beer  
from Likes l left outer join CanDrink cd  
on l.drinker = cd.drinker and  
l.beer = cd.beer where cd.beer IS NULL;
```

3. [2 points] Rewrite the query in question (2) into one without using the view (i.e. view expansion).

```
select l.drinker, l.beer  
from Likes l left outer join  
(Select f.drinker, s.beer from Frequents f, Sells s where f.bar = s.bar) as cd  
on l.drinker = cd.drinker and l.beer = cd.beer where cd.beer IS NULL;
```

4. [3 points] Use the CanDrink and the Drinker(name, city, phone) table to find drinkers who live in LA and can drink at least 3 different beers.

```
select cd.drinker from CanDrink cd, Drinker d  
where d.city = 'LA' and  
cd.drinker = d.name  
group by drinker  
having count(*) >= 3;
```