**PUNTO UNO**

**Explorando**

1. **Navegador:** Puedo ocultar las etiquetas hijas de una etiqueta padre específica, ademas el documento es más legible

**Editor:** se puede editar el documento XML.

1. De la etiqueta raíz COUNTRIES se despliega una etiqueta hija llamada COUNTRY de la cual se conoce el nombre, población y área. De esta se despliega dos etiquetas hijas, la primera llamada LANGUAGE de la cual se conoce el porcentaje y el nombre del lenguaje, y la segunda llamada CITY de esta se conoce el nombre y la población.
2. **CONSULTAS INICIALES**

* ¿Cuántos habitantes tiene Colombia?

countries/country[@name = "Colombia"]/@population

Attribute='population=36813160'

* ¿Cuáles es el nombre de las principales ciudades de Colombia?

countries/country[@name = "Colombia"]/city/name

Element='<name>Medellin</name>'

Element='<name>Barranquilla</name>'

Element='<name>Bogota</name>'

Element='<name>Cali</name>'

* ¿Qué idiomas se hablan en Colombia?

countries/country[@name = "Colombia"]/language/text()

Text='Spanish'

* ¿Qué se conoce de Venezuela? [a. toda la información] [b. todos los atributos] [c. todas la etiquetas]

1. countries/country[@name = "Venezuela"]

Element='<country area="912050" name="Venezuela" population="21983188">

<city>

<name>Maracaibo</name>

<population>1249670</population>

</city>

<city>

<name>Caracas</name>

<population>1822465</population>

</city>

</country>'

1. countries/country[@name = "Venezuela"]/@\*

Attribute='area=912050'

Attribute='name=Venezuela'

Attribute='population=21983188'

1. countries/country[@name = "Venezuela"]/\*

Element='<city>

<name>Maracaibo</name>

<population>1249670</population>

</city>'

Element='<city>

<name>Caracas</name>

<population>1822465</population>

</city>'

* ¿Cuáles paises tienen más de cinco ciudades importantes?

countries/country[count(city)>5]/@name

Attribute='name=Brazil'

Attribute='name=China'

Attribute='name=India'

Attribute='name=Indonesia'

Attribute='name=Japan'

Attribute='name=Pakistan'

Attribute='name=Russia'

Attribute='name=South Korea'

Attribute='name=United States'

* ¿Cuáles paises tienen más de 500 millones de habitantes?

countries/country[@population >500000000]/@name

Attribute='name=China'

Attribute='name=India'

* ¿En qué países se habla español?

countries/country[language/text() = "Spanish"]/@name

Attribute='name=Chile'

Attribute='name=Colombia'

Attribute='name=Cuba'

Attribute='name=Dominican Republic'

Attribute='name=Guatemala'

Attribute='name=Nicaragua'

* ¿En qué paises se habla únicamente español?

countries/country[count(language)=1 and language/text() = "Spanish"]/@name

Attribute='name=Chile'

Attribute='name=Colombia'

Attribute='name=Cuba'

Attribute='name=Dominican Republic'

Attribute='name=Nicaragua'

* ¿En qué países no existe un lenguage mayoritario? (Lo conocen más del 50%)

countries/country[count(language)>=1 and not(language[not(@percentage <= 50)])]/@name

Attribute='name=Afghanistan'

Attribute='name=Haiti'

Attribute='name=India'

Attribute='name=Kazakstan'

Attribute='name=Liberia'

Attribute='name=Macau'

Attribute='name=Pakistan'

Attribute='name=Panama'

Attribute='name=Papua New Guinea'

Attribute='name=Solomon Islands'

Attribute='name=Spain'

* ¿De cuáles países se conocen sus ciudades y sus lenguas?

countries/country[count(language)>=1 and count(city)>=1]/@name

Attribute='name=Armenia'

Attribute='name=Australia'

Attribute='name=Austria'

Attribute='name=Azerbaijan'

Attribute='name=Bulgaria'

Attribute='name=Burma'

Attribute='name=Chile'

Attribute='name=Colombia'

Attribute='name=Cuba'

Attribute='name=Dominican Republic'

Attribute='name=France'

Attribute='name=Georgia'

Attribute='name=Germany'

Attribute='name=Hungary'

Attribute='name=India'

Attribute='name=Iran'

Attribute='name=Japan'

Attribute='name=Kazakstan'

Attribute='name=Netherlands'

Attribute='name=Nicaragua'

Attribute='name=North Korea'

Attribute='name=Pakistan'

Attribute='name=Poland'

Attribute='name=Russia'

Attribute='name=Saudi Arabia'

Attribute='name=Serbia and Montenegro'

Attribute='name=Spain'

Attribute='name=Uzbekistan'

* ¿De cuáles países no se conocen sino sus datos básicos nombre, area y población?

countries/country[count(language)=0 and count(city)=0]/@name

Attribute='name=Albania'

Attribute='name=American Samoa'

Attribute='name=Andorra'

Attribute='name=Angola'

Attribute='name=Aruba'

Attribute='name=Bahamas'

Attribute='name=Bahrain'

Attribute='name=Belize'

Attribute='name=Benin'

Attribute='name=Bhutan'

Attribute='name=Bolivia'

Attribute='name=Botswana'

Attribute='name=Brunei'

Attribute='name=Burkina Faso'

Attribute='name=Burundi'

Attribute='name=Cambodia'

Attribute='name=Cameroon'

Attribute='name=Cape Verde'

Attribute='name=Central African Republic'

Attribute='name=Chad'

Attribute='name=Comoros'

Attribute='name=Congo'

Attribute='name=Cook Islands'

Attribute='name=Costa Rica'

Attribute='name=Cote dIvoire'

Attribute='name=Cyprus'

Attribute='name=Djibouti'

Attribute='name=Dominica'

Attribute='name=El Salvador'

Attribute='name=Equatorial Guinea'

Attribute='name=Eritrea'

Attribute='name=Estonia'

Attribute='name=Faroe Islands'

Attribute='name=Fiji'

Attribute='name=French Polynesia'

Attribute='name=Gabon'

Attribute='name=Gambia'

Attribute='name=Ghana'

Attribute='name=Gibraltar'

Attribute='name=Greece'

Attribute='name=Greenland'

Attribute='name=Grenada'

Attribute='name=Guam'

Attribute='name=Guernsey'

Attribute='name=Guinea-Bissau'

Attribute='name=Guyana'

Attribute='name=Holy See'

Attribute='name=Honduras'

Attribute='name=Ireland'

Attribute='name=Israel'

Attribute='name=Jamaica'

Attribute='name=Jersey'

Attribute='name=Jordan'

Attribute='name=Kiribati'

Attribute='name=Kuwait'

Attribute='name=Kyrgyzstan'

Attribute='name=Laos'

Attribute='name=Latvia'

Attribute='name=Lebanon'

Attribute='name=Lesotho'

Attribute='name=Libya'

Attribute='name=Liechtenstein'

Attribute='name=Lithuania'

Attribute='name=Luxembourg'

Attribute='name=Malawi'

Attribute='name=Maldives'

Attribute='name=Malta'

Attribute='name=Man'

Attribute='name=Marshall Islands'

Attribute='name=Martinique'

Attribute='name=Mauritania'

Attribute='name=Mauritius'

Attribute='name=Mayotte'

Attribute='name=Micronesia'

Attribute='name=Moldova'

Attribute='name=Monaco'

Attribute='name=Nauru'

Attribute='name=Netherlands Antilles'

Attribute='name=New Caledonia'

Attribute='name=New Zealand'

Attribute='name=Niger'

Attribute='name=Niue'

Attribute='name=Norfolk Island'

Attribute='name=Northern Mariana Islands'

Attribute='name=Oman'

Attribute='name=Palau'

Attribute='name=Paraguay'

Attribute='name=Pitcairn Islands'

Attribute='name=Puerto Rico'

Attribute='name=Qatar'

Attribute='name=Reunion'

Attribute='name=Rwanda'

Attribute='name=Saint Lucia'

Attribute='name=Saint Vincent and the Grenadines'

Attribute='name=Seychelles'

Attribute='name=Sierra Leone'

Attribute='name=Slovakia'

Attribute='name=Somalia'

Attribute='name=South Africa'

Attribute='name=Suriname'

Attribute='name=Svalbard'

Attribute='name=Swaziland'

Attribute='name=Tajikistan'

Attribute='name=Togo'

Attribute='name=Tonga'

Attribute='name=Trinidad and Tobago'

Attribute='name=Tunisia'

Attribute='name=Tuvalu'

Attribute='name=Uganda'

Attribute='name=United Arab Emirates'

Attribute='name=Vanuatu'

Attribute='name=Virgin Islands'

Attribute='name=Wallis and Futuna'

Attribute='name=Western Sahara'

Attribute='name=Western Samoa'

Attribute='name=Zambia'

Attribute='name=Zimbabwe'

* ¿De cuántos países se tiene información?

countries/count(country[@name])

Int64='231'

* ¿En qué países se hablan más de cinco lenguas?

countries/country[count(language)>5]/@name

Attribute='name=Iran'

Attribute='name=Pakistan'

* ¿Cuáles países tienen área superior al promedio?

countries/country[@area > avg(/countries/country/@area)]/@name

Attribute='name=Afghanistan'

Attribute='name=Algeria'

Attribute='name=Angola'

Attribute='name=Argentina'

Attribute='name=Australia'

Attribute='name=Bolivia'

Attribute='name=Botswana'

Attribute='name=Brazil'

Attribute='name=Burma'

Attribute='name=Canada'

Attribute='name=Central African Republic'

Attribute='name=Chad'

Attribute='name=Chile'

Attribute='name=China'

Attribute='name=Colombia'

Attribute='name=Egypt'

Attribute='name=Ethiopia'

Attribute='name=Greenland'

Attribute='name=India'

Attribute='name=Indonesia'

Attribute='name=Iran'

Attribute='name=Kazakstan'

Attribute='name=Libya'

Attribute='name=Madagascar'

Attribute='name=Mali'

Attribute='name=Mauritania'

Attribute='name=Mexico'

Attribute='name=Mongolia'

Attribute='name=Mozambique'

Attribute='name=Namibia'

Attribute='name=Niger'

Attribute='name=Nigeria'

Attribute='name=Pakistan'

Attribute='name=Peru'

Attribute='name=Russia'

Attribute='name=Saudi Arabia'

Attribute='name=Somalia'

Attribute='name=South Africa'

Attribute='name=Sudan'

Attribute='name=Tanzania'

Attribute='name=Turkey'

Attribute='name=Ukraine'

Attribute='name=United States'

Attribute='name=Venezuela'

Attribute='name=Zaire'

Attribute='name=Zambia'

* ¿Cuál es el país de mayor población?

countries/country[@population = max(/countries/country/@population)]/@name

Attribute='name=China'

1. **Consultas quiz Standford**

* Return the area of Mongolia.

countries/country[@name = "Mongolia"]/@area

* Return the names of all cities that have the same name as the country in which they are located.

countries/country[@name = child::city/name/text()]/@name

* Return the names of all countries where over 50% of the population speaks German

countries/country[language[text() = "German"]/@percentage > 50]/@name

* Return the name of the country with the highest population.

countries/country[@population = max(/countries/country/@population)]/@name

* Return the names of all countries that have at least three cities with population greater than 3 million.

countries/country[count(city[population/text() > 3000000])>=3]/@name

* Return the names of French-speaking and German-speaking countries.

countries/country[language/text() = "German" and language/text() = "French"]/@name

* Return the names of all countries containing a city such that some other country has a city of the same name.
* Return the languages spoken in countries where Russian is spoken.

countries/country[language/text()="Russian"]/language[not(text() = "Russian")]/text()

* Return all country name where the country textually contains a language spoken in the country

countries/country/language[contains(parent::country/@name,text())]

* Return all countries that have at least one city with population greater than 7 million.

countries/country[city/population > 7000000]/@name

* Return all countries where at least one language is listed, but the total percentage for all listed languages is less than 90%.

countries/country[language and count(language[@percentage < 90]) = count(language)]/@name

* Return all countries where at least one language is listed, and every listed language is spoken by less than 20% of the population.

countries/country[language and count(language[@percentage < 20]) = count(language)]/@name

* Find all situations where one country's most popular language is another country's least popular, and both countries list more than one language.

countries/country[language and max(language/@percentage) =min( /countries/country/language/@percentage)]/@name

1. **Consultas propias**

* Toda la información de los países

countries/\*

* Toda la informacion de las ciudades

Countries/country/\*

* Que area tiene panama?

countries/country[@name = 'Panama']/@area

* Paises que tienen un área mayor a 300000

countries/country[@area > 300000]/@name

* Paises que no tienen ciudades

countries/country[count(city)=0]/@name

1. **Esquema**

<?xml version = "1.0"?>

<!-- detalles -->

<!--Pais solo puede tener ciudad y lenguaje -->

<!--Los países deben tener el nombre, la poblacion y el area -->

<!--Las ciudades deben tener su nombre y la poblacion -->

<!--El nombre de las ciudades es un texto -->

<!--La poblacion de las ciudades es un texto -->

<!--El lenguaje debe contener el porcentaje -->

<!--El nombre del lenguaje es un texto -->

<!DOCTYPE countries[

<!ELEMENT country (city,language)\*>

<!ELEMENT language (#PCDATA)>

<!ELEMENT city (name,population)>

<!ELEMENT name (#PCDATA)>

<!ELEMENT population (#PCDATA)>

<!ATTLIST country name CDATA #REQUIRED>

<!ATTLIST country population CDATA #REQUIRED>

<!ATTLIST country area CDATA #REQUIRED>

<!ATTLIST language percentage CDATA #REQUIRED>

]>