# **SELECT within SELECT Tutorial**

From SQLZOO

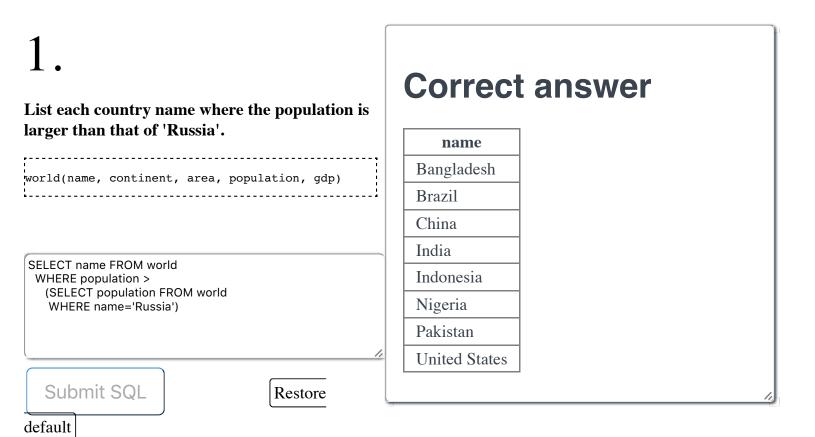
This tutorial looks at how we can use SELECT statements within SELECT statements to perform more complex queries.

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

## **Exercises**



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')

Submit SQL

default

Finland
France
Germany
Iceland
Ireland
Liechtenstein
Luxembourg
Monaco
Netherlands
Norway
San Marino
Sweden
Switzerland

3.

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 = (SELECT continent FROM world WHERE name = 'Argentina') OR continent = (SELECT continent FROM world WHERE name = 'Australia')

ORDER BY name

Submit SQL

Restore

Restore

default

## **Correct answer**

name	continent
Argentina	South America
Australia	Oceania
Bolivia	South America
Brazil	South America
Chile	South America
Colombia	South

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

SELECT name, population

default

name = 'Canada') AND population < (SELECT population FROM world WHERE name = 'Poland')

Submit SQL

Restore

FROM world WHERE population > (SELECT population FROM world WHERE **Correct answer** 

name	population
Iraq	36004552
Sudan	37289406

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.

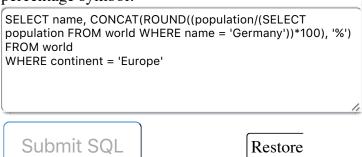
#### Decimal places

You can use the function ROUND to remove the decimal places.

#### Percent symbol %

default

You can use the function CONCAT to add the percentage symbol.



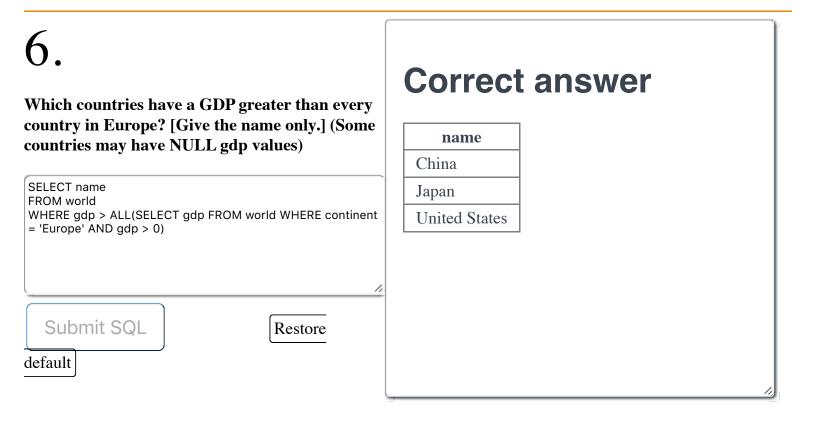
Poland	48%
Portugal	13%
Romania	25%
San Marino	0%
Serbia	9%
Slovakia	7%
Slovenia	3%
Spain	58%
Sweden	12%
Switzerland	10%
Ukraine	53%
United Kingdom	79%
Vatican City	0%

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.

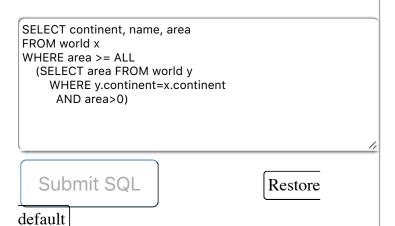
We can use the word ALL to allow >= or > or < or <=to act over a list. For example, you can find the largest country in the world, by population with this query:

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



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.

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



## **Correct answer**

continent	name	area
Africa	Algeria	2381741
Oceania	Australia	7692024
South America	Brazil	8515767
North America	Canada	9984670
Asia	China	9596961
Caribbean	Cuba	109884
Europe	Kazakhstan	2724900
Eurasia	Russia	17125242

8.

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

SELECT continent, name
FROM world x
WHERE name <= ALL(SELECT name FROM world y WHERE
y.continent = x.continent)

Submit SQL

Restore

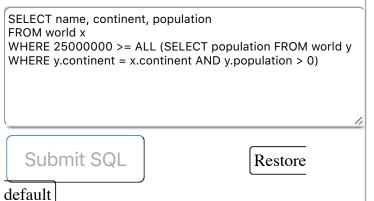
## **Correct answer**

continent	name	
Africa	Algeria	
Asia	Afghanistan	
Caribbean	Antigua and Barbuda	
Eurasia	Armenia	
Europe	Albania	
North America	Belize	
Oceania	Australia	
South America	Argentina	

# **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.



Grenada	Caribbean	103328	
Haiti	Caribbean	10413211	
Jamaica	Caribbean	2717991	
Kiribati	Oceania	106461	
Marshall Islands	Oceania	56086	
Micronesia, Federated States of	Oceania	101351	Î
Nauru	Oceania	9945	
New Zealand	Oceania	4538520	
Palau	Oceania	20901	
Papua New Guinea	Oceania	7398500	
Saint Lucia	Caribbean	180000	
0	0	107000	11

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 x WHERE population > ALL (SELECT population\*3 FROM world y WHERE y.continent = x.continent AND y.name != x.name)

Submit SQL

default

Restore

## **Correct answer**

name	continent
Australia	Oceania
Brazil	South America
Russia	Eurasia

Nested SELECT Quiz

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