

Window functions

Language: English • 日本語

General Elections were held in the UK in 2015 and 2017. Every citizen votes in a **constituency**. The candidate who gains the most votes becomes MP for that constituency.

All these results are recorded in a table **ge**

yr	firstName	lastName	constituency	party	votes
2015	Ian	Murray	S14000024	Labour	19293
2015	Neil	Hay	S14000024	Scottish National Party	16656
2015	Miles	Briggs	S14000024	Conservative	8626
2015	Phyl	Meyer	S14000024	Green	2090
2015	Pramod	Subbaraman	S14000024	Liberal Democrat	1823
2015	Paul	Marshall	S14000024	UK Independence Party	601
2015	Colin	Fox	S14000024	Scottish Socialist Party	197
2017	Ian	MURRAY	S14000024	Labour	26269
2017	Jim	EADIE	S14000024	SNP	10755
2017	Stephanie Jane Harley	SMITH	S14000024	Conservative	9428
2017	Alan Christopher	BEAL	S14000024	Liberal Democrats	1388

Warming up

1.

Show the **lastName**, **party** and **votes** for the **constituency** 'S14000024' in 2017.

```
SELECT lastName, party, votes
FROM ge
WHERE constituency = 'S14000024' AND yr = 2017
ORDER BY votes DESC
```

Submit SQL

restore default

result

Who won?

2.

You can use the RANK function to see the order of the candidates. If you RANK using (ORDER BY votes DESC) then the candidate with the most votes has rank 1.

Show the party and RANK for constituency S14000024 in 2017. List the output by party

```
SELECT party, votes,  
       RANK() OVER (ORDER BY votes desc) as posn  
FROM ge  
WHERE constituency = 'S14000024 ' AND yr = 2017  
order by party
```

Submit SQL

restore default

result

PARTITION BY

3.

The 2015 election is a different PARTITION to the 2017 election. We only care about the order of votes for each year.

Use PARTITION to show the ranking of each party in S14000021 in each year. Include yr, party, votes and ranking (the party with the most votes is 1).

```
SELECT yr,party, votes,
       RANK() OVER (PARTITION BY yr ORDER BY votes DESC) as posn
FROM ge
WHERE constituency = 'S14000021'
ORDER BY party,yr
```

Submit SQL

restore default

result

Edinburgh Constituency

4.

Edinburgh constituencies are numbered S14000021 to S14000026.

Use PARTITION BY constituency to show the ranking of each party in Edinburgh in 2017. Order your results so the winners are shown first, then ordered by constituency.

```
SELECT constituency,party, votes,
rank() over(partition by constituency  order by votes desc) as posn
FROM ge
WHERE constituency BETWEEN 'S14000021' AND 'S14000026'
AND yr = 2017
order by posn,constituency
```

Submit SQL

restore default

result

Winners Only

5.

You can use SELECT within SELECT to pick out only the winners in Edinburgh.

Show the parties that won for each Edinburgh constituency in 2017.

```
WHERE constituency BETWEEN 'S14000021' AND 'S14000026'
  AND yr = 2017
  AND votes = (
    SELECT MAX(votes)
    FROM ge AS e2
    WHERE e2.constituency = ge.constituency
    AND constituency BETWEEN 'S14000021' AND 'S14000026'
    AND yr = 2017
  )
order by votes
)
order by constituency;
```

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Correct answer

constituency	party
S14000021	Conservative
S14000022	SNP
S14000023	SNP
S14000024	Labour
S14000025	SNP

S14000026

Liberal Democrats

Scottish seats

6.

You can use **COUNT** and **GROUP BY** to see how each party did in Scotland. Scottish constituencies start with 'S'

Show how many seats for each party in Scotland in 2017.

```
select party, count(*) from ge
where constituency like 'S%'
and yr = 2017
AND votes = (
    SELECT MAX(votes)
    FROM ge AS g2
    WHERE g2.constituency = ge.constituency
    AND g2.yr = 2017
)
group by party
```

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Correct answer

party	count(*)
Conservative	13
Labour	7
Liberal Democrats	4
SNP	35

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