

# SQL Queries II

## CS 210 - Principles of Information and Data Management

### 1. Drinkers who like the most beers (highest number of beers)

```
SELECT DISTINCT drinker
FROM Likes
GROUP BY drinker
HAVING count(*)=(SELECT count(*) as c1 FROM Likes
                  GROUP BY drinker
                  ORDER BY c1 DESC
                  LIMIT 1
)
```

```
# drinker
'Mike'
```

### 2. Bars which sell most expensive Budweiser and are not frequented by Gunjan

```
SELECT DISTINCT s.bar
FROM
    Sells s,
    Frequents f,
    (SELECT MAX(price) as MaxPrice FROM Sells WHERE beer='Budweiser') as mp
WHERE
    s.beer='Budweiser'
    AND s.price=mp.MaxPrice
    AND f.bar NOT IN (SELECT DISTINCT bar FROM Frequents WHERE
drinker='Gunjan');
```

```
# bar
'Caravan'
```

### 3. Drinkers who frequent only bars which serve all beers they like

```
SELECT DISTINCT l.drinker
FROM Likes l
```

```

WHERE l.drinker NOT IN (
    SELECT l1.drinker
    FROM Likes l1 WHERE
        NOT EXISTS (
            SELECT f.drinker
            FROM Frequents f, Sells s
            WHERE
                l.beer = s.beer
                AND f.drinker = l.drinker
            AND f.bar = s.bar
        )
)

```

```

# drinker
'Gunjan'
'Jesse'
'John'
'Justin'
'Mike'
'Sahil'

```

#### 4. Drinkers who frequent most popular bar (the one with highest count of drinkers)

```

SELECT DISTINCT f.drinker
FROM
    Frequents f,
    (
        SELECT bar, count(*) as num_drinkers
        FROM Frequents
        GROUP BY bar
        ORDER BY count(*) DESC
        LIMIT 1
    ) AS c
WHERE f.bar = c.bar;

```

```

# drinker
'Bob'
'Erik'
'Herb'
'Jesse'
'Joe'

```

```
'John'  
'Justin'  
'Mike'  
'Rebecca'  
'Tom'  
'Vince'  
'Jeanie'  
'Tatiana'  
'Yuhan'
```

## 5. Precinct(s) which collected the least number of total votes by end of day of November 5th 2020

```
SELECT DISTINCT p1.precinct  
FROM Penna p1  
WHERE p1.Timestamp LIKE '2020-11-05 %'  
GROUP BY precinct  
HAVING MAX(p1.totalvotes)=(  
    SELECT MAX(totalvotes) as t2  
    From Penna as p  
    WHERE p.Timestamp LIKE '2020-11-05 %'  
    GROUP BY p.precinct  
    ORDER BY t2 ASC  
    LIMIT 1  
);
```

Please note that this query was run on the remote database at 209.xx.xx...

```
# precinct  
'Franconia 2'
```

## 6. Which precincts did Trump win by more than 100 votes in 2020

```
SELECT DISTINCT precinct  
FROM  
    penna p1,  
    (  
        SELECT precinct as p, MAX(Timestamp) as t  
        FROM penna  
        GROUP BY precinct  
    ) p2  
WHERE
```

```
p1.precinct=p2.p
AND p1.Timestamp = p2.t
AND trump - biden > 100;
```

Please note that this query was ran on a local database including only 1000 queries.

```
# precinct
'Adams Township - Dunlo Voting Precinct'
'Adams Township - Elton Voting Precinct'
'Adams Township - St. Michael Voting Precinct'
'Adams Township No. 1 Voting Precinct'
'Adams Township- - Gramlingtown Voting Precinct'
'Allegheny Township Voting Precinct'
'Barr Township Voting Precinct'
'Blacklick Township Voting Precinct'
'Cambria Township - Colver Voting Precinct'
'Cambria Township - Revloc Voting Precinct'
'Cambria Township No. 1 Voting Precinct'
'Cambria Township No. 4 Voting Precinct'
'Carrolltown Borough Voting Precinct'
'Chest Township Voting Precinct'
'Clearfield Township Voting Precinct'
'Conemaugh Township - Center Voting Precinct'
'Conemaugh Township - Cover Hil Voting Precinct'
'Cresson Borough Voting Precinct'
'Cresson Township - North Voting Precinct'
'Cresson Township - South Voting Precinct'
'Croyle Township - No. 2 Voting Precinct'
'Croyle Township No. 1 Voting Precinct'
'Daisytown Borough Voting Precinct'
'Dale Borough Voting Precinct'
'Dean Township Voting Precinct'
'East Carroll Township - South Voting Precinct'
'East Conemaugh Borough Voting Precinct'
'East Taylor Township - No. 1 Voting Precinct'
'East Taylor Township No. 2 Voting Precinct'
'Ebensburg Borough - Center Voting Precinct'
'Ebensburg Borough - East Voting Precinct'
'Ebensburg Borough - West Voting Precinct'
'Elder Township Voting Precinct'
```

'Ferndale Borough Voting Precinct'  
'Gallitzin Borough Voting Precinct'  
'Gallitzin Township Voting Precinct'  
'Geistown Borough No. 1 Voting Precinct'  
'Geistown Borough No. 2 Voting Precinct'  
'Hastings Borough Voting Precinct'  
'Jackson Township - Vinco Voting Precinct'  
'Jackson Township No. 1 Voting Precinct'  
'Jackson Township No.3 Voting Precinct'  
'Johnstown - Eighth Ward No. 3 Voting Precinct'  
'Johnstown-20th Ward 1 Voting Precinct'  
'Lilly Borough - Second Ward Voting Precinct'  
'Lorain Borough Voting Precinct'  
'Lower Yoder Township No. 2 Voting Precinct'  
'Lower Yoder Township No.1 Voting Precinct'  
'Middle Taylor Township Voting Precinct'  
'Munster Township Voting Precinct'  
'Nanty Glo Borough - First Ward Voting Precinct'  
'Nanty Glo Borough - Second War Voting Precinct'  
'Northern Cambria Borough - Cen Voting Precinct'  
'Northern Cambria Borough - Nor Voting Precinct'  
'Northern Cambria Borough - Sou Voting Precinct'  
'Patton Borough - First Ward Voting Precinct'  
'Patton Borough - Second Ward Voting Precinct'  
'Portage Borough - First Ward Voting Precinct'  
'Portage Borough - Second Ward Voting Precinct'  
'Portage Borough - Third Ward Voting Precinct'  
'Portage Township - Southwest Voting Precinct'  
'Portage Township Center Voting Precinct'  
'Reade Township Voting Precinct'  
'Richland Township No. 1 Voting Precinct'  
'Richland Township No. 2 Voting Precinct'  
'Richland Township No. 3 Voting Precinct'  
'Richland Township No. 4 Voting Precinct'  
'Richland Township No. 5 Voting Precinct'  
'Richland Township No. 6 Voting Precinct'  
'Richland Township No. 7 Voting Precinct'  
'Richland Township No. 8 Voting Precinct'  
'Richland Township No. 9 Voting Precinct'  
'Sankertown Borough Voting Precinct'

'Scalp Level Borough Voting Precinct'  
'South Fork Borough Voting Precinct'  
'Southmont Borough No. 1 Voting Precinct'  
'Southmont Borough No. 2 Voting Precinct'  
'Stonycreek Township - Ward 1 Voting Precinct'  
'Stonycreek Township - Ward 3 Voting Precinct'  
'Stonycreek Township - Ward 4 Voting Precinct'  
'Summerhill Borough Voting Precinct'  
'Summerhill Township - North Voting Precinct'  
'Summerhill Township - South Voting Precinct'  
'Susquehanna Township - North Voting Precinct'  
'Susquehanna Township - South Voting Precinct'  
'Upper Yoder Township No. 1 Voting Precinct'  
'Upper Yoder Township No. 2 Voting Precinct'  
'Upper Yoder Township No. 3 Voting Precinct'  
'Upper Yoder Township No. 4 Voting Precinct'  
'Vintondale Borough Voting Precinct'  
'Washington Township Voting Precinct'  
'West Carroll Township - North Voting Precinct'  
'West Carroll Township - South Voting Precinct'  
'West Taylor Township Voting Precinct'  
'Westmont Borough No. 1 Voting Precinct'  
'Westmont Borough No. 2 Voting Precinct'  
'Westmont Borough No. 3 Voting Precinct'  
'White Township Voting Precinct'  
'BENNER NORTH'  
'BENNER SOUTH'  
'BOGGS EAST'  
'BOGGS WEST'  
'BURNSIDE'  
'CURTIN SOUTH'  
'FERGUSON WEST'  
'GREGG'  
'HAINES'  
'HALFMOON EAST CENTRAL'  
'HOWARD BORO'  
'HOWARD TWP'  
'HUSTON'  
'MARION'  
'MILES EAST'

'MILESBURG'  
'MILLHEIM'  
'PENN'  
'PHILIPSBURG 2ND WARD'  
'PORT MATILDA'  
'POTTER NORTH'  
'POTTER SOUTH'  
'RUSH NORTH'  
'RUSH SOUTH'  
'RUSH WEST'  
'SNOW SHOE'  
'SNOW SHOE EAST'  
'SNOW SHOE WEST'  
'SPRING EAST'  
'SPRING NORTH'  
'SPRING SOUTH'  
'SPRING SOUTHWEST'  
'SPRING WEST'  
'TAYLOR'  
'UNION'  
'WALKER WEST'  
'WORTH'  
'Aleppo Voting Precinct'  
'Carmichaels Borough Voting Precinct'  
'Center Voting Precinct'  
'Cumberland #1 Voting Precinct'  
'Cumberland #2 Voting Precinct'  
'Cumberland #4 Voting Precinct'  
'Cumberland Nemacolin Voting Precinct'  
'Dunkard #1 Voting Precinct'  
'Dunkard #2 Voting Precinct'  
'Franklin East Voting Precinct'  
'Franklin North Voting Precinct'  
'Franklin South Voting Precinct'  
'Franklin West Voting Precinct'  
'Greene Voting Precinct'  
'Jackson Voting Precinct'  
'Jefferson #1 Voting Precinct'  
'Jefferson #3 Voting Precinct'  
'Monongahela #1 Voting Precinct'

```

'Monongahela #2 Voting Precinct'
'Morgan - Lippencott Voting Precinct'
'Morgan - Mather Voting Precinct'
'Morris Voting Precinct'
'Perry Voting Precinct'
'Rices Landing Borough Voting Precinct'
'Richhill Voting Precinct'
'Washington Voting Precinct'
'Wayne - East Voting Precinct'
'Wayne - West Voting Precinct'
'Waynesburg #1 Voting Precinct'
'Waynesburg #2 Voting Precinct'
'Waynesburg #3 Voting Precinct'
'Whiteley Voting Precinct'
'Collegeville 1'
'East Norriton 1-1'
'Franconia 4'
'Franconia 5'
'Hatfield 2-2'
'Hatfield 5-1'
'Souderton 2'
'Towamencin 2-3'
'Worcester East 3'

```

**7. Has Trump ever led the total vote (for any of the timestamps)?  
(Return "Yes he did on <timestamp>" or "No he never did".**

```

SELECT
    CONCAT(
        IF(Trump>Biden, "Yes he did on ", "No he never did"),
        IF(Trump>Biden, Timestamp, "")
    )
FROM Penna1
LIMIT 1;

```

```

# CONCAT(
    IF(Trump>Biden, "Yes he did on ", "No he never did"),
    IF(Trump>Biden, Timestamp, "")
)
'Yes he did on 2020-11-04 03:58:36'

```



