SELECT within SELECT Tutorial

Language: English · 日本語 · 中文

This tutorial looks at how we can use SELECT statements within SELECT statements to perform more complex queries.

name	continent	area	population	gdp
Afghanistan	Asia	652230	25500100	20343000000
Albania	Europe	28748	2831741	12960000000
Algeria	Africa	2381741	37100000	188681000000
Andorra	Europe	468	78115	3712000000
Angola	Africa	1246700	20609294	100990000000

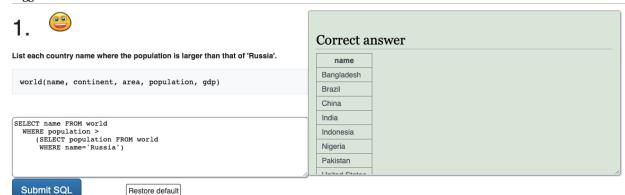
Using nested SELECT

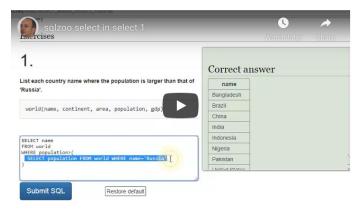
Summary

- 1 Bigger than Russia 2 Richer than UK 3 Neighbours of Argentina and Australia
- 4 Between Canada and Poland
- 5 Percentages of Germany
- 6 Bigger than every country in Europe
- 7 Largest in each continent
- 8 First country of each continent (alphabetically)
- 9 Difficult Questions That Utilize Techniques Not Covered In Prior Sections

Contents [hide]

Bigger than Russia





Richer than UK





Show the countries in Europe with a per capita GDP greater than 'United Kingdom'.

Per Capita GDP

select name from world

where continent = 'Europe and (gdp/population) > (select gdp/population from world where name = 'United Kingdom')

Correct answer



SELECT basics quiz SELECT from world quiz

SELECT from nobel SELECT in SELECT quiz SUM and COUNT

auiz JOIN quiz More JOIN

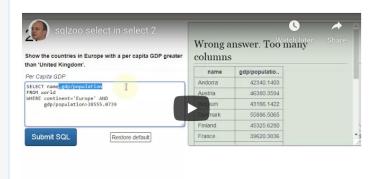
Using NULL quiz Self JOIN

quiz

Reference

Tools

Submit SQL Restore default Finland Germany local local local default loc



Neighbours of Argentina and Australia





List the name and continent of countries in the continents containing either Argentina or Australia. Order by name of the country.

select name, continent from world where continent in (select continent from world where name = 'Argentina' or name = 'Australia') order by name

Submit SQL

Restore default

Correct answer

name	continent
Argentina	South America
Australia	Oceania
Bolivia	South America
Brazil	South America
Chile	South America
Colombia	South America
Ecuador	South America
F:::	Onneria

Between Canada and Poland





Which country has a population that is more than Canada but less than Poland? Show the name and the population.

select name, population
from world
where population > (select population from world where name =
'Canada') and population < (select population from world where name
= 'Poland')</pre>

Submit SQL

Restore default

Correct answer

name population

Percentages of Germany





Germany (population 80 million) has the largest population of the countries in Europe. Austria (population 8.5 million) has 11% of the population of Germany.

Show the name and the population of each country in Europe. Show the population as a percentage of the population of Germany.

The format should be Name, Percentage for example:

name	percentage
Albania	3%

Correct answer

name	percentage
Albania	3%
Andorra	0%
Austria	11%
Belarus	11%
Belgium	14%
Bosnia and Herzegovina	4%

Andorra	0%
Austria	11%

Bulgaria 8%

Decimal places

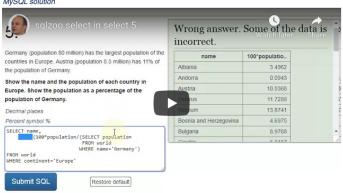
Percent symbol %

select name, concat(round(population/(select population from world where name = 'Germany')*100), '%') as percentage from world where continent = 'Europe'

Submit SQL

Restore default





To get a well rounded view of the important features of SQL you should move on to the next tutorial concerning aggregates.

To gain an absurdly detailed view of one insignificant feature of the language, read on.

We can use the word ALL to allow >= or > or < or <= to act over a list. For example, you can find the largest country in the world, by population with this query:

```
SELECT name
 FROM world
 WHERE population >= ALL(SELECT population
                          FROM world
                          WHERE population>0)
```

You need the condition **population>0** in the sub-query as some countries have **null** for population.

Bigger than every country in Europe





Which countries have a GDP greater than every country in Europe? [Give the name only.] (Some countries may have NULL gdp values)



Correct answer

name China Japan United States

We can refer to values in the outer SELECT within the inner SELECT. We can name the tables so that we can tell the difference between the inner and outer versions.

Largest in each continent





Find the largest country (by area) in each continent, show the continent, the name and the area:

SELECT continent, name, area FROM world x WHERE area >=
(SELECT max(area) FROM world y
WHERE y.continent=x.continent
AND area>0)

Correct answer

continent	name	area
Africa	Algeria	2381741
Oceania	Australia	7692024
South America	Brazil	8515767
North America	Canada	9984670
Asia	China	9596961

Submit SQL

Restore default

Caribbean 109884 Cuba Europe Kazakhstan 2724900

The above example is known as a correlated or synchronized sub-query.

Using correlated subqueries

First country of each continent (alphabetically)

8.



List each continent and the name of the country that comes first alphabetically.

select continent, min(name) from world group by continent

Submit SQL

Restore default

Correct answer

continent	min(name)
Africa	Algeria
Asia	Afghanistan
Caribbean	Antigua and Barbuda
Eurasia	Armenia
Europe	Albania
North America	Belize
Oceania	Australia
Couth Amorica	Argontino

Difficult Questions That Utilize Techniques Not Covered In Prior Sections

9.



Find the continents where all countries have a population <= 25000000. Then find the names of the countries associated with these continents. Show name, continent and population.

select name, continent, population from world

where continent in (select continent from world group by continent having max(population)<=25000000)

Submit SQL

Restore default

Correct answer

name	continent	population
Antigua and Barbuda	Caribbean	96453
Bahamas	Caribbean	385340
Barbados	Caribbean	287025
Cuba	Caribbean	11209628
Dominica	Caribbean	71808
Dominican Republic	Caribbean	10358320
Grenada	Caribbean	112003
Liniti	Caribbaan	11577770

10.



Some countries have populations more than three times that of any of their neighbours (in the same continent). Give the countries and continents.

select name, continent from world w1 where population > all(select 3*population from world w2 where w1.continent = w2.continent and w1.name <> w2.name)

Submit SQL

Restore default

Correct answer

name	continent
Brazil	South America
Russia	Eurasia

Nested SELECT Quiz

Category: Languages pages