

TALLER No. 1**Razonamiento y Ontologías****Profesor:** Jaime Alberto Guzmán Luna

Contenido del taller:

1. Introducción al SPARQL
2. Razonamiento en consultas
3. SPARQL más que un lenguaje de consultas

CONSULTAS DE REFERENCIA**Consulta 1: select**

```
# George Washington's Namesakes
SELECT ?location
WHERE {
    ?person <http://www.w3.org/2000/01/rdf-schema#label>
        "George Washington"@en.
    ?location <http://dbpedia.org/property/namedFor> ?person
}
```

Consulta 2: Uso de * con SELECT

```
# George Washington's Namesakes
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX dbprop: <http://dbpedia.org/property/>
SELECT *
WHERE {
    ?person rdfs:label "George Washington"@en.
    ?location dbprop:namedFor ?person
}
```

Consulta 3: uso de ; en consulta

```
# George Washington's occupation(s), birthplace(s) and image(s)
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX dbo: <http://dbpedia.org/ontology/>
SELECT *
WHERE {
    ?person rdfs:label "George Washington"@en;
        dbo:birthPlace ?birthLoc
}
```

Consulta 4: order by

```
PREFIX : <http://dbpedia.org/resource/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> PREFIX
rdfs: <http://www.w3.org/2000/01/rdf-schema#> PREFIX dbo:
<http://dbpedia.org/ontology/>
SELECT ?author_name ?title FROM
<http://dbpedia.org/> WHERE {
    ?author rdf:type dbo:Writer .
    ?author rdfs:label ?author_name .
    ?author dbo:notableWork ?work .
    ?work rdfs:label ?title .
}
ORDER BY ASC (?author_name)
```

Consulta 5: OFFSET y LIMIT

```
PREFIX : <http://dbpedia.org/resource/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX dbo: <http://dbpedia.org/ontology/>
SELECT ?author_name ?title FROM <http://dbpedia.org/> WHERE {
  ?author rdf:type dbo:Writer .
  ?author rdfs:label ?author_name .
  ?author dbo:notableWork ?work .
  ?work rdfs:label ?title .
}
ORDER BY ASC (?author_name)
#Apply an offset to get next "element"
OFFSET 3
#Limit to 10 results
LIMIT 10
```

Consulta 6: DISTINCT

```
# George Washington's occupation(s), birthplace(s) and image(s)
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX dbo: <http://dbpedia.org/ontology/>
SELECT DISTINCT ?person
WHERE {
  ?person rdfs:label "George Washington"@en;
  dbo:birthPlace ?birthLoc
}
```

Consulta 7: RESTRICCIONES DE FILTRADO

```
PREFIX : <http://dbpedia.org/resource/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX dbo: <http://dbpedia.org/ontology/>
SELECT ?author_name ?title ?pages
FROM <http://dbpedia.org/>
WHERE {
  ?author rdf:type dbo:Writer .
  ?author rdfs:label ?author_name .
  ?author dbo:notableWork ?work .
  ?work dbo:numberOfPages ?pages
FILTER (?pages > 500) .
  ?work rdfs:label ?title .
} LIMIT 100
```

Consulta 8: RESTRICCIONES DE FILTRADO

Filtrar resultados solo para etiquetas en inglés

```
PREFIX : <http://dbpedia.org/resource/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX dbo: <http://dbpedia.org/ontology/>
SELECT ?author_name ?title ?pages FROM <http://dbpedia.org/> WHERE {
  ?author rdf:type dbo:Writer .
  ?author rdfs:label ?author_name
FILTER (LANG(?author_name)="en").
  ?author dbo:notableWork ?work .
  ?work dbo:numberOfPages ?pages
FILTER (?pages > 500) .
  ?work rdfs:label ?title
FILTER (LANG(?title)="en").
} LIMIT 100
```

Consulta 9: CONSULTAS FEDERADAS

```
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX db: <http://dbpedia.org/>
SELECT ?nombre WHERE {
  ?pais rdf:type dbo:Country .
  ?pais rdfs:label ?nombre .
  SERVICE <http://dbpedia.org/sparql> {
    SELECT ?nombre WHERE {
      ?pais rdf:type dbo:Country .
      ?pais rdfs:label ?nombre
      FILTER (lang(?nombre)='es')
    }
  }
} LIMIT 100
```

Consulta 10:Inferencia:Caso1 Error

```
PREFIX rel: <http://purl.org/vocab/relationship/>

SELECT *
FROM <urn:owl:inference:tests>
WHERE
{
  <http://dbpedia.org/resource/Elizabeth_Bowes-Lyon> rel:ancestorOf+ ?o.
}
}
```

Correcto

```
PREFIX rel: <http://purl.org/vocab/relationship/>

SELECT *
FROM <urn:owl:inference:tests>
WHERE
{
  <http://dbpedia.org/resource/Elizabeth_Bowes-Lyon> rel:ancestorOf+ ?o.
}
}
```

Consulta 11:Inferencia:Caso2

Error

```
PREFIX rel: <http://purl.org/vocab/relationship/>

SELECT *
FROM <urn:owl:inference:tests>
WHERE
{
  <http://dbpedia.org/resource/Elizabeth_II_of_the_United_Kingdom> rel:descendantOf ?o .
}
}
```

Correcto

```
PREFIX rel: <http://purl.org/vocab/relationship/>

SELECT *
FROM <urn:owl:inference:tests>
WHERE
{
  <http://dbpedia.org/resource/Elizabeth_II_of_the_United_Kingdom> rel:descendantOf|^rel:ancestorOf ?o .
}
}
```

Consulta 12:Protocolo SPARQL-Ejemplo

```
PREFIX : <http://dbpedia.org/resource/>
PREFIX rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
PREFIX rdfs: <http://www.w3.org/2000/01/rdf-schema#>
PREFIX dbo: <http://dbpedia.org/ontology/>
SELECT ?author_name ?title ?pages
FROM <http://dbpedia.org/> WHERE {
  ?author rdf:type dbo:Writer .
  ?author rdfs:label ?author_name
  FILTER (LANG(?author_name)="en").
  ?author dbo:notableWork ?work .
  ?work dbo:numberOfPages ?pages
  FILTER (?pages > 500) .
  ?work rdfs:label ?title
  FILTER (LANG(?title)="en").
} LIMIT 100
```