DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

COMPUTER SCİENCE

MSC

MODULE –

CME728_SEMANTİC WEB_1

Assaingemnet 1

“Write a SPARQL statement about Samsung Company”

Submitted to

Assist. Prof. Dr. Oğuzhan MENEMENCİOĞLU

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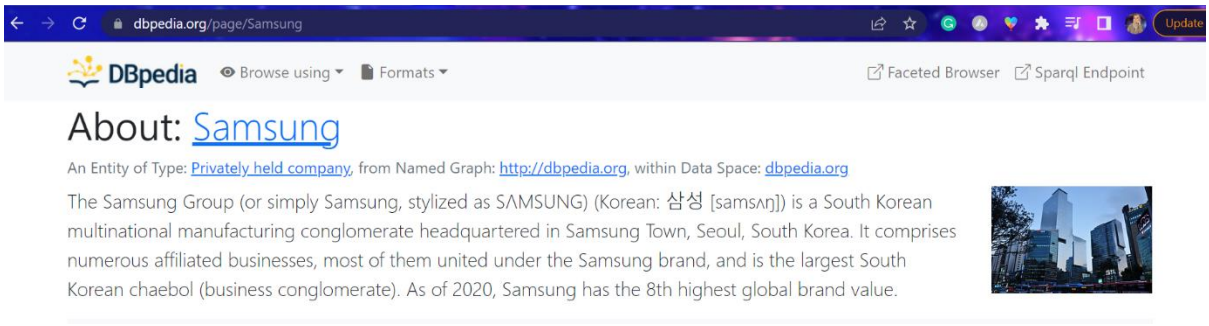
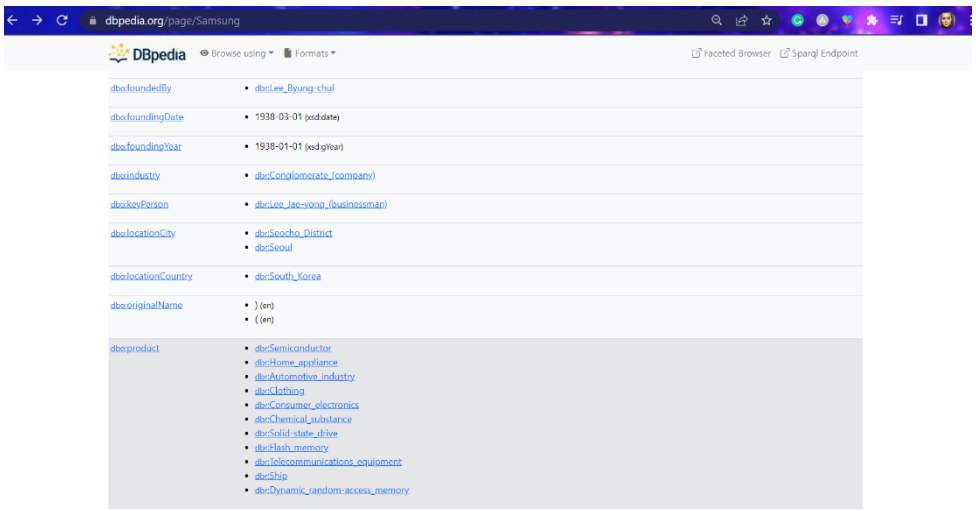
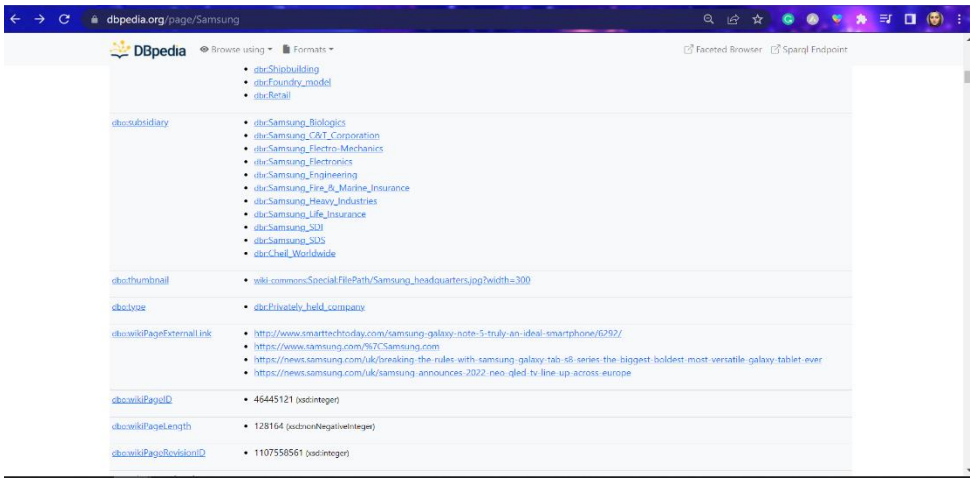
SEM1, 2022/23

Samsung Company

First of all, I was trying to search for domain that can help me to gather information from DBpedia about popular companies that make me to enjoy explore about it. Writing a SPARQL statement about Samsung Company helps me to gather some information related to the Samsung company. I tried to use different SPARQL queries about Samsung Company by using the filter, group by, count, join, option, and other functions in SQL with an explanation of the details





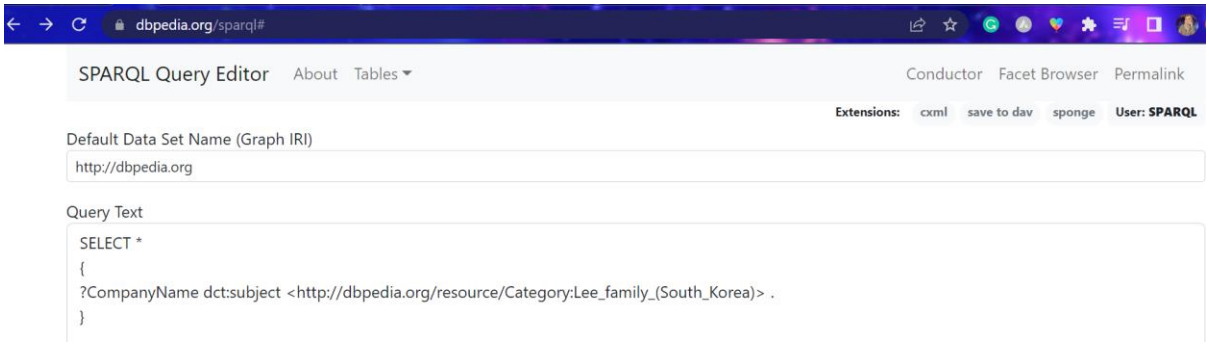


1) SELECT *

{

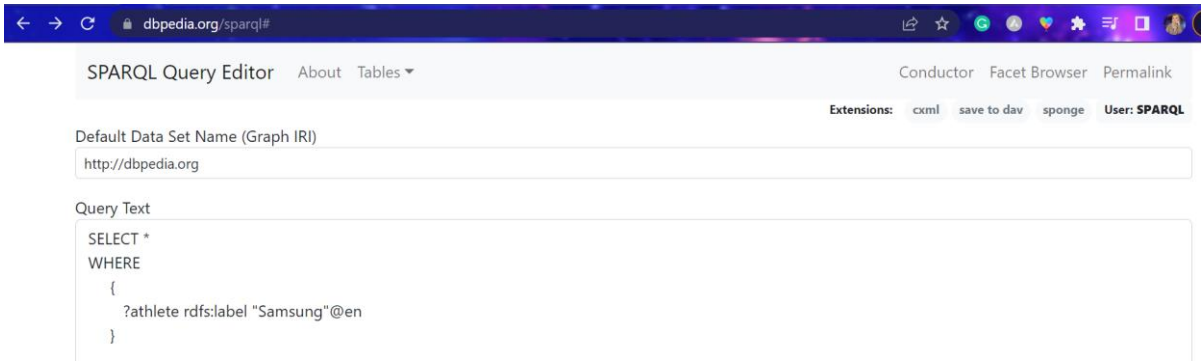
?CompanyName dct:subject <http://dbpedia.org/resource/Category:Lee_family_(South_Korea)> .

}



2) SELECT *

WHERE
{
?athlete rdfs:label "Samsung"@en
}



3) SELECT *

WHERE

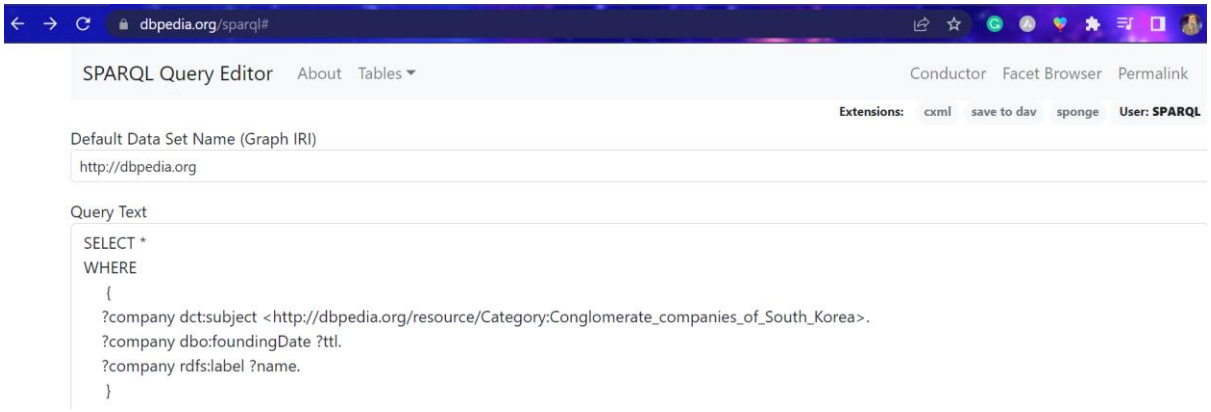
{

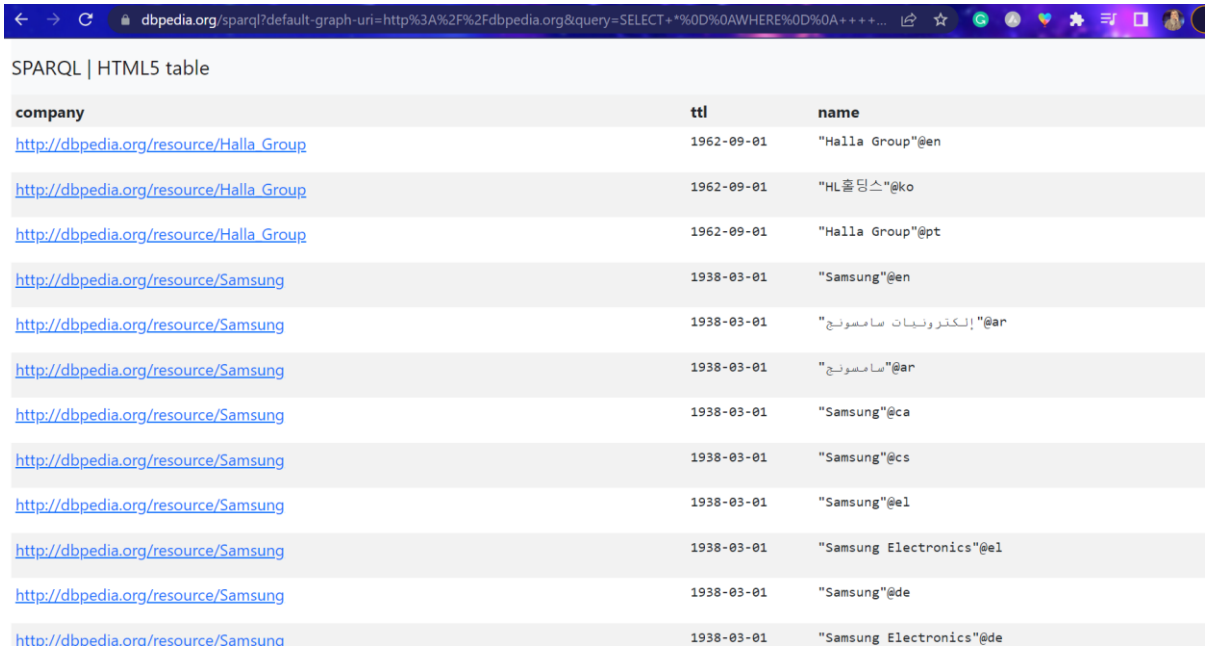
?company dct:subject <http://dbpedia.org/resource/Category:Conglomerate_companies_of_South_Korea>.

?company dbo:foundingDate ?ttl.

?company rdfs:label ?name.

}

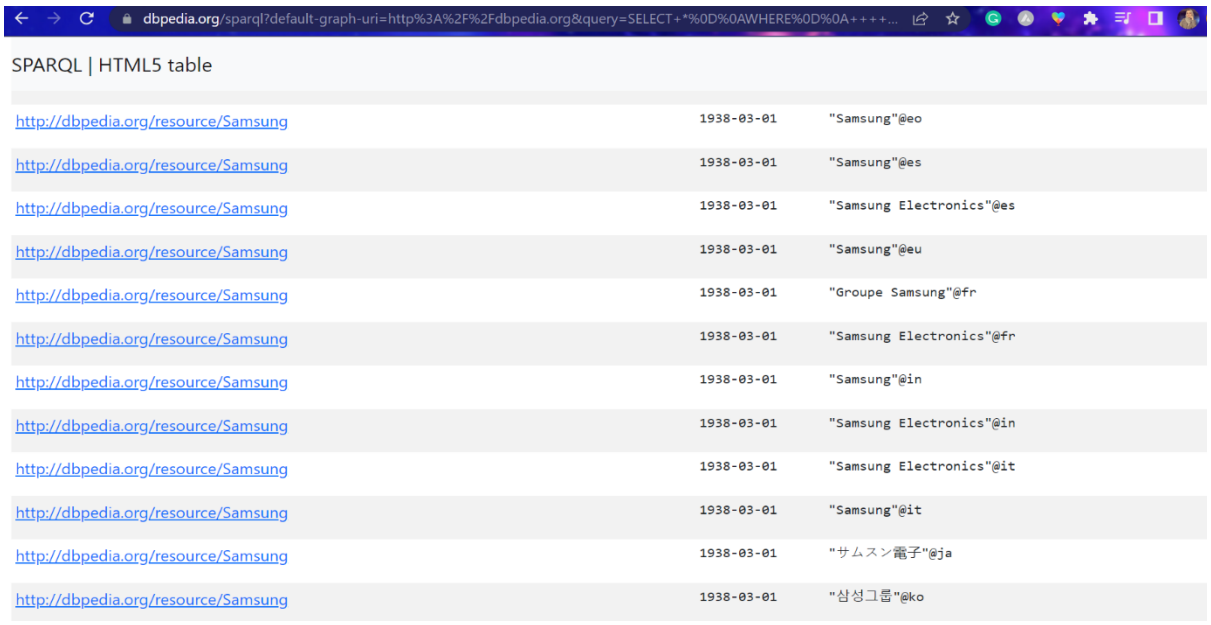




dbpedia.org/sparql?default-graph-uri=http%3A%2F%2Fdbpedia.org&query=SELECT+*%0D%0AWHERE%0D%0A+++...

SPARQL | HTML5 table

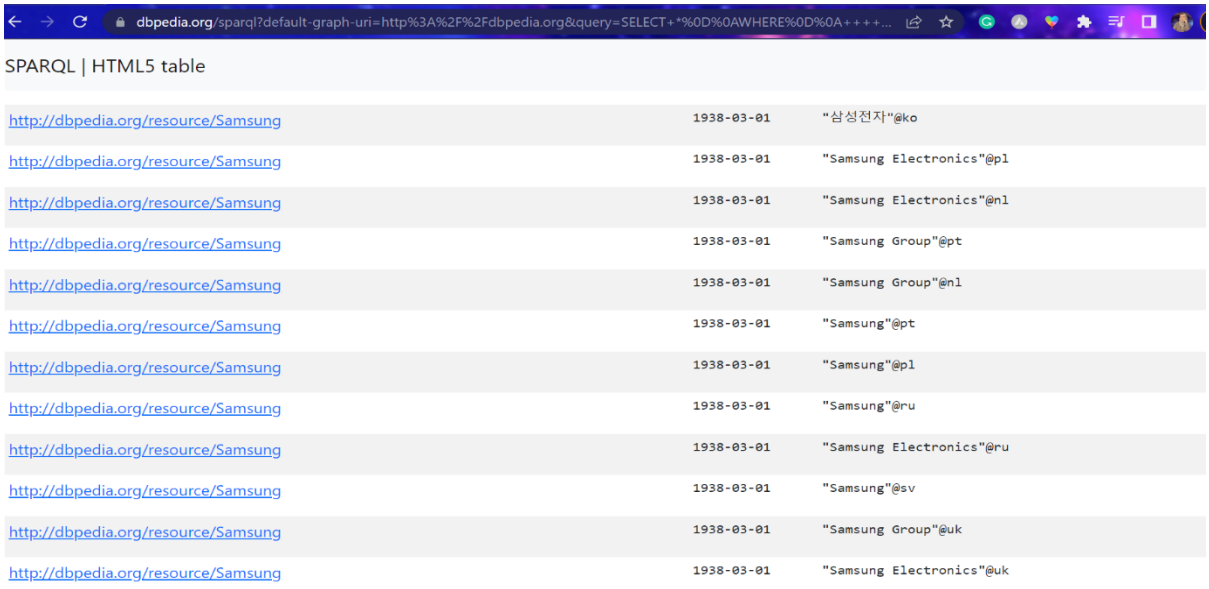
company	ttl	name
http://dbpedia.org/resource/Halla_Group	1962-09-01	"Halla Group"@en
http://dbpedia.org/resource/Halla_Group	1962-09-01	"HL홀딩스"@ko
http://dbpedia.org/resource/Halla_Group	1962-09-01	"Halla Group"@pt
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@en
http://dbpedia.org/resource/Samsung	1938-03-01	"إلكترونيات سامسونج"@ar
http://dbpedia.org/resource/Samsung	1938-03-01	"سامسونج"@ar
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@ca
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@cs
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@el
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung Electronics"@el
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@de
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung Electronics"@de

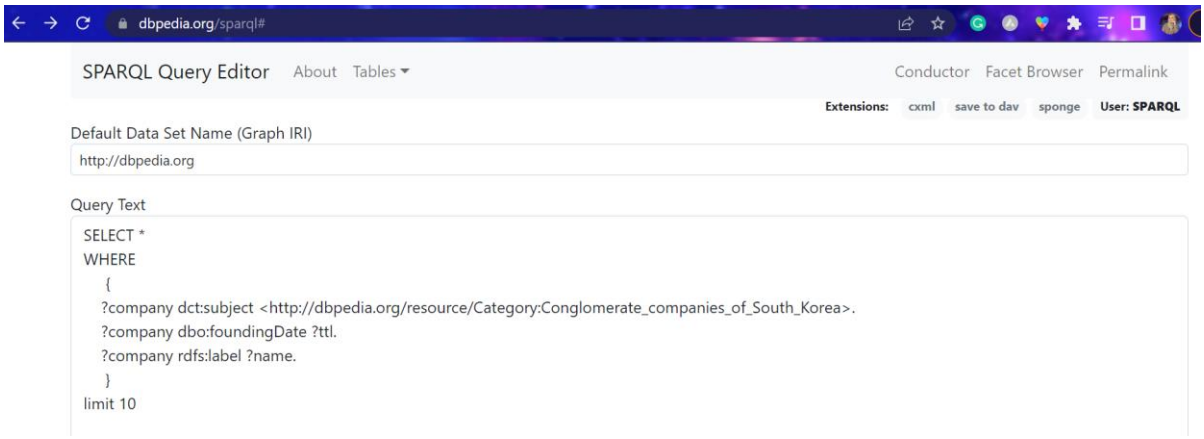


dbpedia.org/sparql?default-graph-uri=http%3A%2F%2Fdbpedia.org&query=SELECT+*%0D%0AWHERE%0D%0A+++...

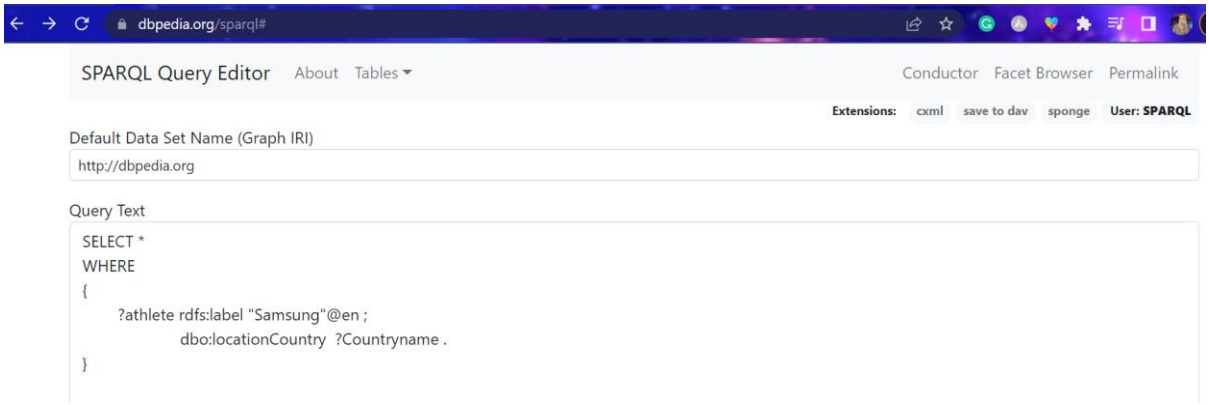
SPARQL | HTML5 table

http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@eo
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@es
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung Electronics"@es
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@eu
http://dbpedia.org/resource/Samsung	1938-03-01	"Groupe Samsung"@fr
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung Electronics"@fr
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@in
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung Electronics"@in
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung Electronics"@it
http://dbpedia.org/resource/Samsung	1938-03-01	"Samsung"@it
http://dbpedia.org/resource/Samsung	1938-03-01	"サムスン電子"@ja
http://dbpedia.org/resource/Samsung	1938-03-01	"삼성그룹"@ko





4) SELECT *
WHERE
{
?athlete rdfs:label "Samsung"@en ;
dbo:locationCountry ?Countryname .
}



5) SELECT *

WHERE

{

?athlete rdfs:label "Samsung"@en ;

dbp:founder ?foundername .

}

6) SELECT *

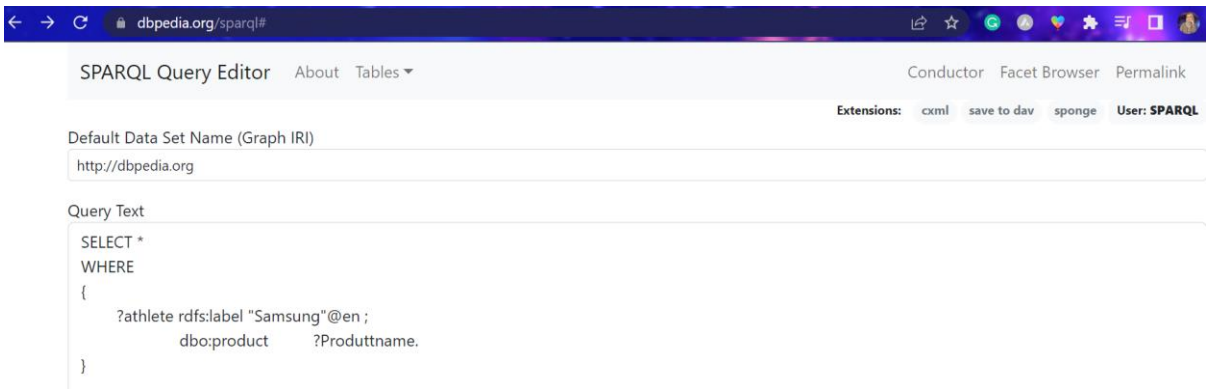
WHERE

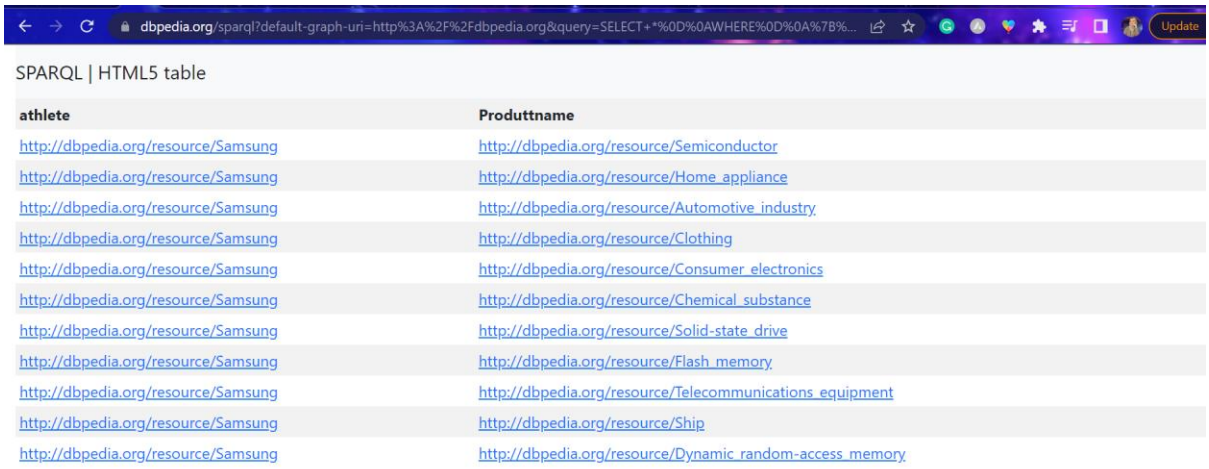
{

?athlete rdfs:label "Samsung"@en ;

dbo:product ?Produttname.

}





SPARQL | HTML5 table

athlete	Produttname
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Semiconductor
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Home_appliance
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Automotive_industry
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Clothing
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Consumer_electronics
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Chemical_substance
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Solid-state_drive
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Flash_memory
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Telecommunications_equipment
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Ship
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Dynamic_random-access_memory

7) SELECT ?company ?companyLabel

WHERE

{

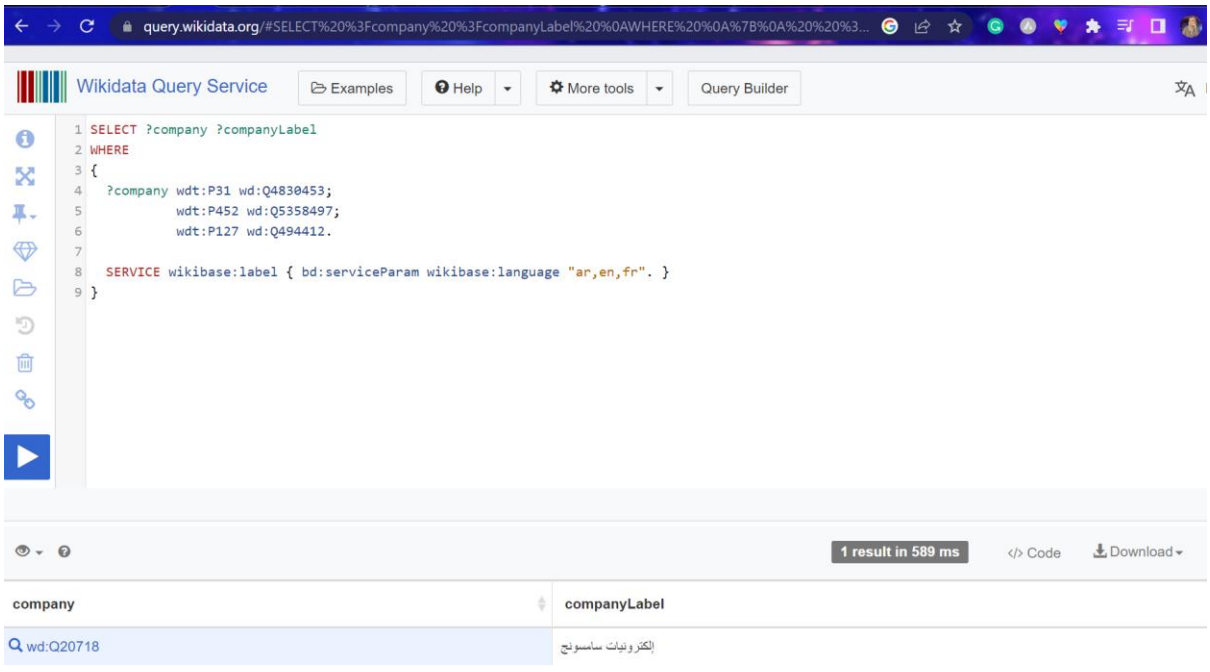
?company wdt:P31 wd:Q4830453;

wdt:P452 wd:Q5358497;

wdt:P127 wd:Q494412.

SERVICE wikibase:label { bd:serviceParam wikibase:language "ar,en,fr". }

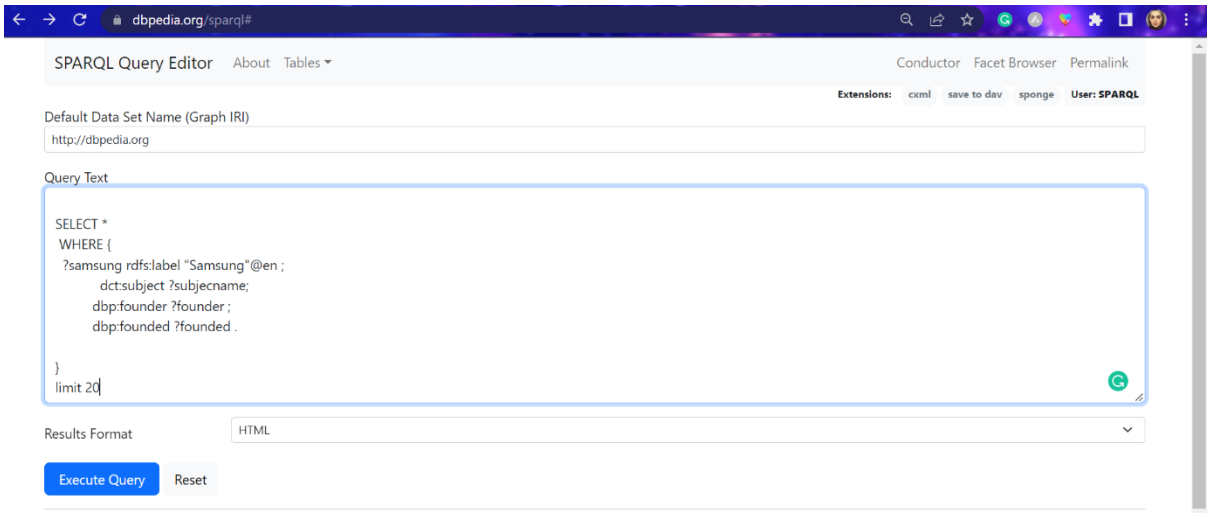
}

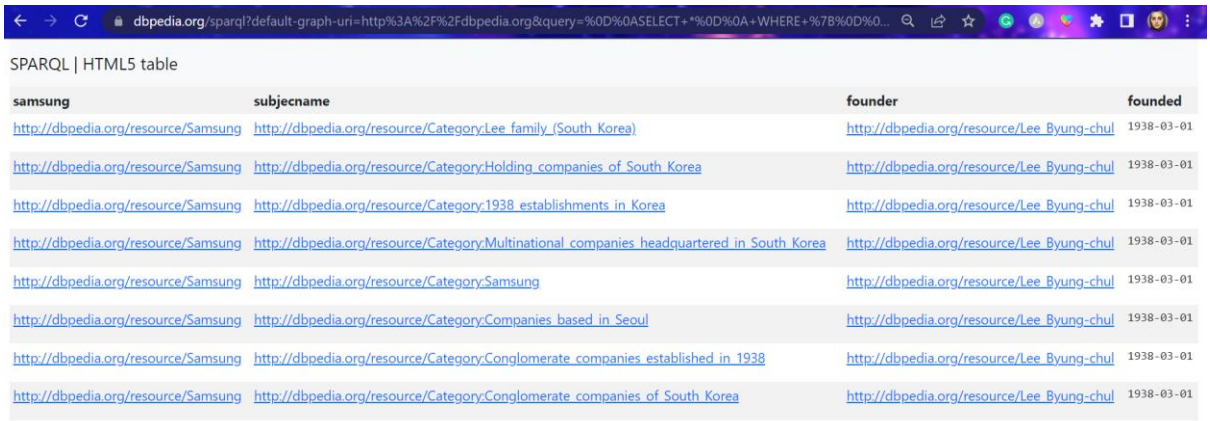


8) SELECT *

```
WHERE {
 ?samsung rdfs:label "Samsung"@en ;
          dct:subject ?subjecname;
         dbp:founder ?founder ;
         dbp:founded ?founded .

}
limit 20
```



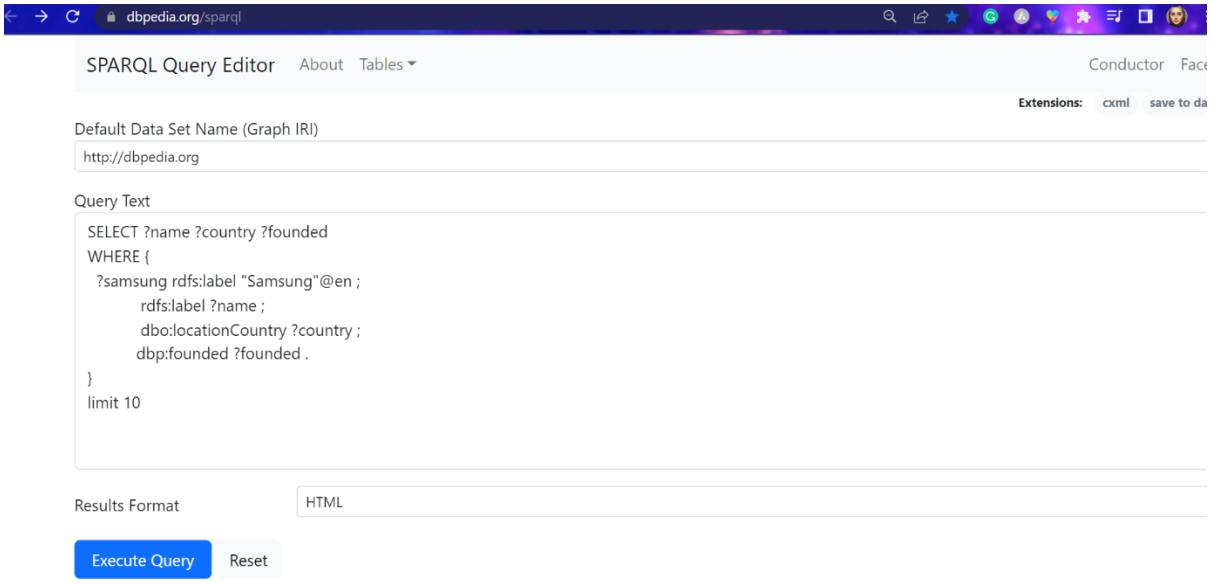


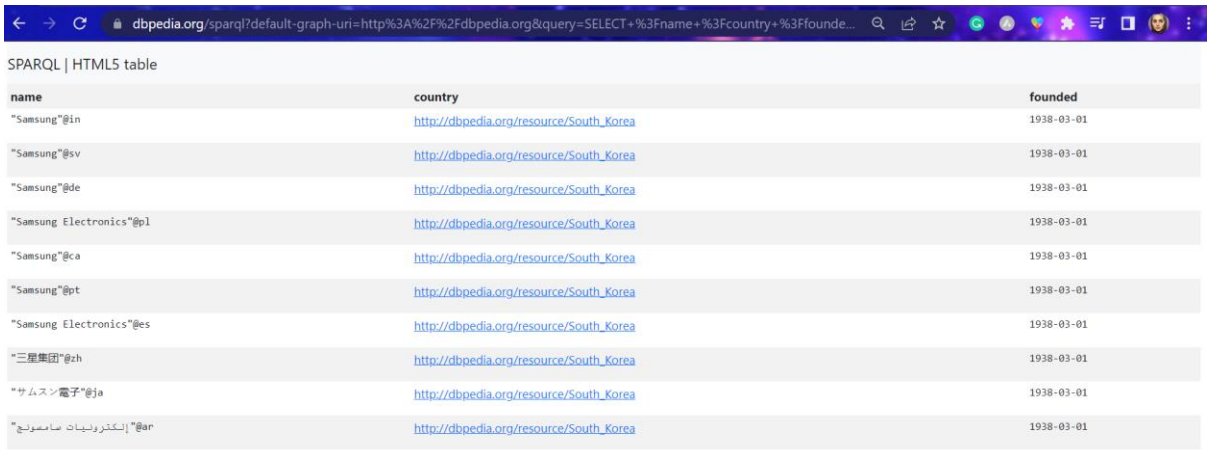
samsung	subjecname	founder	founded
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Category:Lee_family_(South_Korea)	http://dbpedia.org/resource/Lee_Byung-chul	1938-03-01
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Category:Holding_companies_of_South_Korea	http://dbpedia.org/resource/Lee_Byung-chul	1938-03-01
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Category:1938_establishments_in_Korea	http://dbpedia.org/resource/Lee_Byung-chul	1938-03-01
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Category:Multinational_companies_headquartered_in_South_Korea	http://dbpedia.org/resource/Lee_Byung-chul	1938-03-01
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Category:Samsung	http://dbpedia.org/resource/Lee_Byung-chul	1938-03-01
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Category:Companies_based_in_Seoul	http://dbpedia.org/resource/Lee_Byung-chul	1938-03-01
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Category:Conglomerate_companies_established_in_1938	http://dbpedia.org/resource/Lee_Byung-chul	1938-03-01
http://dbpedia.org/resource/Samsung	http://dbpedia.org/resource/Category:Conglomerate_companies_of_South_Korea	http://dbpedia.org/resource/Lee_Byung-chul	1938-03-01

9) This query will list information about the company:

```
SELECT ?name ?country ?founded
WHERE {
?samsung a samsung:Company ;
rdfs:label ?name ;
```

```
samsung:country ?country ;
samsung:founded ?founded .
}
```

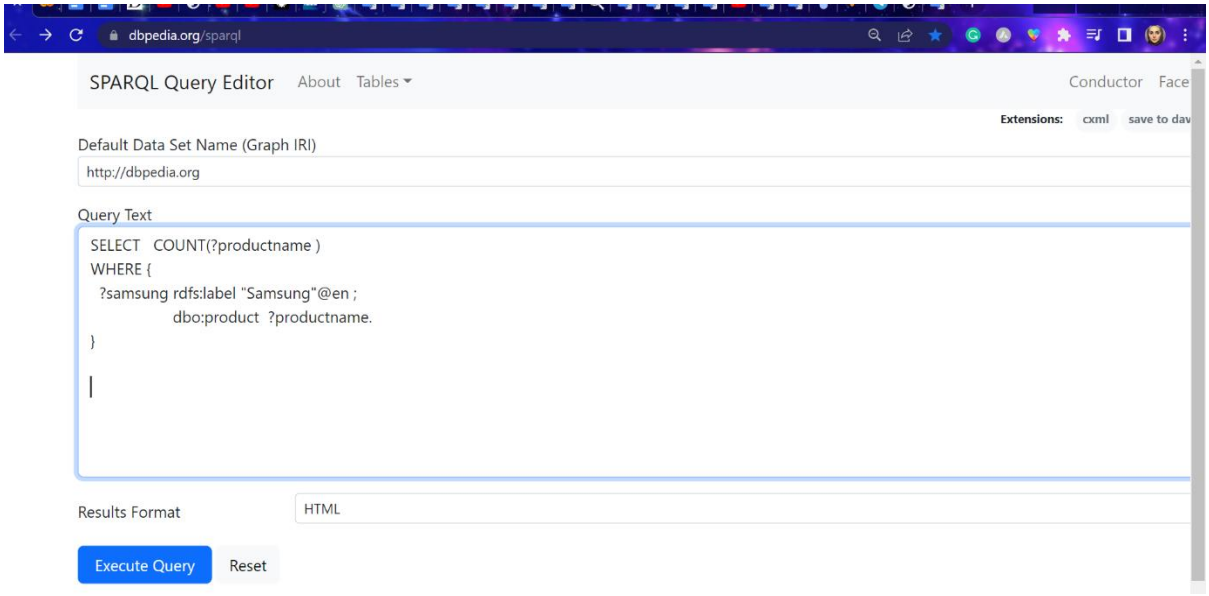


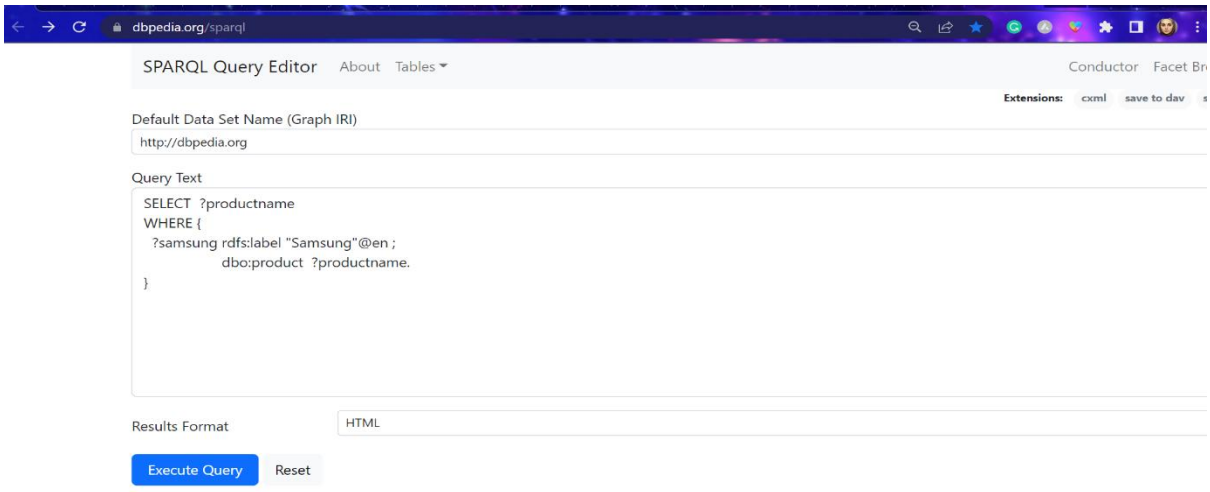


Explanation: This query will select the name, country, and year the company was founded for Samsung.

10) SELECT COUNT(?productname)

```
WHERE {
  ?samsung rdfs:label "Samsung"@en ;
            dbo:product  ?productname.
}
```


dbpedia.org/sparql
SPARQL Query Editor
About
Tables
Conductor
Face
Extensions:
cxml
save to dav
Default Data Set Name (Graph IRI)
http://dbpedia.org
Query Text
SELECT COUNT(?productname)
WHERE {
?samsung rdfs:label "Samsung"@en ;
dbo:product ?productname.
}
Results Format
HTML
Execute Query
Reset


dbpedia.org/sparql
SPARQL Query Editor
About
Tables
Conductor
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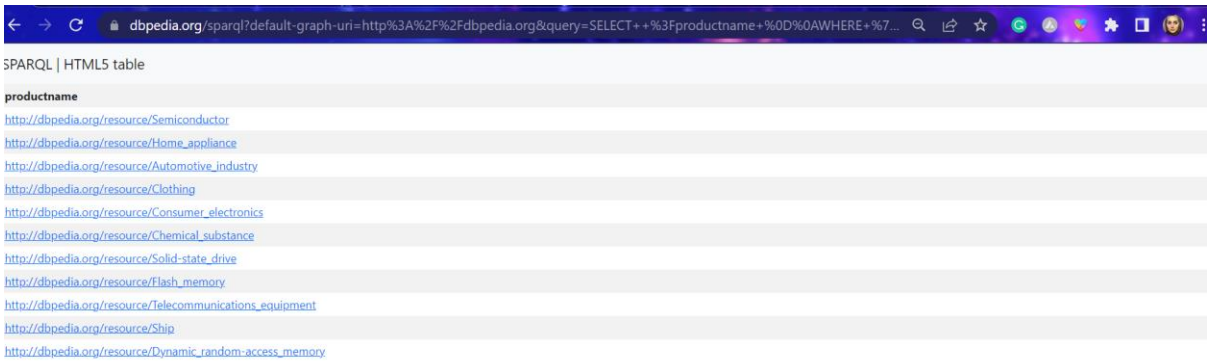
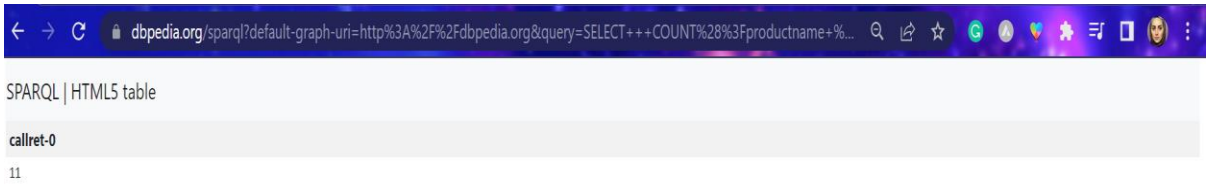
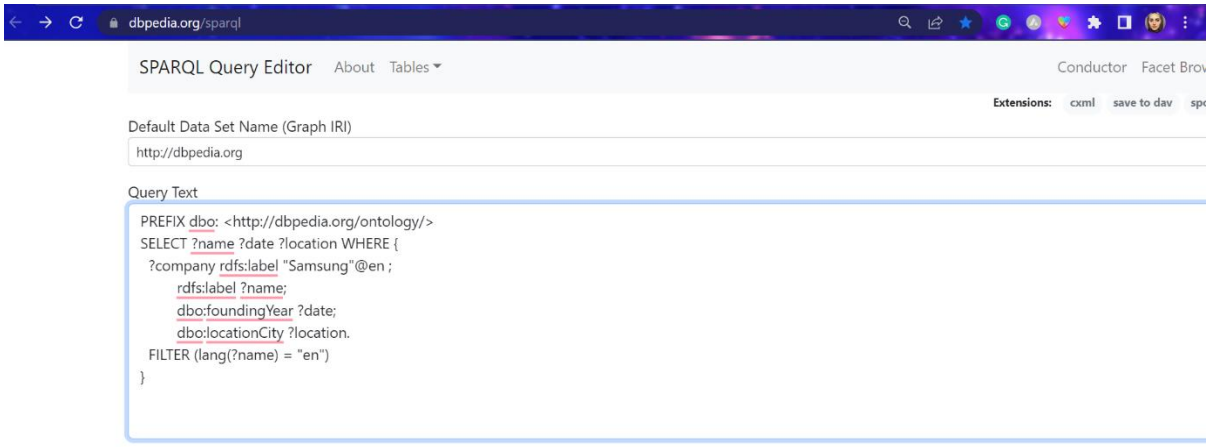
Extensions:
cxml
save to dav
Default Data Set Name (Graph IRI)
http://dbpedia.org
Query Text
SELECT ?productname
WHERE {
?samsung rdfs:label "Samsung"@en ;
dbo:product ?productname.
}
Results Format
HTML
Execute Query
Reset

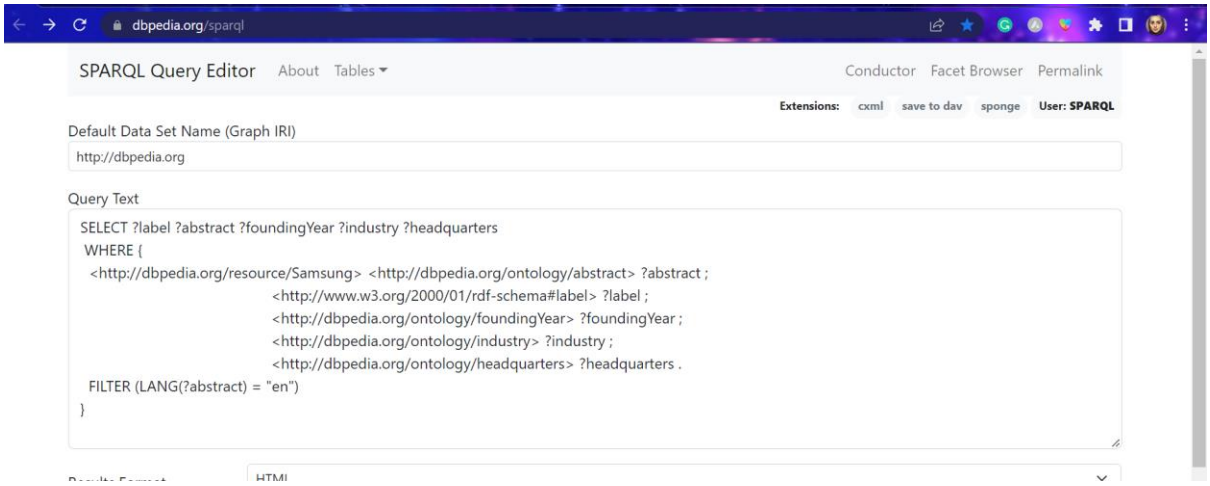

dbpedia.org/sparql?default-graph-uri=http%3A%2F%2Fdbpedia.org&query=SELECT+%3Fproductname+%0D%0AWHERE+%7...
SPARQL | HTML5 table
productname
http://dbpedia.org/resource/Semiconductor
http://dbpedia.org/resource/Home_appliance
http://dbpedia.org/resource/Automotive_industry
http://dbpedia.org/resource/Clothing
http://dbpedia.org/resource/Consumer_electronics
http://dbpedia.org/resource/Chemical_substance
http://dbpedia.org/resource/Solid-state_drive
http://dbpedia.org/resource/Flash_memory
http://dbpedia.org/resource/Telecommunications_equipment
http://dbpedia.org/resource/Ship
http://dbpedia.org/resource/Dynamic_random-access_memory



11) PREFIX dbo: <http://dbpedia.org/ontology/>

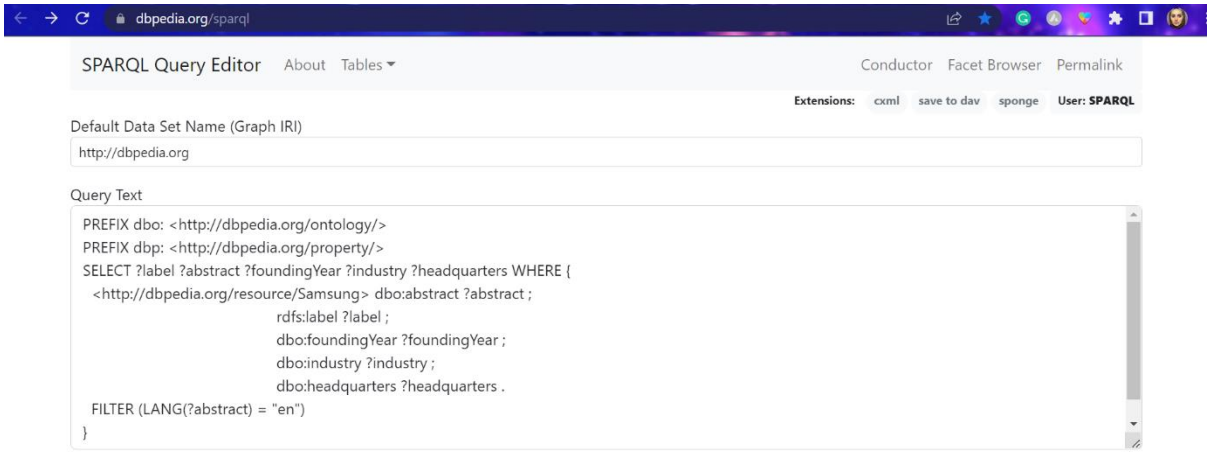
```
SELECT ?name ?date ?location WHERE {
  ?company rdfs:label "Samsung"@en ;
        rdfs:label ?name;
        dbo:foundingYear ?date;
        dbo:locationCity ?location.
  FILTER (lang(?name) = "en")
}
```

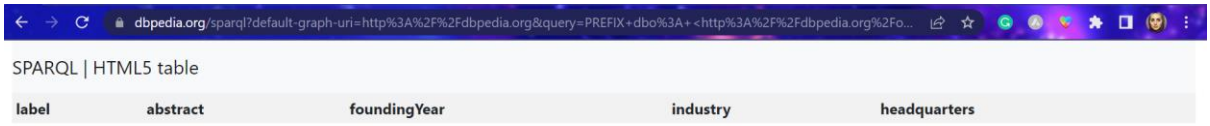




12) Alaos i trey to get more information but dose nto retrived only the deatils :

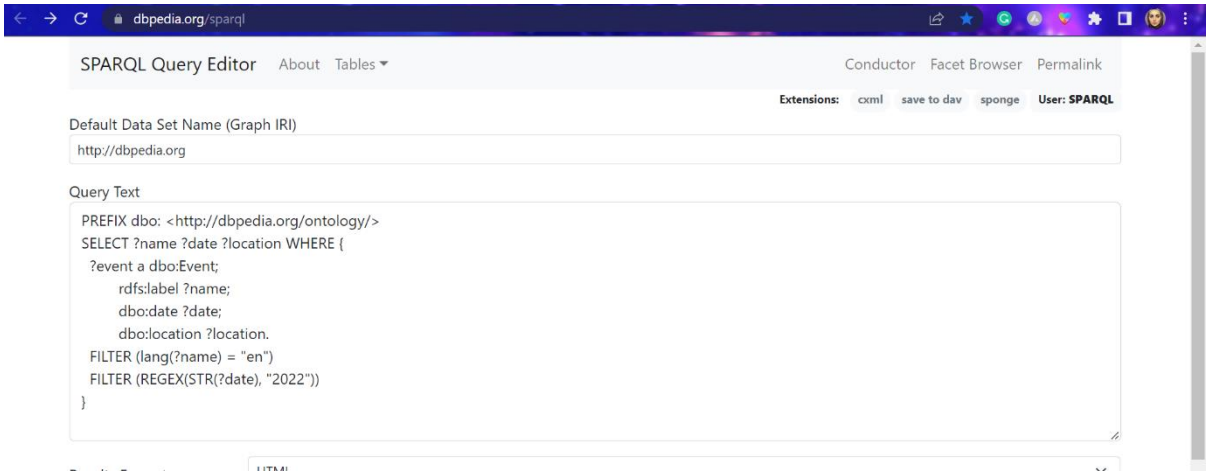
```
PREFIX dbo: <http://dbpedia.org/ontology/>
PREFIX dbp: <http://dbpedia.org/property/>
SELECT ?label ?abstract ?foundingYear ?industry ?headquarters WHERE {
 <http://dbpedia.org/resource/Samsung> dbo:abstract ?abstract ;
                                       rdfs:label ?label ;
                                       dbo:foundingYear ?foundingYear ;
                                       dbo:industry ?industry ;
                                       dbo:headquarters ?headquarters .
 FILTER (LANG(?abstract) = "en")
}
```

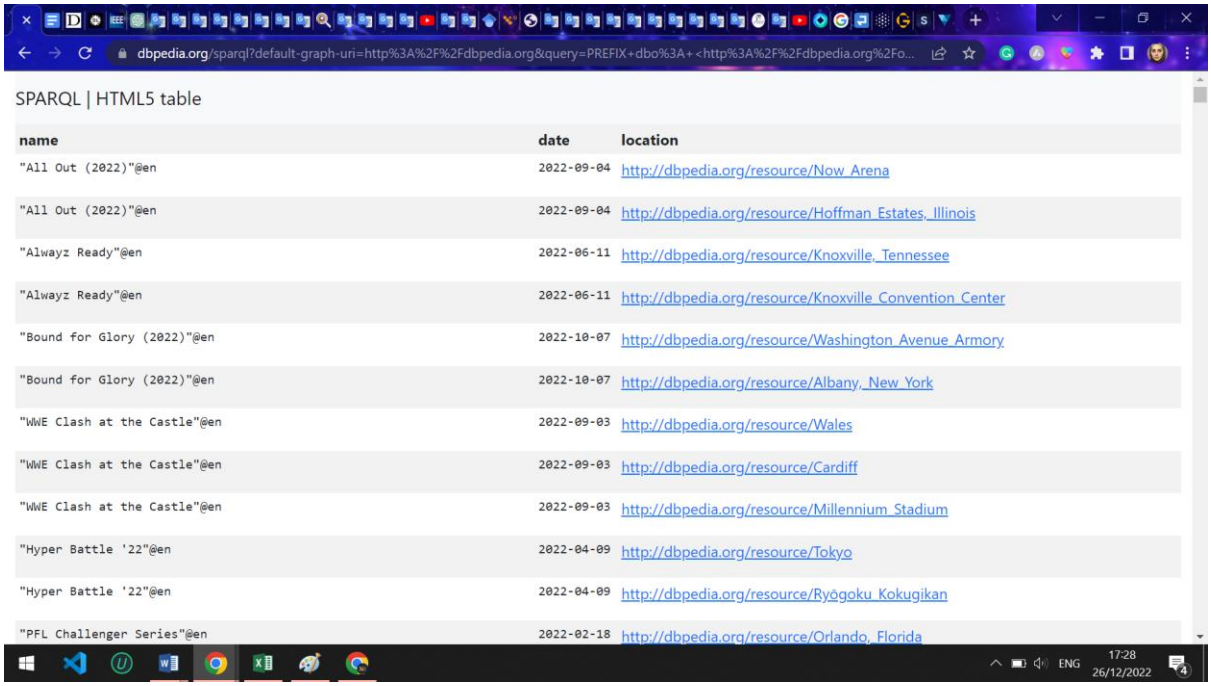




13)

```
PREFIX dbo: <http://dbpedia.org/ontology/>
SELECT ?name ?date ?location WHERE {
 ?event a dbo:Event;
       rdfs:label ?name;
       dbo:date ?date;
       dbo:location ?location.
 FILTER (lang(?name) = "en")
 FILTER (REGEX(STR(?date), "2022"))
}
```



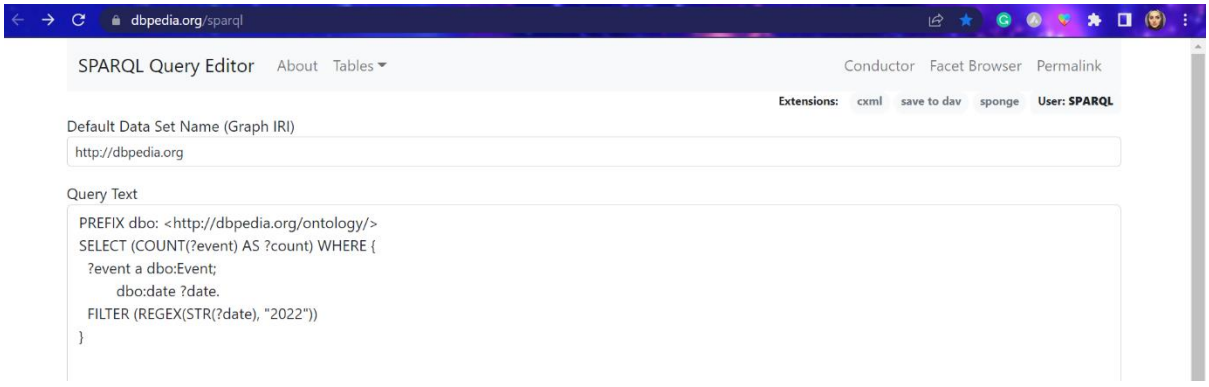


SPARQL | HTML5 table

name	date	location
"All Out (2022)"@en	2022-09-04	http://dbpedia.org/resource/Now_Arena
"All Out (2022)"@en	2022-09-04	http://dbpedia.org/resource/Hoffman_Estates,_Illinois
"Alwayz Ready"@en	2022-06-11	http://dbpedia.org/resource/Knoxville,_Tennessee
"Alwayz Ready"@en	2022-06-11	http://dbpedia.org/resource/Knoxville_Convention_Center
"Bound for Glory (2022)"@en	2022-10-07	http://dbpedia.org/resource/Washington_Avenue_Armory
"Bound for Glory (2022)"@en	2022-10-07	http://dbpedia.org/resource/Albany,_New_York
"WWE Clash at the Castle"@en	2022-09-03	http://dbpedia.org/resource/Wales
"WWE Clash at the Castle"@en	2022-09-03	http://dbpedia.org/resource/Cardiff
"WWE Clash at the Castle"@en	2022-09-03	http://dbpedia.org/resource/Millennium_Stadium
"Hyper Battle '22"@en	2022-04-09	http://dbpedia.org/resource/Tokyo
"Hyper Battle '22"@en	2022-04-09	http://dbpedia.org/resource/Ryōgoku_Kokugikan
"PFL Challenger Series"@en	2022-02-18	http://dbpedia.org/resource/Orlando,_Florida

14) PREFIX dbo: <http://dbpedia.org/ontology/>

```
SELECT (COUNT(?event) AS ?count)
WHERE {
  ?event a dbo:Event;
        dbo:date ?date.
  FILTER (REGEX(STR(?date), "2022"))
}
```



SPARQL Query Editor About Tables Conductor Facet Browser Permalink

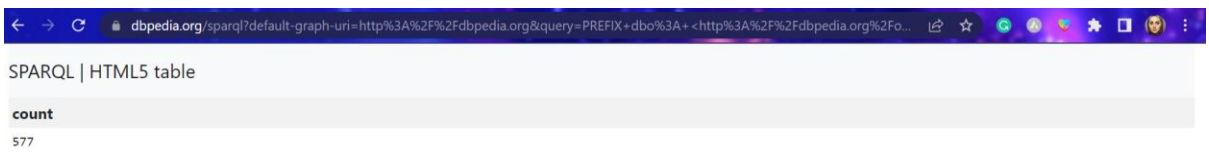
Extensions: cxml save to dav sponge User: SPARQL

Default Data Set Name (Graph IRI)

http://dbpedia.org

Query Text

```
PREFIX dbo: <http://dbpedia.org/ontology/>
SELECT (COUNT(?event) AS ?count) WHERE {
  ?event a dbo:Event;
        dbo:date ?date.
  FILTER (REGEX(STR(?date), "2022"))
}
```

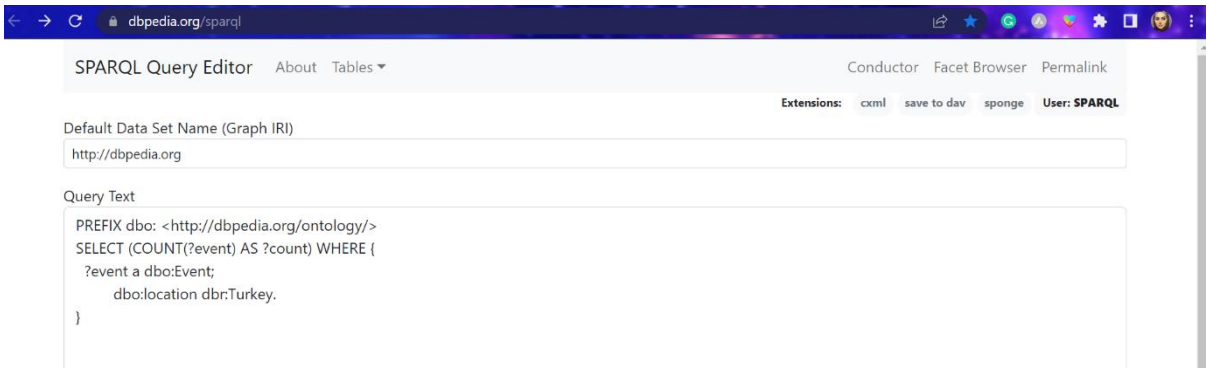


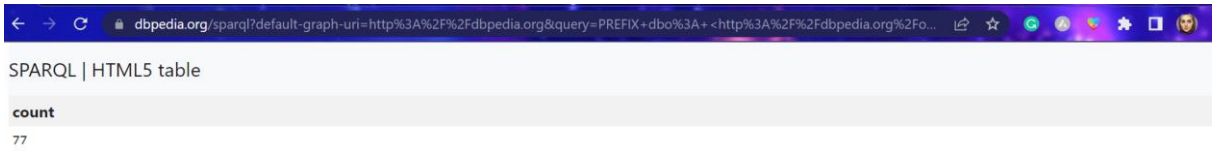
SPARQL | HTML5 table

count
577

15) PREFIX dbo: <http://dbpedia.org/ontology/>

```
SELECT (COUNT(?event) AS ?count) WHERE {
  ?event a dbo:Event;
        dbo:location dbr:Turkey.
}
```



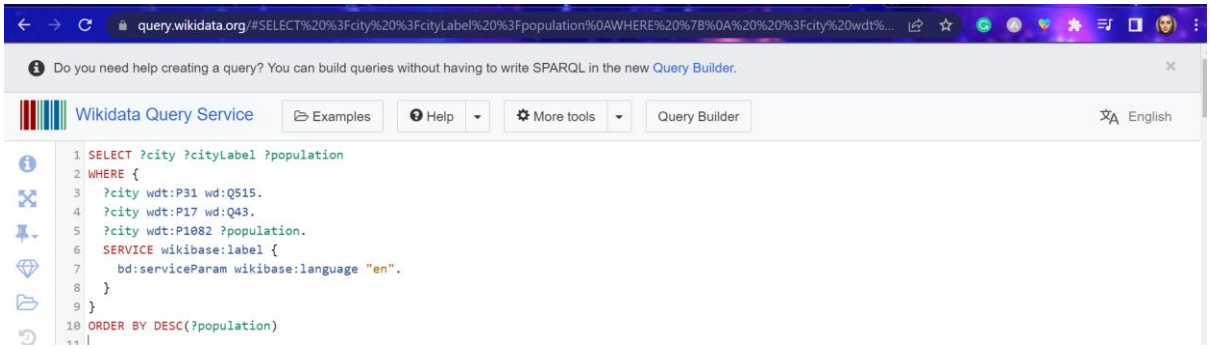


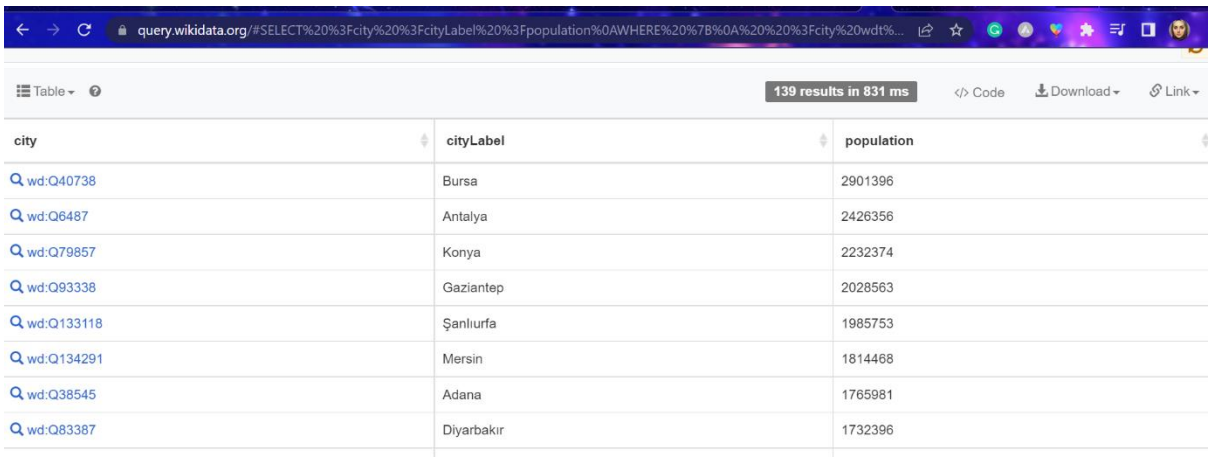
Itrieded to wuse wikidata but the information about samsung

To retrieve a list of major cities in Turkey ordered by their population:

16) SELECT ?city ?cityLabel ?population

```
WHERE {
  ?city wdt:P31 wd:Q515.
  ?city wdt:P17 wd:Q43.
  ?city wdt:P1082 ?population.
  SERVICE wikibase:label {
    bd:serviceParam wikibase:language "en".
  }
}
ORDER BY DESC(?population)
```





city	cityLabel	population
wd:Q40738	Bursa	2901396
wd:Q6487	Antalya	2426356
wd:Q79857	Konya	2232374
wd:Q93338	Gaziantep	2028563
wd:Q133118	Şanlıurfa	1985753
wd:Q134291	Mersin	1814468
wd:Q38545	Adana	1765981
wd:Q83387	Diyarbakır	1732396

wd:Q45301	Trabzon	807903
wd:Q122803	Erzurum	767848
wd:Q159835	Batman	447106
wd:Q134703	Marash	443575
wd:Q165995	Malatya	426381
wd:Q174060	Elazığ	421726
wd:Q129649	İzmit	363416
wd:Q147089	Manisa	356702
wd:Q83061	Van	353419
wd:Q134287	Tarsus	339676
wd:Q199723	Balıkesir	331788

wd:Q343973	İnegöl	268155
wd:Q188894	Kütahya	266784
wd:Q181379	Osmaniye	264373
wd:Q171031	Isparta	258375
wd:Q693929	Kızıltepe	252656
wd:Q189134	Uşak	252044
wd:Q174341	İskenderun	248335
wd:Q206885	Düzce	240633
wd:Q194146	Niğde	224289
wd:Q200951	Bolu	205525
wd:Q182009	Tekirdağ	204001

To retrieve a list of cities in Turkey with a population greater than 1 million:

17) SELECT ?city ?cityLabel ?population

WHERE {

?city wdt:P31 wd:Q515.

?city wdt:P17 wd:Q43.

?city wdt:P1082 ?population.

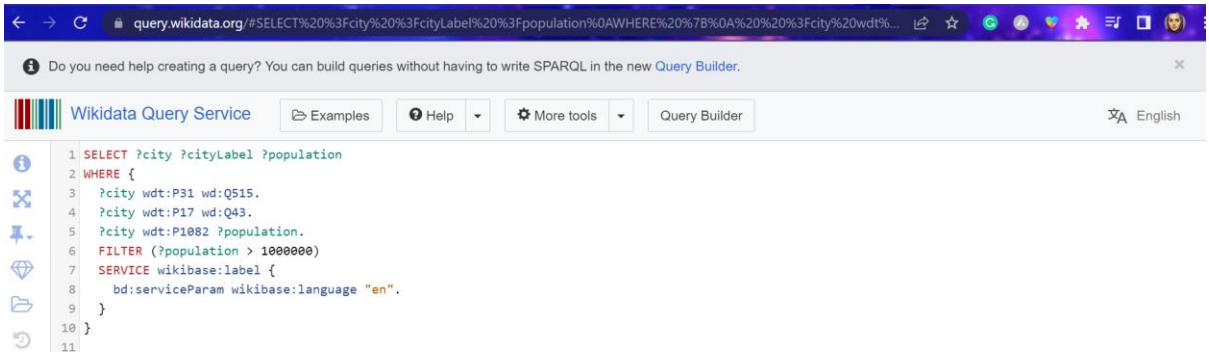
FILTER (?population > 1000000)

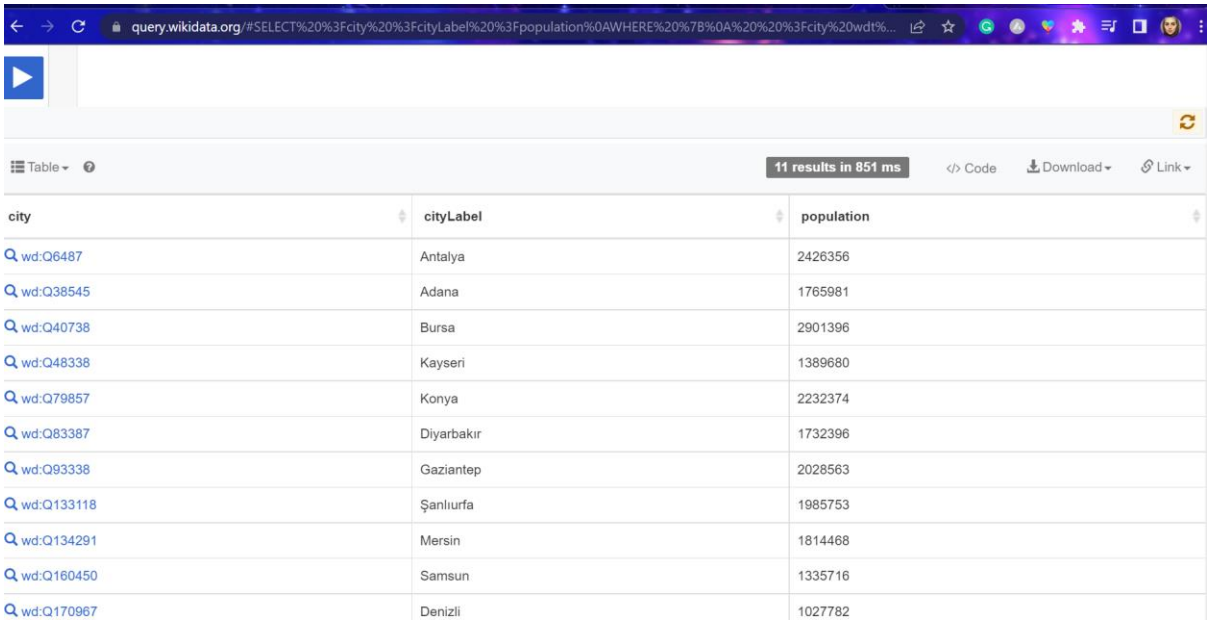
SERVICE wikibase:label {

bd:serviceParam wikibase:language "en".

}

}





city	cityLabel	population
wd:Q6487	Antalya	2426356
wd:Q38545	Adana	1765981
wd:Q40738	Bursa	2901396
wd:Q48338	Kayseri	1389680
wd:Q79857	Konya	2232374
wd:Q83387	Diyarbakır	1732396
wd:Q93338	Gaziantep	2028563
wd:Q133118	Şanlıurfa	1985753
wd:Q134291	Mersin	1814468
wd:Q160450	Samsun	1335716
wd:Q170967	Denizli	1027782

To retrieve a list of lakes in Turkey with a surface area greater than 50 square kilometers

18) SELECT ?lake ?lakeLabel ?surfaceArea

WHERE {

?lake wdt:P31 wd:Q23397.

?lake wdt:P17 wd:Q43.

?lake wdt:P2046 ?surfaceArea.

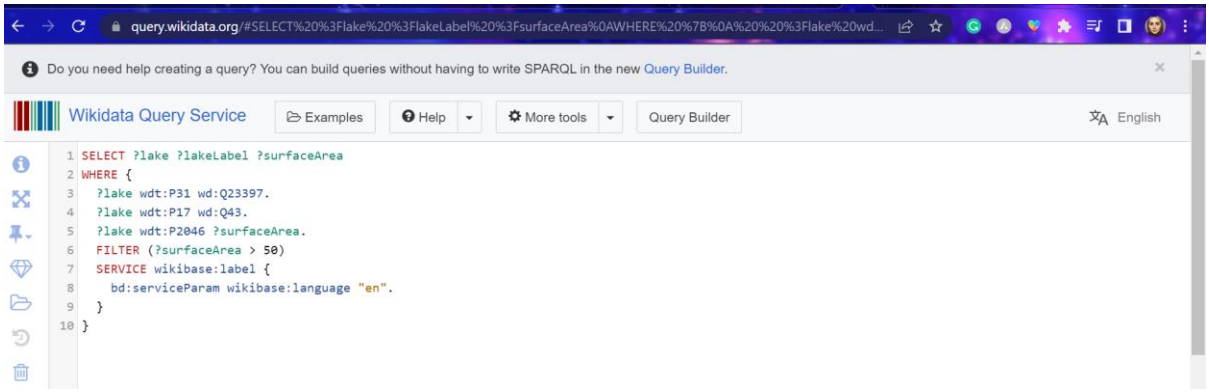
FILTER (?surfaceArea > 50)

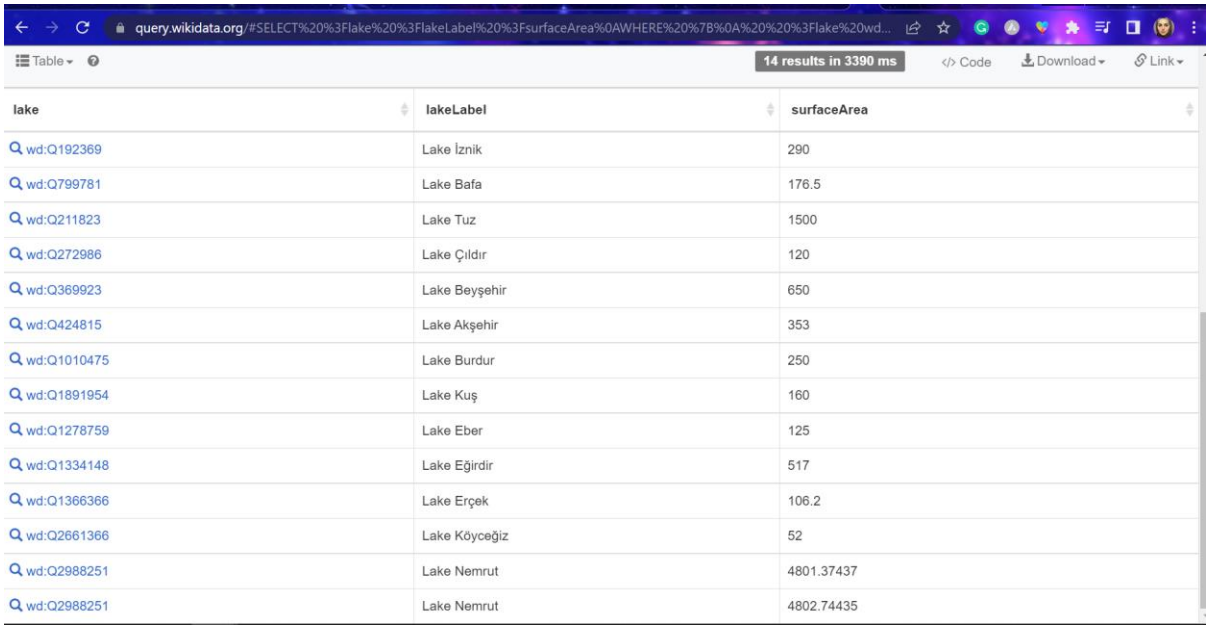
SERVICE wikibase:label {

bd:serviceParam wikibase:language "en".

}

}



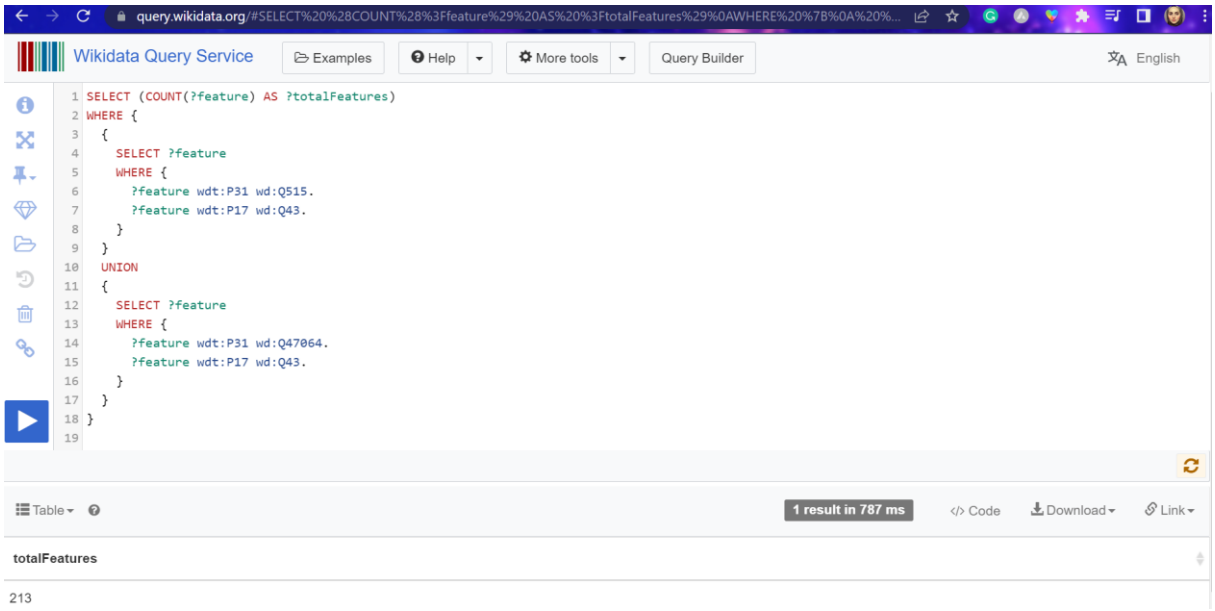


lake	lakeLabel	surfaceArea
wd:Q192369	Lake İznik	290
wd:Q799781	Lake Bafa	176.5
wd:Q211823	Lake Tuz	1500
wd:Q272986	Lake Çıldır	120
wd:Q369923	Lake Beyşehir	650
wd:Q424815	Lake Akşehir	353
wd:Q1010475	Lake Burdur	250
wd:Q1891954	Lake Kuş	160
wd:Q1278759	Lake Eber	125
wd:Q1334148	Lake Eğirdir	517
wd:Q1366366	Lake Erçek	106.2
wd:Q2661366	Lake Köyceğiz	52
wd:Q2988251	Lake Nemrut	4801.37437
wd:Q2988251	Lake Nemrut	4802.74435

To retrieve the total number of cities and mountain ranges in Turkey:

19) SELECT (COUNT(?feature) AS ?totalFeatures)

```
WHERE {
 {
  SELECT ?feature
  WHERE {
   ?feature wdt:P31 wd:Q515.
   ?feature wdt:P17 wd:Q43.
  }
 }
 UNION
 {
  SELECT ?feature
  WHERE {
   ?feature wdt:P31 wd:Q47064.
   ?feature wdt:P17 wd:Q43.
  }
 }
}
```



To retrieve the total population of cities in Turkey: