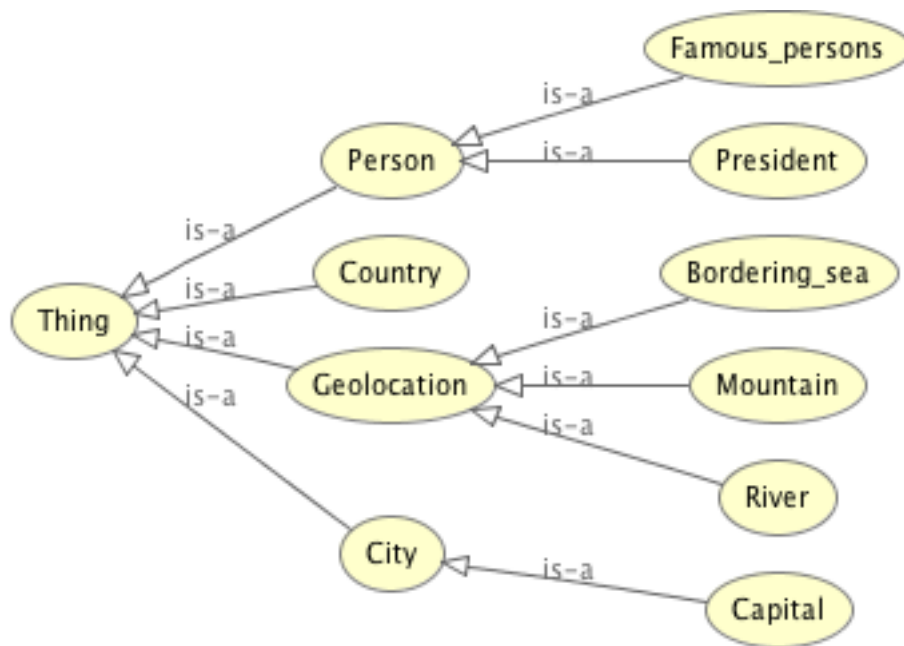


Central America ontology

Ontology with countries in central America.



Object properties:

- Country has a capital
- Sea borders a country
- River is located_in a country

A few instance examples are:

- Salma Hayek is a famous_person born_in Mexico
- The country Nicaragua has_capital Managua
- The country Mexico borders the Gulf of Mexico

Object property – Class – Instance

Queries

Prefixes used for all queries

PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>

PREFIX owl: <http://www.w3.org/2002/07/owl#>

PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>

PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>

PREFIX : <http://www.semanticweb.org/chrispool/ontologies/2015/8/central_america#>

1 - Display all countries and their capitals

SELECT ?Country ?Capital

WHERE { ?Country :has_capital ?Capital . }

The screenshot shows a web browser window with a SPARQL query interface. The browser's address bar shows the URL: http://www.semanticweb.org/chrispool/ontologies/2015/8/central_america. The interface includes a search bar, tabs for 'Active Ontology', 'Entities', 'Individuals by class', and 'SPARQL Query'. The 'SPARQL Query' tab is active, displaying the following query:

```
SPARQL query:
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX : <http://www.semanticweb.org/chrispool/ontologies/2015/8/central_america#>

SELECT ?Country ?Capital
WHERE { ?Country :has_capital ?Capital . }
```

Below the query, the results are displayed in a table with two columns: 'Country' and 'Capital'.

Country	Capital
Nicaragua	Managua
Panama	Panama
Costa_Rica	San_Jose
El_Salvador	San_salvador
Honduras	Tegucigalpa
Belize	Belize_City
Guatemala	Guatemala
Mexico	Mexico_City

At the bottom of the interface, there is an 'Execute' button and a status bar that reads 'Reasoner state out of sync with active ontology' and 'Show Inferences'.

2 - Display all capitals of countries bordering the Caribbean sea

```
SELECT ?Country ?Capital
WHERE {
    :Caribbean :borders ?Country .
    ?Country :has_capital ?Capital .
}
```

The screenshot shows a web browser window with a SPARQL query interface. The query is executed, and the results are displayed in a table with two columns: 'Country' and 'Capital'.

Country	Capital
Nicaragua	Managua
Panama	Panama
Costa_Rica	San_Jose
El_Salvador	San_salvador
Honduras	Tegucigalpa
Belize	Belize_City
Guatemala	Guatemala
Mexico	Mexico_City

At the bottom of the interface, there is an 'Execute' button and a status message: 'Reasoner state out of sync with active ontology' with a checkbox for 'Show Inferences'.

3 - Display all geolocations (only geolocations type)

```
SELECT ?entity
WHERE {
  ?entity rdf:type ?type.
  ?type rdfs:subClassOf* :Geolocation.
}
```

The screenshot shows a web browser window with the URL `central_america (http://www.semanticweb.org/chrispool/ontologies/2015/8/central_america)`. The browser has tabs for "Active Ontology", "Entities", "Individuals by class", and "SPARQL Query". The "SPARQL Query" tab is active, displaying the following query:

```
SPARQL query:
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX : <http://www.semanticweb.org/chrispool/ontologies/2015/8/central_america#>

SELECT ?entity
WHERE {
  ?entity rdf:type ?type.
  ?type rdfs:subClassOf* :Geolocation.
}
```

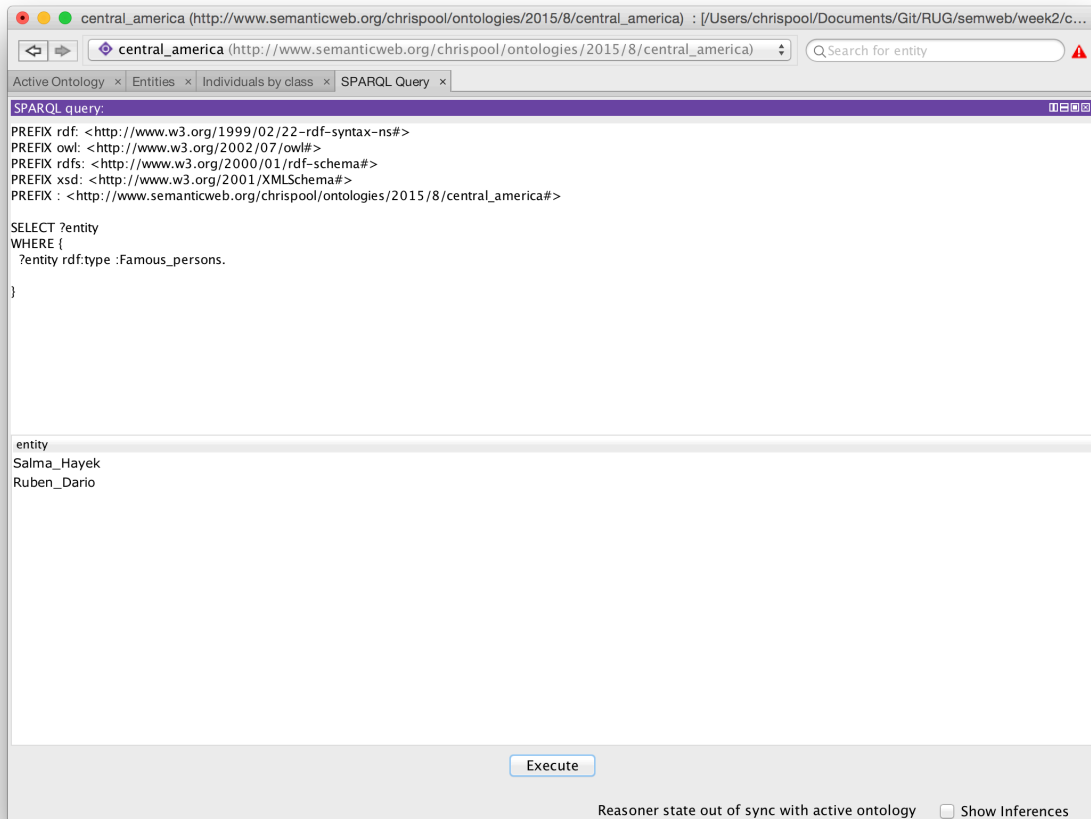
Below the query, the results are displayed under the heading "entity". The results are:

- Caribbean
- Pacific_ocean
- Gulf_of_Mexico

At the bottom of the interface, there is an "Execute" button and a status message: "Reasoner state out of sync with active ontology". There is also a checkbox labeled "Show Inferences" which is currently unchecked.

4 - Display all persons that are famous persons (subclass of persons)

```
SELECT ?entity
WHERE {
  ?entity rdf:type :Famous_person.
}
```



5 - Display cities that contain the combination Au

```
SELECT ?capital
WHERE { ?country :has_capital ?capital
FILTER regex(?capital,'^ua','i')
}
```

The screenshot shows a web browser window with the URL `central_america (http://www.semanticweb.org/chrispool/ontologies/2015/8/central_america)`. The browser has tabs for 'Active Ontology', 'Entities', 'Individuals by class', and 'SPARQL Query'. The 'SPARQL Query' tab is active, displaying the following query:

```
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX owl: <http://www.w3.org/2002/07/owl#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX xsd: <http://www.w3.org/2001/XMLSchema#>
PREFIX : <http://www.semanticweb.org/chrispool/ontologies/2015/8/central_america#>

SELECT ?capital
WHERE { ?country :has_capital ?capital
FILTER(regex(str(?capital), "ua", "i"))
}
```

Below the query, the results are displayed in a table with the following data:

capital
Managua
Guatemala

At the bottom of the interface, there is an 'Execute' button and a status bar that reads 'Reasoner state out of sync with active ontology' and 'Show Inferences'.