SQL vragen Join

1: Toon voor alle sightings van de zwarte gier (“black vulture) de datum, county en common name

```
 year | county_name |  common_name
------+-------------+---------------
 2005 | Columbia    | Black Vulture
 2005 | Delaware    | Black Vulture
 2005 | Dutchess    | Black Vulture
 2005 | Orange      | Black Vulture
 2005 | Putnam      | Black Vulture
 2005 | Rensselaer  | Black Vulture
 2005 | Rockland    | Black Vulture
 2005 | Sullivan    | Black Vulture
 2005 | Ulster      | Black Vulture
 2005 | Westchester | Black Vulture
(10 rows)
```

```
SELECT year, county_name, common_name FROM sightings
NATURAL JOIN biological_entity WHERE common_name = 'Black Vulture';
```

2: Toon de sighting datum en common name van alle dieren die in de county “Broøme” gesignaleerd zijn in de periode 1900-1990.

```
 year |      common_name
------+------------------------
 1920 | Porter's Reed Grass
 1947 | Ebony Boghaunter
 1954 | Spine-crowned Clubtail
 1981 | Kentucky Warbler
 1982 | Henslow's Sparrow
(5 rows)
```

```
SELECT year, common_name FROM sightings
NATURAL JOIN biological_entity
WHERE year BETWEEN 1900 AND 1990
AND county_name = 'Broome'
```

3. Toon per taxonomische subgroup het aantal soorten die gesignaleerd zijn in de county Broome tussen 1900 en 1990. Sorteer je uitvoer op taxonomische subgroup.

```
     subtax_name      | count
----------------------+-------
 Dragonflies          |     2
 Grasses              |     1
 Sparrows and Towhees |     1
 Wood-Warblers        |     1
(4 rows)
```

```
SELECT subtax_name, COUNT(*) FROM biological_entity
NATURAL JOIN sightings
WHERE year BETWEEN 1900 AND 1990
AND county_name = 'Broome'
GROUP BY subtax_name ORDER BY subtax_name;
```

4. Toon alle taxonomische subgroupen waarvoor meer dan 10 soorten zijn gesignaleerd in de county Hamiltøn, inclusief het aantal gesignaleerde soorten.

```
           subtax_name            | count
----------------------------------+-------
 Sedges                           |    12
 Hawks, Falcons, Eagles, Vultures |    14
 Wood-Warblers                    |    22
 Other Flowering Plants           |    28
(4 rows)
```

```
SELECT subtax_name, COUNT(*) FROM
biological_entity
NATURAL JOIN sightings
WHERE county_name = 'Hamilton'
GROUP BY subtax_name HAVING COUNT(*) > 10
ORDER BY COUNT(*) ASC;
```

5. Toon per taxonomische subgroup met ‘bird’ in de naam, alle mogelijke description en het bijbehorden aantal soorten in de county Bronx.

```
            subtax_name            |              description               | count
-----------------------------------+----------------------------------------+-------
 Blackbirds and Orioles            | Protected Bird                         |     5
 Gulls, Terns, Plovers, Shorebirds | Endangered                             |     1
 Gulls, Terns, Plovers, Shorebirds | Protected Bird                         |     5
 Gulls, Terns, Plovers, Shorebirds | Protected Bird - Game with open season |     1
 Hummingbirds and Swifts           | Protected Bird                         |     1
 Mockingbirds and Thrashers        | Protected Bird                         |     3
 Nightbirds                        | Special Concern                        |     1
 Thrushes and Bluebirds            | Protected Bird                         |     2
(8 rows)
```

```
SELECT subtax_name, description, COUNT(*) FROM biological_entity
NATURAL JOIN sightings
WHERE county_name = 'Bronx'
AND subtax_name LIKE '%bird%'
GROUP BY subtax_name, description;
```

6. Van welke taxa (tax_name) zitten er meer dan 100 soorten in de tabel biological_entity?

```
       tax_name
-----------------------
 Birds
 Butterflies and Moths
 Flowering Plants
(3 rows)
```

```
SELECT tax_name FROM subtax
NATURAL JOIN biological_entity
WHERE subtax.subtax_name = biological_entity.subtax_name
GROUP BY tax_name HAVING COUNT(*) > 100 ORDER BY tax_name;
```

7. Toon de taxonomische group waarvan de meeste soorten gesignaleerd zijn, inclusief totaal aantal sightings.

```
 tax_name | count
----------+-------
 Birds    |  9668
(1 row)
```

```
SELECT tax_name, COUNT(*) FROM subtax
JOIN biological_entity
ON subtax.subtax_name=biological_entity.subtax_name
JOIN sightings
ON biological_entity.scientific_name=sightings.scientific_name
GROUP BY tax_name ORDER BY COUNT DESC LIMIT 1;
```

8. Toon per county het aantal reptielen die gesignaleerd zijn in counties die beginnen met de letter ‘C’.

```
 county_name | count
-------------+-------
 Cattaraugus |    16
 Cayuga      |    15
 Chautauqua  |    16
 Chemung     |    14
 Chenango    |    13
 Clinton     |    13
 Columbia    |    21
 Cortland    |    10
(8 rows)
```

```
SELECT county_name, COUNT(*) FROM sightings
JOIN biological_entity
ON biological_entity.scientific_name=sightings.scientific_name
JOIN subtax
ON biological_entity.subtax_name=subtax.subtax_name
WHERE tax_name = 'Reptiles' AND county_name LIKE 'C%'
GROUP BY county_name ORDER BY county_name;
```

9. Toon de counties waar meer dan 25 verschillende amfibieen zijn gesignaleerd.

```
 county_name
-------------
 Allegany
 Orange
 Ulster
(3 rows)
```

```
SELECT county_name FROM sightings
JOIN biological_entity
ON biological_entity.scientific_name=sightings.scientific_name
JOIN subtax
ON biological_entity.subtax_name=subtax.subtax_name
WHERE tax_name = 'Amphibians'
GROUP BY county_name HAVING COUNT(*) > 25 ORDER BY county_name;
```

10. Toon voor de taxa “Vogels” en “zoogdieren” alle mogelijke beschermde statussen, inclusief het aantal soorten per combinatie taxus – status. Zie query-uitvoer hieronder voor een verduidelijking.

```
 tax_name |              description               | count
----------+----------------------------------------+-------
 Birds    | Endangered                             |     9
 Birds    | not listed                             |     5
 Birds    | Protected Bird                         |   174
 Birds    | Protected Bird - Game with open season |    33
 Birds    | Special Concern                        |    19
 Birds    | Threatened                             |    10
 Mammals  | Endangered                             |     8
 Mammals  | Game with open season                  |     1
 Mammals  | not listed                             |     4
 Mammals  | Special Concern                        |     2
 Mammals  | Threatened                             |     1
(11 rows)
```

```
SELECT tax_name, description, COUNT(*) FROM biological_entity
JOIN subtax
ON biological_entity.subtax_name=subtax.subtax_name
WHERE tax_name = 'Birds' OR tax_name = 'Mammals'
GROUP BY tax_name, description ORDER BY tax_name, description;
```