



1. CLASSES AND THEIR HIERARCHY:

Continent

Country

Capital

City

Landmark

GovernmentType

SurroundingWater

Person

Citizen

Immigrant

Native

Ruler

2. OBJECT PROPERTIES:

- [hasCity](#)
- [hasGovernmentType](#)
- [hasImmigrants](#)
- [hasLandmark](#)
- [hasNativeResidents](#)
- [hasRuler](#)
- [isCapitalOf](#)
- [isInContinent](#)
- [isSurroundedBy](#)

Ontologies Classes Object Properties Data Properties Annotation Properties Individuals Datatypes Clouds

Object Property: [hasCity](#)

Domains (1)

- Country

Ranges (1)

- City

Usage (7)

- Australia [hasCity](#) Sydney
- China [hasCity](#) Shanghai
- Egypt [hasCity](#) Giza
- France [hasCity](#) Marseille
- Germany [hasCity](#) Hamburg
- India [hasCity](#) Mumbai
- United_States [hasCity](#) New_York

Ontologies Classes Object Properties Data Properties Annotation Properties Individuals Datatypes Clouds

Object Property: [hasGovernmentType](#)

Domains (1)

- Country

Ranges (1)

- GovernmentType

Usage (8)

- Country \equiv [hasGovernmentType](#) exactly 1 GovernmentType
- Australia [hasGovernmentType](#) Federal_Parliamentary_Constitutional_Monarchy
- China [hasGovernmentType](#) Communist_Party-led_State
- Egypt [hasGovernmentType](#) Republic
- France [hasGovernmentType](#) Semi-Presidential_Republic
- Germany [hasGovernmentType](#) Federal_Republic
- India [hasGovernmentType](#) Federal_Parliamentary_Democratic_Republic
- United_States [hasGovernmentType](#) Democracy

Object Property: hasImmigrants

Domains (1)

- Country

Ranges (1)

- Immigrant

Usage (7)

- Australia **hasImmigrants** 300
- China **hasImmigrants** 450
- Egypt **hasImmigrants** 700
- France **hasImmigrants** 250
- Germany **hasImmigrants** 102
- India **hasImmigrants** 450
- United_States **hasImmigrants** 700

Object Property: hasLandmark

Domains (1)

- City

Ranges (1)

- Landmark

Usage (8)

- City \equiv **hasLandmark** **max** 3 Landmark
- Giza **hasLandmark** The_Great_Pyramids
- Hamburg **hasLandmark** Brandenburg_Gate
- Marseille **hasLandmark** Eiffel_Tower
- Mumbai **hasLandmark** Taj_Mahal
- New_York **hasLandmark** Statue_of_Liberty
- Shanghai **hasLandmark** Great_Wall_of_China
- Sydney **hasLandmark** Sydney_Opera_House

Ontologies Classes Object Properties Data Properties Annotation Properties Individuals Datatypes Clouds

Object Property: hasNativeResidents

Domains (1)

- Country

Ranges (1)

- Native

Usage (7)

- Australia **hasNativeResidents** 600000
- China **hasNativeResidents** 900000
- Egypt **hasNativeResidents** 5462700
- France **hasNativeResidents** 400000
- Germany **hasNativeResidents** 10000000
- India **hasNativeResidents** 670000
- United_States **hasNativeResidents** 5000000

Ontologies Classes Object Properties Data Properties Annotation Properties Individuals Datatypes Clouds

Object Property: hasRuler

Domains (1)

- Country

Ranges (1)

- Ruler

Usage (7)

- Country **hasRuler** exactly 1 Ruler
- Australia **hasRuler** Elizabeth_II
- China **hasRuler** Xi_Jinping
- Egypt **hasRuler** Abdel_Fattah_el-Sisi
- Germany **hasRuler** Angela_Merkel
- India **hasRuler** Ram_Nath_Kovind
- United_States **hasRuler** Joe_Biden

Object Property: isCapitalOf

Domains (1)

- Capital

Ranges (1)

- Country

Usage (8)

- Capital \equiv isCapitalOf exactly 1 Country
- Beijing isCapitalOf China
- Berlin isCapitalOf Germany
- Cairo isCapitalOf Egypt
- Canberra isCapitalOf Australia
- New_Delhi isCapitalOf India
- Paris isCapitalOf France
- Washington_DC isCapitalOf United_States

Object Property: isInContinent

Domains (1)

- Country

Usage (8)

- Country \equiv isInContinent exactly 1 Continent
- Australia isInContinent Oceania
- China isInContinent Asia
- Egypt isInContinent Africa
- France isInContinent Europe
- Germany isInContinent Europe
- India isInContinent Asia
- United_States isInContinent North_America

Ontologies Classes Object Properties Data Properties Annotation Properties Individuals Datatypes Clouds

Object Property: isSurroundedBy

Domains (1)

- Country

Ranges (1)

- SurroundingWater

Usage (8)

- Country \equiv isSurroundedBy max 4 SurroundingWater
- Australia isSurroundedBy Pacific_Ocean
- China isSurroundedBy Yellow_Sea
- Egypt isSurroundedBy Red_Sea
- France isSurroundedBy Mediterranean_Sea
- Germany isSurroundedBy North_Sea
- India isSurroundedBy Arabian_Sea
- United_States isSurroundedBy Atlantic_Ocean

3. OBJECT PROPERTIES CONSTRAINTS:

each country has exactly 1 ruler

each city has max landmarks of 3

each country is in exactly 1 continent

each capital is capital of exactly 1 country

each country is surrounded max by 4 water bodies

each country has exactly 1 gov type

4. DATA PROPERTIES

Ontologies Classes Object Properties Data Properties Annotation Properties Individuals
Datatypes Clouds

Data Property: address

Domains (1)

- Landmark

Ranges (1)

- xsd:string

Usage (7)

- Brandenburg_Gate **address** "Brandenburger Tor
Pariser Platz
10117 Berlin
Germany"(xsd:string)
- Eiffel_Tower **address** "Champ de Mars, 5 Avenue Anatole France, 75007 Paris,
France"(xsd:string)
- Great_Wall_of_China **address** "Huairou, China"(xsd:string)
- Statue_of_Liberty **address** "Liberty Island, New York, NY 10004, United States"
(xsd:string)
- Sydney_Opera_House **address** "Bennelong Point, Sydney NSW 2000, Australia"
(xsd:string)
- Taj_Mahal **address** "Dharmapuri, Forest Colony
Tajganj, Agra, Uttar Pradesh 282001"(xsd:string)
- The_Great_Pyramids **address** "Al Haram, Nazlet El-Semman
Giza Governorate
Egypt"(xsd:string)

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Data Property: hasYearBuilt

Domains (1)

- Landmark

Ranges (1)

- xsd:string

Usage (6)

- Brandenburg_Gate **hasYearBuilt** "1791 CE"(xsd:string)
- Eiffel_Tower **hasYearBuilt** "1889 CE"(xsd:string)
- Great_Wall_of_China **hasYearBuilt** "7th century BCE"(xsd:string)
- Sydney_Opera_House **hasYearBuilt** "1973 CE"(xsd:string)
- Taj_Mahal **hasYearBuilt** "1653 CE"(xsd:string)
- The_Great_Pyramids **hasYearBuilt** "2560 BCE"(xsd:string)

Data Property: rulertype

Domains (1)

- Ruler

Ranges (1)

- xsd:string

Usage (6)

- Abdel_Fattah_el-Sisi **rulertype** "President"(xsd:string)
- Angela_Merkel **rulertype** "Chancellor"(xsd:string)
- Emmanuel_Macron **rulertype** "President"(xsd:string)
- Joe_Biden **rulertype** "President"(xsd:string)
- Ram_Nath_Kovind **rulertype** "President"(xsd:string)
- Xi_Jinping **rulertype** "President"(xsd:string)

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Data Property: watertype

Domains (1)

- SurroundingWater

Ranges (1)

- xsd:string

Usage (7)

- Arabian_Sea **watertype** "sea"(xsd:string)
- Atlantic_Ocean **watertype** "ocean"(xsd:string)
- Mediterranean_Sea **watertype** "sea"(xsd:string)
- North_Sea **watertype** "sea"(xsd:string)
- Pacific_Ocean **watertype** "ocean"(xsd:string)
- Red_Sea **watertype** "sea"(xsd:string)
- Yellow_Sea **watertype** "sea"(xsd:string)

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