

SELECT within SELECT Tutorial

1.

List each country name where the population is larger than that of 'Russia'.

```
world(name, continent, area, population, gdp)
```

```
SELECT name FROM world
WHERE population >
(SELECT population FROM world
WHERE name='Russia');
```

2.

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'
);
```

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 in
(select continent from world
where name in ('Argentina' , 'Australia')
)
order by name;
```

4.

Which country has a population that is more than United Kingdom but less than Germany? Show the name and the population.

```
select name, population from world
where population >
(
select population from world
where name = 'United Kingdom'
) and population < (select population from world where name = 'Germany'
);
```

5.

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%
Andorra	0%
Austria	11%

...	...
-----	-----

Decimal places

Percent symbol %

```
SELECT name, CONCAT(ROUND(population/(SELECT population FROM world
WHERE name = 'Germany')*100), '%') as percentage FROM world
WHERE continent = 'Europe';
```

6.

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

```
select name from world
where gdp > ALL(select GDP from world where continent = 'Europe');
```

7.

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

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

Using correlated subqueries

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

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 x.continent = y.continent);
```

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 y.name, y.continent, y.population
FROM world AS y
JOIN
(SELECT continent,max(population)
FROM world
GROUP BY continent
HAVING max(population) <= 25000000) AS x
ON y.continent = x.continent
```

10.

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

```
SELECT name, continent FROM world x
WHERE population >ALL(SELECT 3*population FROM world y WHERE
x.continent = y.continent AND
x.name <> y.name);
```

QUIZ

1. Select the code that shows the name, region and population of the smallest country in each region

```
SELECT region, name, population FROM bbc x WHERE population <= ALL (SELECT population FROM
bbc y WHERE y.region=x.region AND population>0);
```

2. Select the code that shows the countries belonging to regions with all populations over 50000

```
SELECT name,region,population FROM bbc x WHERE 50000 < ALL (SELECT population FROM bbc y
WHERE x.region=y.region AND y.population>0);
```

3. Select the code that shows the countries with a less than a third of the population of the countries around it

```
SELECT name, region FROM bbc x
WHERE population < ALL (SELECT population/3 FROM bbc y WHERE
y.region = x.regionAND y.name != x.name);
```

4. Select the result that would be obtained from the following code:

```
SELECT name FROM bbc
WHERE population >
      (SELECT population
FROM bbc
WHERE name='United Kingdom')
AND region IN      (SELECT region
FROM bbc
WHERE name = 'United Kingdom')
```

France

Germany

Russia

Turkey

5. Select the code that would show the countries with a greater GDP than any country in Africa (some countries may have NULL gdp values).

```
SELECT name FROM bbc
WHERE gdp > (SELECT MAX(gdp) FROM bbc WHERE region = 'Africa');
```

6. Select the code that shows the countries with population smaller than Russia but bigger than Denmark

```
SELECT name FROM bbc
WHERE population < (SELECT population FROM bbc WHERE name='Russia')
AND population > (SELECT population FROM bbc WHERE name='Denmark')
```

7. >Select the result that would be obtained from the following code:

```
SELECT name FROM bbc
WHERE population > ALL
    (SELECT MAX(population)
     FROM bbc
     WHERE region = 'Europe')
AND region = 'South Asia'
```

Bangladesh

India

Pakistan
