



UNIVERSITY OF SARGODHA

PATHWAY TO PROGRESS

**Web Ontology Project: General Election in Pakistan
Ontology
(SPARQL Queries)**

Submitted to:
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#1: Count General NA Seats

Answer to: 15. What is total number of seats in Parliament-National Assembly?

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#>

SELECT (count(?NA) as ?countn) ?Area_Type

WHERE

{ ?NA a ?Area_Type. }

GROUP BY (?Area_Type)

The screenshot shows a SPARQL query execution interface. The query is as follows:

```
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#>
SELECT (count(?NA) as ?countn) ?Area_Type
WHERE { ?NA a ?Area_Type. }
GROUP BY (?Area_Type)
```

The results are displayed in a table with two columns: **countn** and **Area_Type**. The results are as follows:

countn	Area_Type
"294" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	Panjab
"2836" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	owl:NamedIndividual
"1337" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	owl:Class
"272" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	NA
"510" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	owl:ObjectProperty
"497" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	rdfs:Datatype
"602" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	owl:DatatypeProperty
"20" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	Political_Party
"51" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	Balochistan
"3" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	PK
"130" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	Sindh
"28" ^{^^} <http://www.w3.org/2001/XMLSchema#integer>	owl:Restriction

The interface also includes a menu bar (File, Edit, View, Reasoner, Tools, Refactor, Window, Help), a search bar, and a status bar at the bottom showing the Windows taskbar and system clock (5:38 AM, 6/19/2022).

#2:Count all Area Types, NA, PA Individuals and Properties

Answer to:

15. What is total number of seats in Parliament? & 16. How many reserved seats in Parliament?

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#>

SELECT (count(?PA) as ?countp) (count(?NA) as ?countn)?Area_Type

WHERE

{

?PA a ?Area_Type.

?NA a ?Area_Type.

}

GROUP BY (?Area_Type)

ORDER BY (?NA)

The screenshot shows a web application for executing SPARQL queries. The query is as follows:

```
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#>
SELECT (count(?PA) as ?countp) (count(?NA) as ?countn)?Area_Type
WHERE
{
  ?PA a ?Area_Type.
  ?NA a ?Area_Type.
}
GROUP BY (?Area_Type)
ORDER BY (?NA)
```

The results are displayed in a table with three columns: countp, countn, and Area_Type. The results are as follows:

countp	countn	Area_Type
"86436"	"86436"	Panjab
"8042896"	"8042896"	owl:NamedIndividual
"1787569"	"1787569"	owl:Class
"73984"	"73984"	NA
"260100"	"260100"	owl:ObjectProperty
"247009"	"247009"	rdfs:Datatype
"362404"	"362404"	owl:DatatypeProperty
"400"	"400"	Political_Party
"2601"	"2601"	Balochistan
"9"	"9"	PK
"16900"	"16900"	Sindh
"784"	"784"	owl:Restriction

The interface includes a menu bar (File, Edit, View, Reasoner, Tools, Refactor, Window, Help), a toolbar with navigation icons, and a status bar at the bottom showing the time (5:59 AM) and date (6/19/2022).

#3: #1: Count General and Reserved Provinces Seats

Answer to: 15. What is total number of seats in Parliament-Provincial Assembly?

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#>

SELECT (count(?Balochistan) as ?countB) ?PA

WHERE

{

?Balochistan a ?PA.

}

GROUP BY (?PA)

The screenshot shows a SPARQL query editor window titled "untitled-ontology-2". The query is as follows:

```
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#>
SELECT (count(?Balochistan) as ?countB) ?PA
WHERE
{
  ?Balochistan a ?PA.
}
GROUP BY (?PA)
```

The results table has two columns: "countB" and "PA". The results are as follows:

countB	PA
"602"^^<http://www.w3.org/2001/XMLSchema#integer>	owl:DatatypeProperty
"20"^^<http://www.w3.org/2001/XMLSchema#integer>	Political_Party
"51"^^<http://www.w3.org/2001/XMLSchema#integer>	Balochistan
"3"^^<http://www.w3.org/2001/XMLSchema#integer>	PK
"130"^^<http://www.w3.org/2001/XMLSchema#integer>	Sindh
"28"^^<http://www.w3.org/2001/XMLSchema#integer>	owl:Restriction
"115"^^<http://www.w3.org/2001/XMLSchema#integer>	KPK
"3"^^<http://www.w3.org/2001/XMLSchema#integer>	Population
"3"^^<http://www.w3.org/2001/XMLSchema#integer>	PB
"3"^^<http://www.w3.org/2001/XMLSchema#integer>	PS
"2"^^<http://www.w3.org/2001/XMLSchema#integer>	Secrete_Ballot
"6"^^<http://www.w3.org/2001/XMLSchema#integer>	New_Leadership

The "Execute" button is visible at the bottom of the query editor.