Simple SQL Queries

CS 210 - Principles of Information and Data Management

Return SQL code as text file plus results which workbench gave you (you can include them in the same txt file). Query + answer. As long as it is readable by a grader, it is fine - text, word, screenshot....but text is easiest.

1. Find all distinct drinkers whose phone numbers come from area code 917 and who like Budweiser or Bud (synonym!)

Interpretation: All unique drinkers whose phone numbers start with 917 and like Bud / Budweiser.

```
SELECT DISTINCT drinker
FROM Likes l, Drinkers d
WHERE
(l.beer='Budweiser' OR l.beer='Bud') AND
d.phone LIKE '917%' AND
d.name = l.drinker
```

```
# drinker
```

2. What beers does Mike like?

Interpretation: Beers liked by Mike

```
SELECT DISTINCT beer FROM Likes WHERE drinker='Mike'
```

```
# beer

Blue Moon
Bud
Budweiser
Creamy Dark
Hefeweizen
Michelob Golden Draft Light
Original Premium Lager
```

```
Original Premium Lager Dog
Killian's
```

3. Which town has the most drinkers?

Interpretation: Return a single town that has no other towns with more drinkers

```sql
SELECT city
FROM Drinkers
GROUP BY city
ORDER BY count(*) DESC
LIMIT 1;
```

```
# city
Edison
```

4. What bars are frequented by drinkers from that town (3)?

Interpretation: As written in question

```sql
SELECT DISTINCT bar
FROM Frequents f, Drinkers d
WHERE d.name = f.drinker AND
d.city = 'Edison';
```

```
# bar
'Gecko Grill'
'Cabana'
'Blue Angel'
'Seven Bamboo'
```

5. Provide all bars which serve beers that Mike likes

Interpretation: As written in question

```sql
SELECT DISTINCT s.bar
FROM Sells s, (SELECT beer FROM Likes WHERE drinker='Mike') AS b
WHERE s.beer = b.beer;
```

```
# bar

A.P. Stump's
Blue Angel
Blue Tattoo
Britannia Arms
Cabana
Caravan
Club 175
Coconut Willie's Cocktail Lounge
Gecko Grill
Giza Hookah Lounge
Hedley Club
Seven Bamboo
The Backbeat
The Blank Club
The Shark and Rose
```

6. Who likes at least one same beer that Joe or Mike like?

Interpretation: Return all drinkers that like at least one beer that is also liked by Joe or Mike.

```
SELECT DISTINCT l.drinker
FROM Likes l, Likes l1, Likes l2
WHERE
(l.beer = l1.beer OR l.beer = l2.beer)
AND l.drinker != 'Joe' AND l.drinker != 'Mike';
```

```
# drinker
'John'
'Justin'
'Devarsh'
'Yuhan'
'Vince'
'Gunjan'
'Sahil'
'Jesse'
```

7. All bars which sell at least one beer which is liked by at least one drinker who frequents these bars

Interpretation: Return bars that sell a beer that is liked by someone who frequents their bar.

```
SELECT DISTINCT s.bar
FROM Sells s, Frequents f, Likes l
WHERE f.bar = s.bar AND
s.beer = l.beer AND
s.drinker = l.drinker;
```

```
# bar
'The Shark and Rose'
'Seven Bamboo'
'Gecko Grill'
'Caravan'
'Cabana'
'Blue Angel'
'A.P. Stump\'s'
```

8. Drinkers who like some beers sold by Caravan bar

Interpretation: As written in title

```
SELECT DISTINCT l.drinker
FROM Likes l, Sells s
WHERE l.beer = s.beer AND s.bar = 'Caravan'
GROUP BY l.drinker HAVING count(*) > 1;
```

```
# drinker
'John'
'Mike'
'Vince'
'Gunjan'
'Yuhan'
```

9. Bars which sell Budweiser and are frequented by some drinkers who like Budweiser

Interpretation: As written in title

```
SELECT DISTINCT b.bar
FROM
(SELECT DISTINCT bar FROM Sells WHERE Sells.beer = 'Budweiser') as b,
Frequents f,
Likes l
WHERE
f.drinker = l.drinker
AND l.beer = 'Budweiser'
AND f.bar = b.bar
```

```
# bar
'Cabana'
'Caravan'
'Gecko Grill'
'Seven Bamboo'
'The Shark and Rose'
```

10. Bars which are frequented by Mike and Steve

Interpretation: As written in title

```
SELECT DISTINCT f1.bar
FROM Frequents f1, Frequents f2
WHERE
        f1.bar = f2.bar
        AND f1.drinker='Mike' AND f2.drinker='Steve'
```

```
# bar
null
```

11. Drinker who like at least two beers that Mike likes

Interpretation: As written in title

```
SELECT COUNT(*), drinker
FROM Likes l1
WHERE beer in (
        SELECT beer
    FROM Likes l
    WHERE
                l.drinker = 'Mike'
```

```
        AND l1.drinker!=l.drinker
        )
GROUP BY l1.drinker
HAVING COUNT(*)>1
```

```
# COUNT(*), drinker
'5', 'John'
'2', 'Justin'
'2', 'Gunjan'
'3', 'Yuhan'
```

12. Bars which sell at least 3 beers that Mike likes (do not use COUNT)

Interpretation: As written in title

```
SELECT DISTINCT s1.bar
FROM
        Sells s1, Sells s2, Sells s3
WHERE
        s1.bar = s2.bar AND s2.bar = s3.bar
    AND s1.beer IN (SELECT l.beer FROM Likes l WHERE l.drinker="Mike")
    AND s2.beer IN (SELECT l.beer FROM Likes l WHERE l.drinker="Mike")
    AND s3.beer IN (SELECT l.beer FROM Likes l WHERE l.drinker="Mike")
    AND s1.beer != s2.beer AND s2.beer != s3.beer AND s3.beer != s1.beer;
```

```
# bar
'Caravan'
```