

MANUAL LMD SQL

SELECT basics

Introducing the world table of countries

1. The example uses a **WHERE** clause to show the population of 'France'. Note that strings (pieces of text area that are data) should be in 'single quotes'.

Modify it to show the population of Germany.

Código:

```
select population from world where name = 'France';
```

Corrección:

```
select population from world where name='Germany';
```

Correct answer	
population	
80716000	

Scandinavia

2. Checking a list with the word **IN** allows us to check if an item is in a list. The example shows the name and population for the countries 'Brazil', 'Russia', 'India' and 'China'.

Show the name and the population for 'Sweden', 'Norway' and 'Denmark'.

Código:

```
select name, population from world where name in ('Brazil', 'Russia', 'India', 'China');
```

Corrección:

```
select name, population from world where name in('Sweden', 'Norway', 'Denmark');
```

Correct answer	
name	population
Denmark	5634437
Norway	5124383
Sweden	9675885

Just the right size

3. Which countries are not too small and not too big? `between` allows range checking (range specified is inclusive of boundary values). The example below shows countries with an area of 250,000-300,000 sq. km.

Modify it to show the country and the area for countries with an area between 200,000 and 250,000.

Código:

```
select name, area from world where area between 250000 and 300000;
```

Corrección:

```
select name, area from world where area between 200000 and 250000;
```

Correct answer	
name	area
Belarus	207600
Ghana	238533
Guinea	245857
Guyana	214969
Laos	236800
Romania	238391
Uganda	241550

SELECT basics - quiz

1. Select the code which produces this table:

name	population
Bahrain	1234571
Swaziland	1220000
Timor-Leste	1066409

Respuesta:



```
SELECT name, population
FROM world
WHERE population BETWEEN 1000000 AND 1250000
```

2. Pick the result you would obtain from this code:

```
select name, population from world where name like "A1%"
```

Respuesta:



Albania	3200000
Algeria	32900000

3. Select the code which shows the countries that end in A or L.

Respuesta:



```
SELECT name FROM world
WHERE name LIKE '%a' OR name LIKE '%l'
```

4. Pick the result from the query:

```
select name, length(name) from world where length(name)=5 and region='Europe';
```

Respuesta:



name	length(name)
Italy	5
Malta	5
Spain	5

5. Here are the first few rows of the world table:

name	region	area	population	gdp
Afghanistan	South Asia	652225	26000000	
Albania	Europe	28728	3200000	6656000000
Algeria	Middle East	2400000	32900000	75012000000
Andorra	Europe	468	64000	
...				

Pick the result you would obtain from this code:

```
select name, area*2 from world where population=64000;
```

Respuesta:



Andorra	936
---------	-----

6. Select the code that would show the countries with an area larger than 50000 and a population smaller than 10000000.


Respuesta:



```
SELECT name, area, population
FROM world
WHERE area > 50000 AND population < 10000000
```

7. Select the code that shows the population density of China, Australia, Nigeria and France.

Respuesta:



```
SELECT name, population/area
FROM world
WHERE name IN ('China', 'Nigeria', 'France', 'Australia')
```

SELECT from world

Introduction

1. Observe the result of running this SQL command to show the name, continent and population of all countries.

Código:

```
select name, continent, population from world;
```

Corrección (es lo mismo):

```
select name, continent, population from world;
```

Correct answer

name	continent	population
Afghanistan	Asia	25500100
Albania	Europe	2821977
Algeria	Africa	38700000
Andorra	Europe	76098
Angola	Africa	19183590
Antigua and Barbuda	Caribbean	86295
Argentina	South America	42669500

Large Countries

2. Show the name for the countries that have a population of at least 200 million. 200 million is 200000000, there are eight zeros.

Código:

```
select name from world where population=64105700;
```

Corrección:

```
select name from world where population>=200000000;
```

Correct answer	
name	
Brazil	
China	
India	
Indonesia	
United States	

Per capita GDP

3. Give the **name** and the per capita GDP for those countries with a **population** of at least 200 million.

Respuesta:

```
select name, gdp/population from world where population>=200000000;
```

Correct answer	
name	
Brazil	11115.264751422625
China	6121.710598592322
India	1504.793124478397
Indonesia	3482.020488188676
United States	51032.29454636844

South America In millions

4. Show the **name** and **population** in millions for the countries of the **continent** 'South America'. Divide the population by 1000000 to get population in millions.

Respuesta:

```
select name, population/1000000 from world where continent='South America';
```

Correct answer

name	
Argentina	42.6695
Bolivia	10.027254
Brazil	202.794
Chile	17.773
Colombia	47.662
Ecuador	15.7742
Guyana	0.784894

France, Germany, Italy

5. Show the **name** and **population** for France, Germany, Italy.

Respuesta:

```
select name, population from world where name in('France', 'Germany', 'Italy');
```

Correct answer

name	population
France	65906000
Germany	80716000
Italy	60782668

United

6. Show the countries which have a **name** that includes the word 'United'.

Respuesta:

```
select name from world where name like '%United%';
```

Correct answer	
name	
United Arab Emirates	
United Kingdom	
United States	

Two ways to be big

7. Two ways to be big: A country is big if it has an area of more than 3 million sq km or it has a population of more than 250 million.

Show the countries that are big by area or big by population. Show name, population and area.

Respuesta:

```
select name, population, area from world where area>3000000 or  
population>250000000;
```

Correct answer		
name	population	area
Australia	23545500	7692024
Brazil	202794000	8515767
Canada	35427524	9984670
China	1365370000	9596961
India	1246160000	3166414
Indonesia	252164800	1904569
Russia	146000000	17125242

One or the other (but not both)

8. Exclusive OR (XOR). Show the countries that are big by area (more than 3 million) or big by population (more than 250 million) but not both. Show name, population and area.

Respuesta:

```
select name, population, area from world where (area>3000000 and  
population<250000000) or (area<3000000 and population>250000000);
```


Correct answer

name	population	area
Australia	23545500	7692024
Brazil	202794000	8515767
Canada	35427524	9984670
Indonesia	252164800	1904569
Russia	146000000	17125242

Rounding

9. Show the **name** and **population** in millions and the GDP in billions for the countries of the **continent** 'South America'. Use the ROUND function to show the values to two decimal places.

For South America show population in millions and GDP in billions both to 2 decimal places.

Respuesta:

```
select name, round(population/1000000, 2), round(gdp/1000000000, 2) from world
where continent='South America';
```

Correct answer

name		
Argentina	42.67	477.03
Bolivia	10.03	27.04
Brazil	202.79	2254.11
Chile	17.77	268.31
Colombia	47.66	369.81
Ecuador	15.77	87.5
Guyana	0.78	2.85

Trillion dollar economies

10. Show the **name** and per-capita GDP for those countries with a GDP of at least one trillion (1000000000000; that is 12 zeros). Round this value to the nearest 1000.

Show per-capita GDP for the trillion dollar countries to the nearest \$1000.

Respuesta:

```
select name, round(gdp/population, -3) from world where gdp>1000000000000;
```

Correct answer

name	
Australia	66000
Brazil	11000
Canada	45000
China	6000
France	40000
Germany	42000
India	2000

Name and capital have the same length

11. Greece has capital Athens. Each of the strings 'Greece', and 'Athens' has 6 characters.

Show the name and capital where the name and the capital have the same number of characters.

Respuesta:

```
-- La función LENGTH hay que cambiarla por LEN
```

```
select name, len(name), capital, len(capital) from world where  
len(name)=len(capital);
```

Result:

name		capital	
Algeria	7	Algiers	7
Angola	6	Luanda	6
Armenia	7	Yerevan	7
Botswana	8	Gaborone	8
Canada	6	Ottawa	6
Djibouti	8	Djibouti	8
Egypt	5	Cairo	5

Matching name and capital

12. The capital of Sweden is Stockholm. Both words start with the letter 'S'.

Show the name and the capital where the first letters of each match. Don't include countries where the name and the capital are the same word.

Respuesta:

```
select name, capital from world where left(name, 1)=left(capital, 1) and name<>capital;
```

Correct answer

name	capital
Algeria	Algiers
Andorra	Andorra la Vella
Barbados	Bridgetown
Belize	Belmopan
Brazil	Brasília
Brunei	Bandar Seri Begawan
Burundi	Bujumbura

All the vowels

13. Equatorial Guinea and Dominican Republic have all of the vowels (a e i o u) in the name. They don't count because they have more than one word in the name.

Find the country that has all the vowels and no spaces in its name.

Respuesta:

```
select name from world where name not like '% %' and name like '%a%' and name like '%e%' and name like '%i%' and name like '%o%' and name like '%u%';
```

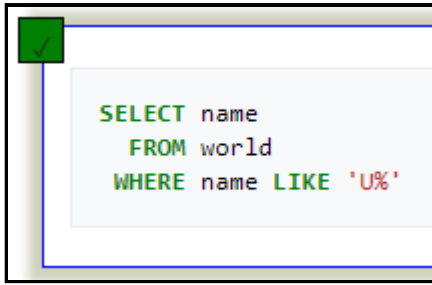
Correct answer

name
Mozambique

SELECT from world - quiz

1. Select the code which gives the name of countries beginning with U.

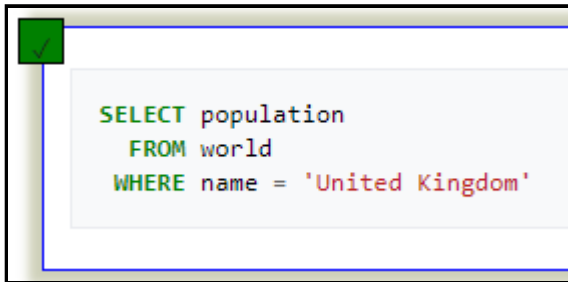
Respuesta:



```
SELECT name
FROM world
WHERE name LIKE 'U%'
```

2. Select the code which shows just the population of United Kingdom.

Respuesta:

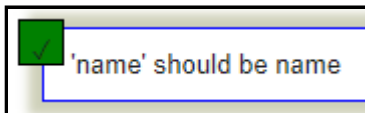


```
SELECT population
FROM world
WHERE name = 'United Kingdom'
```

3. Select the answer which shows the problem with this SQL code - the intended result should be the continent of France:

```
select continent from world where 'name'='France';
```

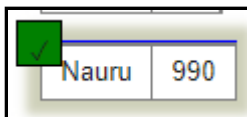
Respuesta:



```
'name' should be name
```

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

```
select name, population/10 from world where population<10000;
```



Nauru	990
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5. Select the code which would reveal the name and population of countries in Europe and Asia.

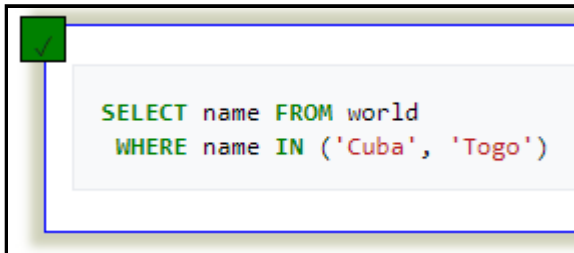
Respuesta:



```
SELECT name, population
FROM world
WHERE continent IN ('Europe', 'Asia')
```

6. Select the code which would give two rows.

Respuesta:

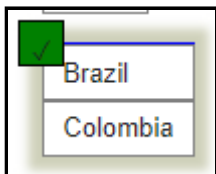


```
SELECT name FROM world
WHERE name IN ('Cuba', 'Togo')
```

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

```
select name from world where continent='South America' and population>40000000;
```

Respuesta:



Brazil
Colombia

SELECT from nobel

Winners from 1950

1. Change the query shown so that it displays Nobel prizes for 1950.

Código:

```
select yr, subject, winner from nobel where yr=1960;
```

Corrección:

```
select yr, subject, winner from nobel where yr=1950;
```

Correct answer

yr	subject	winner
1950	Chemistry	Kurt Alder
1950	Chemistry	Otto Diels
1950	Literature	Bertrand Russell
1950	Medicine	Edward C. Kendall
1950	Medicine	Philip S. Hench
1950	Medicine	Tadeus Reichstein
1950	Peace	Ralph Bunche