**World**

You will need to use the world database to solve these problems.

The steps to import databases are at the end of the [databases Windows installation module](https://qa-community.co.uk/~/_/learning/databases/databases--introduction).

**Tasks**

1. Using COUNT, get the number of cities in the USA.

SELECT COUNT(CountryCode) FROM city WHERE CountryCode="USA";

**Answer = 274**

1. Find out the population and life expectancy for people in Argentina.

SELECT Population, LifeExpectancy FROM country WHERE Name="Argentina";

**Answer = 75.1**

1. Using IS NOT NULL, ORDER BY, and LIMIT, which country has the highest life expectancy?

SELECT name, LifeExpectancy FROM country ORDER BY LifeExpectancy DESC

LIMIT 1;

**Answer = Andorra 83.5**

1. Using JOIN ... ON, find the capital city of Spain.

SELECT Country.Name, Continent, Capital, City.Name FROM country

JOIN city ON Capital=ID

WHERE country.Name = "Spain";

**Answer = Madrid**

1. Using JOIN ... ON, list all the languages spoken in the Southeast Asia region.

SELECT CountryCode, Language, country.name, Region FROM countrylanguage

JOIN country ON CountryCode=Code

WHERE Region="Southeast Asia";

SELECT

COUNT(Language)

FROM countrylanguage

JOIN country ON CountryCode=Code

WHERE Region="Southeast Asia";

**Answer = 65 languages are spoken in SE Asia**

1. Using a single query, list 25 cities around the world that start with the letter F.

SELECT \* FROM city

WHERE Name LIKE 'F%'

LIMIT 25;

1. Using COUNT and JOIN ... ON, get the number of cities in China.

SELECT COUNT(city.Name) FROM city

JOIN country ON CountryCode=Code

WHERE country.Name="China";

**Answer = 363 cities**

1. Using IS NOT NULL, ORDER BY, and LIMIT, which country has the lowest population? Discard non-zero populations.

SELECT Population, Name FROM country

WHERE (Population is NOT NULL AND Population>0)

ORDER BY Population ASC

LIMIT 1;

**Answer = Pitcairn (50)**

1. Using aggregate functions, return the number of countries the database contains.

SELECT COUNT(country.Name) FROM country;

**Answer = 239**

1. What are the top ten largest countries by area?

SELECT

SurfaceArea,

country.Name

FROM country

ORDER BY SurfaceArea DESC

LIMIT 10;

**Answer:**

|  |  |
| --- | --- |
| **17075400.00** | **Russian Federation** |
|  |  |
| **13120000.00** | **Antarctica** |
| **9970610.00** | **Canada** |
| **9572900.00** | **China** |
| **9363520.00** | **United States** |
| **8547403.00** | **Brazil** |
| **7741220.00** | **Australia** |
| **3287263.00** | **India** |
| **2780400.00** | **Argentina** |
| **2724900.00** | **Kazakstan** |

1. List the five largest cities by population in Japan.

SELECT city.Name,

country.Name

FROM city

JOIN country ON CountryCode=Code

WHERE country.Name="Japan"

ORDER BY city.Name DESC

LIMIT 5;

Answer =

|  |  |
| --- | --- |
| Zama | Japan |
| Yonezawa | Japan |
| Yonago | Japan |
| Yokosuka | Japan |
| Yokkaichi | Japan |

1. List the names and country codes of every country with Elizabeth II as its Head of State. You will need to fix the mistake first!

SELECT HeadOfState,

Name,

Code

FROM country

WHERE HeadOfState="Elisabeth II";

Answer=

|  |  |  |
| --- | --- | --- |
| Elisabeth II | Anguilla | AIA |
| Elisabeth II | Antigua and Barbuda | ATG |
| Elisabeth II | Australia | AUS |
| Elisabeth II | Bahamas | BHS |
| Elisabeth II | Belize | BLZ |
| Elisabeth II | Bermuda | BMU |
| Elisabeth II | Barbados | BRB |
| Elisabeth II | Canada | CAN |
| Elisabeth II | Cocos (Keeling) Islands | CCK |
| Elisabeth II | Cook Islands | COK |
| Elisabeth II | Christmas Island | CXR |
| Elisabeth II | Cayman Islands | CYM |
| Elisabeth II | Falkland Islands | FLK |
| Elisabeth II | United Kingdom | GBR |
| Elisabeth II | Gibraltar | GIB |
| Elisabeth II | Grenada | GRD |
| Elisabeth II | Heard Island and McDonald Islands | HMD |
| Elisabeth II | British Indian Ocean Territory | IOT |
| Elisabeth II | Jamaica | JAM |
| Elisabeth II | Saint Kitts and Nevis | KNA |
| Elisabeth II | Saint Lucia | LCA |
| Elisabeth II | Montserrat | MSR |
| Elisabeth II | Norfolk Island | NFK |
| Elisabeth II | Niue | NIU |
| Elisabeth II | New Zealand | NZL |
| Elisabeth II | Pitcairn | PCN |
| Elisabeth II | Papua New Guinea | PNG |
| Elisabeth II | South Georgia and the South Sandwich Islands | SGS |
| Elisabeth II | Saint Helena | SHN |
| Elisabeth II | Solomon Islands | SLB |
| Elisabeth II | Turks and Caicos Islands | TCA |
| Elisabeth II | Tokelau | TKL |
| Elisabeth II | Tuvalu | TUV |
| Elisabeth II | Saint Vincent and the Grenadines | VCT |
| Elisabeth II | Virgin Islands, British | VGB |

1. List the top ten countries with the smallest population-to-area ratio. Discard any countries with a ratio of 0

SELECT

SurfaceArea,

Population,

SurfaceArea/Population,

country.Name

FROM country

WHERE SurfaceArea/Population >0

ORDER BY 3 ASC

LIMIT 10;

Answer =

|  |  |  |  |
| --- | --- | --- | --- |
| 18.00 | 473000 | 0.000038 | Macao |
| 1.50 | 34000 | 0.000044 | Monaco |
| 1075.00 | 6782000 | 0.000159 | Hong Kong |
| 618.00 | 3567000 | 0.000173 | Singapore |
| 6.00 | 25000 | 0.000240 | Gibraltar |
| 0.40 | 1000 | 0.000400 | Holy See (Vatican City State) |
| 53.00 | 65000 | 0.000815 | Bermuda |
| 316.00 | 380200 | 0.000831 | Malta |
| 298.00 | 286000 | 0.001042 | Maldives |
| 143998.00 | 129155000 | 0.001115 | Bangladesh |

1. List every unique world language.

SELECT DISTINCT(language)

FROM countrylanguage;

1. List the names and GNP of the world's top 10 richest countries.

SELECT Name,

GNP

FROM country

ORDER BY GNP DESC

LIMIT 10;

Answer=

|  |  |
| --- | --- |
| United States | 8510700.00 |
| Japan | 3787042.00 |
| Germany | 2133367.00 |
| France | 1424285.00 |
| United Kingdom | 1378330.00 |
| Italy | 1161755.00 |
| China | 982268.00 |
| Brazil | 776739.00 |
| Canada | 598862.00 |
| Spain | 553233.00 |

1. List the names of, and number of languages spoken by, the top ten most multilingual countries.

SELECT COUNT(Language),

country.Name

FROM countrylanguage

JOIN country ON CountryCode=Code

GROUP BY country.Name

ORDER BY 1 DESC

LIMIT 10;

**Answer=**

|  |  |
| --- | --- |
| **12** | **China** |
| **12** | **India** |
| **12** | **Canada** |
| **12** | **United States** |
| **12** | **Russian Federation** |
| **11** | **Tanzania** |
| **11** | **South Africa** |
| **10** | **Nigeria** |
| **10** | **Iran** |
| **10** | **Kenya** |

1. List every country where over 50% of its population can speak German.

SELECT Language,

Percentage,

country.name

FROM countrylanguage

JOIN country ON Countrycode=Code

WHERE Percentage >=50 AND Language="German";

Answer=

|  |  |  |
| --- | --- | --- |
| German | 92.0 | Austria |
| German | 63.6 | Switzerland |
| German | 91.3 | Germany |
| German | 89.0 | Liechtenstein |

1. Which country has the worst life expectancy? Discard zero or null values.

SELECT LifeExpectancy,

Name

FROM country

WHERE LifeExpectancy IS NOT NULL

ORDER BY LifeExpectancy ASC

LIMIT 1;

Answer=Zambia 37.2

1. List the top three most common government forms.

SELECT GovernmentForm,

COUNT(GovernmentForm)

FROM country

GROUP BY 1

ORDER BY COUNT(GovernmentForm) DESC

LIMIT 3;

Answer=

|  |  |
| --- | --- |
| Republic | 122 |
| Constitutional Monarchy | 29 |
| Federal Republic | 15 |

1. How many countries have gained independence since records began?

SELECT COUNT(Name)

FROM country

WHERE IndepYear IS NOT NULL;

Answer=92