

Analysis of Urban Information of Colombia on Wikidata

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Outline

1. Introduction
2. Cities of Colombia
3. Urban Information on Wikidata
4. Discussion
5. Conclusion

1. Introduction

Wikipedia Infoboxes

Bogotá
Capital city of Colombia Bogotá, Distrito Capital
 From the top: Central Bogota, La Candelaria, Torre Colpatria, Capitolio Nacional and Gold Museum.
 Flag Seal
Nickname(s): "La Atenas Suramericana" ("The South American Athens") "Muy Noble y Muy Leal Ciudad" ("Most Noble and Most Loyal City") ^{[1][2]}
Motto(s): " <i>Bogotá Mejor Para Todos</i> " ("A Better Bogotá For All", 2016–2019)

 Location in Colombia and South America Show map of Colombia Show map of South America Show all

Coordinates: 4°42′40″N 74°4′20″W﻿•﻿

Population (2018) ^{[8][9][5][6]}	
• Capital city of Colombia	7,181,469 ^[3]
• Rank	1st
• Metro	10,700,000 ^{[5][6]}
Demonym(s)	Rolo, Cachaco, Bogotan <i>bogotano</i> , <i>-na</i> (es)
Time zone	UTC−5
Postal code	11XXXX
Area code(s)	+57 1
HDI (2017)	0.794 ^[10] high · 1st
GDP (PPP) (2014)	USD 160 billion ^[11]
GDP (PPP) per capita (2014)	USD 17,500 ^[11]
Primary Airport	 EL DORADO BOG (Major/International)
Secondary Airport	 CATAM <i>none</i> (Military) Guaymaral Airport <i>none</i> (Private Activities) La Vanguardia Airport VVC (Regional)
Bus rapid transit	 7 ABCDEFGHIJKLM
Bike Paths	R2-R29
Rapid Transit	 M Metro de Bogotá (UC)
Tramway	 Trams in Bogotá Teleférico de Monserrate
Website	City Official Site Bogotá Tourism (in Spanish)

1. Introduction

Wikidata



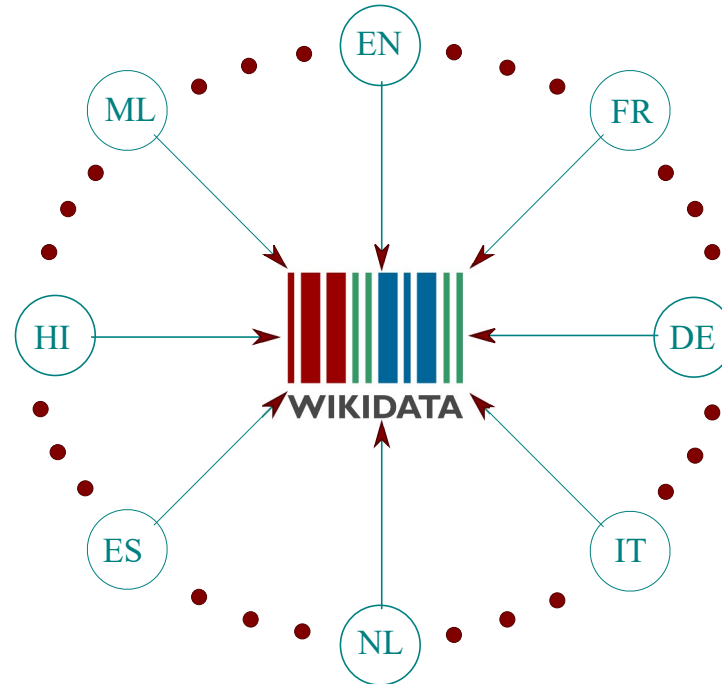
Wikidata: Free, open, multilingual, collaborative, linked and structured knowledge base.

1. Introduction

- Wikidata
 - Started in 2012
 - is free, open, linked, structured, collaborative and multilingual knowledge base
 - From multi-(sub)domain multilingual Wikipedia sites to a single-domain multilingual website
 - Collaborative Multilingual Multi-domain Ontology development

1. Introduction

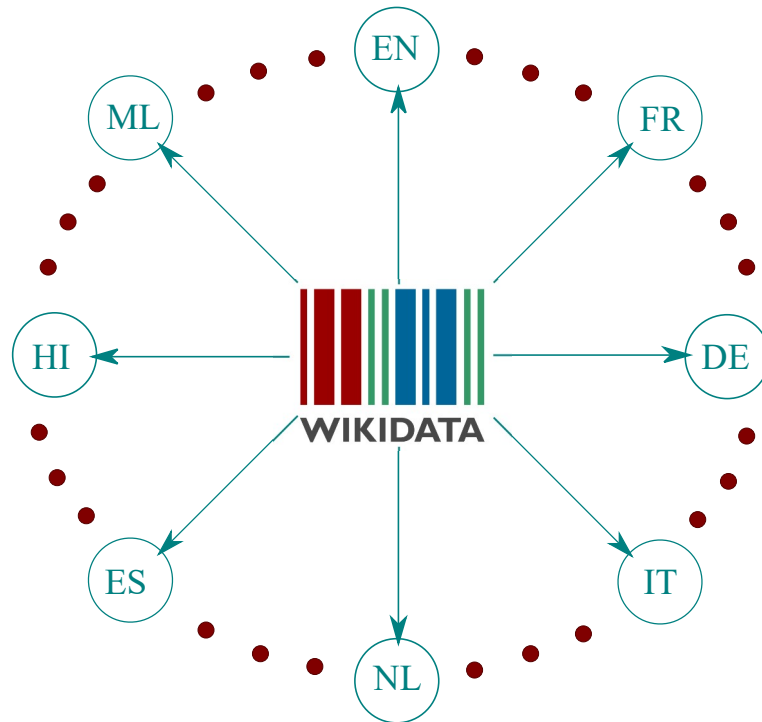
Wikipedia to Wikidata



Ongoing works by Wikimedia contributors: Importing structured data from Wikipedia Infoboxes to Wikidata

1. Introduction

Wikidata to Wikipedia



Ongoing works by Wikimedia contributors: Exporting data from Wikidata to multiple multilingual Wikipedia articles

1. Introduction

Wikipedia Infobox Properties

 Bogotá Capital city of Colombia Bogotá, Distrito Capital From the top: Central Bogotá, La Candelaria, Torre Colpatria, Capitolio Nacional and Gold Museum. Flag Seal Nickname(s): "La Atenas Suramericana" ("The South American Athens") "Muy Noble y Muy Leal Ciudad" ("Most Noble and Most Loyal City")^{[1][2]} Motto(s): "Bogotá Mejor Para Todos" ("A Better Bogotá For All", 2016–2019)	Location in Colombia and South America Show map of Colombia Show map of South America Show all Coordinates: 4°42′40″N 74°4′20″W﻿ / ﻿ Country Department Colombia Capital District Cundinamarca (see text) Founded 6 August 1538 (traditional)^[4] Founded by Gonzalo Jiménez de Quesada Government • Mayor Enrique Peñalosa (2016–2019) Area • Capital city of Colombia 1,587 km² (613 sq mi) Urban 307.36 km² (118.67 sq mi) Area rank 32nd Elevation^[7] 2,640 m (8,660 ft)	Population (2018)^{[8][9][5][6]} • Capital city of Colombia 7,181,469^[3] • Rank 1st • Metro 10,700,000^{[5][6]} Demonym(s) Rolo, Cachaco, Bogotan bogotano, -na (es) Time zone UTC−5 Postal code 11XXXX Area code(s) +57 1 HDI (2017) 0.794^[10] high·1st GDP (PPP) (2014) USD 160 billion^[11] GDP (PPP) per capita (2014) USD 17,500^[11] Primary Airport EL DOGRADO BOG (Major/International) Secondary Airport CATAM none (Military) Guaymaral Airport none (Private Activities) La Vanguardia Airport VVC (Regional) Bus rapid transit A B C D E F G H I J K L M Bike Paths R2-R29 Rapid Transit M (UC) Metro de Bogotá Tramway Trams in Bogotá Teleférico de Monserrate Website City Official Site Bogotá Tourism (in Spanish)
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Existing English Wikipedia Infobox Properties for a Colombian City

1. Introduction

Wikidata: Identifier, Labels, Descriptions and Aliases

Bogotá (Q2841) capital city of Colombia and Cundinamarca department Santa Fe de Bogotá Santafé de Bogotá Bogota edit ▼ In more languages Configure <table><tr><th>Language</th><th>Label</th><th>Description</th><th>Also known as</th></tr><tr><td>English</td><td>Bogotá</td><td>capital city of Colombia and Cundinamarca department</td><td>Santa Fe de Bogotá Santafé de Bogotá Bogota</td></tr><tr><td>French</td><td>Bogota</td><td>capitale de la Colombie</td><td>Bogotá Santa Fe de Bogotá</td></tr><tr><td>Spanish</td><td>Bogotá</td><td>capital de Colombia y del departamento de Cundinamarca</td><td>Santafé de Bogotá Bogota Santafe de Bogota</td></tr><tr><td>German</td><td>Bogotá</td><td>Hauptstadt Kolumbiens und der Provinz Cundinamarca</td><td>Bogota Santa Fe de Bogotá Santafe de Bogota</td></tr></table>				Language	Label	Description	Also known as	English	Bogotá	capital city of Colombia and Cundinamarca department	Santa Fe de Bogotá Santafé de Bogotá Bogota	French	Bogota	capitale de la Colombie	Bogotá Santa Fe de Bogotá	Spanish	Bogotá	capital de Colombia y del departamento de Cundinamarca	Santafé de Bogotá Bogota Santafe de Bogota	German	Bogotá	Hauptstadt Kolumbiens und der Provinz Cundinamarca	Bogota Santa Fe de Bogotá Santafe de Bogota
Language	Label	Description	Also known as																				
English	Bogotá	capital city of Colombia and Cundinamarca department	Santa Fe de Bogotá Santafé de Bogotá Bogota																				
French	Bogota	capitale de la Colombie	Bogotá Santa Fe de Bogotá																				
Spanish	Bogotá	capital de Colombia y del departamento de Cundinamarca	Santafé de Bogotá Bogota Santafe de Bogota																				
German	Bogotá	Hauptstadt Kolumbiens und der Provinz Cundinamarca	Bogota Santa Fe de Bogotá Santafe de Bogota																				
All entered languages LanguagesLabelsDescriptionsAlias																							

Existing translations of Bogotá (Q2841)

1. Introduction

Wikidata: Statements, Properties, Qualifiers and References

Property	 Colombia	 edit	Statement 1
	▼ 0 references	+ add reference	
	 capital of Viceroyalty of New Granada	 edit	Statement 2
	▼ 0 references	+ add reference	
	 Cundinamarca Department	 edit	
	▼ 0 references	+ add reference	
	 Gran Colombia	 edit	Qualifiers
	start time 1819 end time 1831		
	▼ 0 references	+ add reference	
	 Capital District	 edit	
References	start time 1905 end time 1910		
	▼ 0 references	+ add reference	

Current statements of Bogotá (Q2841)

1. Introduction

Wikidata: External identifiers

GND ID	4007557-6	edit	Statement
	▸ 1 reference		
		+ add value	
Global Anabaptist Mennonite Encyclopedia Online ID	Bogotá (Colombia)	edit	
	▼ 0 references		
		+ add reference	
		+ add value	
VIAF ID	127299962	edit	External Identifier
	▸ 1 reference		
		+ add value	
SUDOC authorities ID	082115958	edit	
	▼ 0 references		
		+ add reference	
		+ add value	

Properties

Current external identifiers of Bogotá (Q2841)

2. Cities of Colombia

Cities, Towns and Villages

S.No.	Focus category	List of cities
1.	Main cities of Colombia	Bogotá (Q2841), Medellín (Q48278), Cali (Q51103), Barranquilla (Q62823), Cartagena (Q657461), Soledad (Q767071), Cúcuta (Q216847), Soacha (Q1011151), Ibagué (Q222755), Bucaramanga (Q243766), Villavicencio (Q749224), Santa Marta (Q209016), Bello (Q816024), Valledupar (Q376903), Pereira (Q51111), Buenaventura (Q996581), San Juan de Pasto (Q320015), Manizales (Q235190), Montería (Q852725), Neiva (Q638260)
2.	Important departmental capitals	Bogotá (Q2841), Barranquilla (Q62823), Cali (Q51103), Bucaramanga (Q243766), Medellín (Q48278)

2. Cities of Colombia

Cities, Towns and Villages

S.No.	Focus category	List of cities
3.	Intermediary capitals	Armenia (Q328518), Manizales (Q235190) and Montería (Q852725)
4.	Touristic cities	Cartagena (Q657461), San Andrés (Q134678), Providencia (Q681111), Leticia (Q214913), Puerto Nariño (Q767738), Santa Marta (Q209016) and El Cocuy (Q1655984)

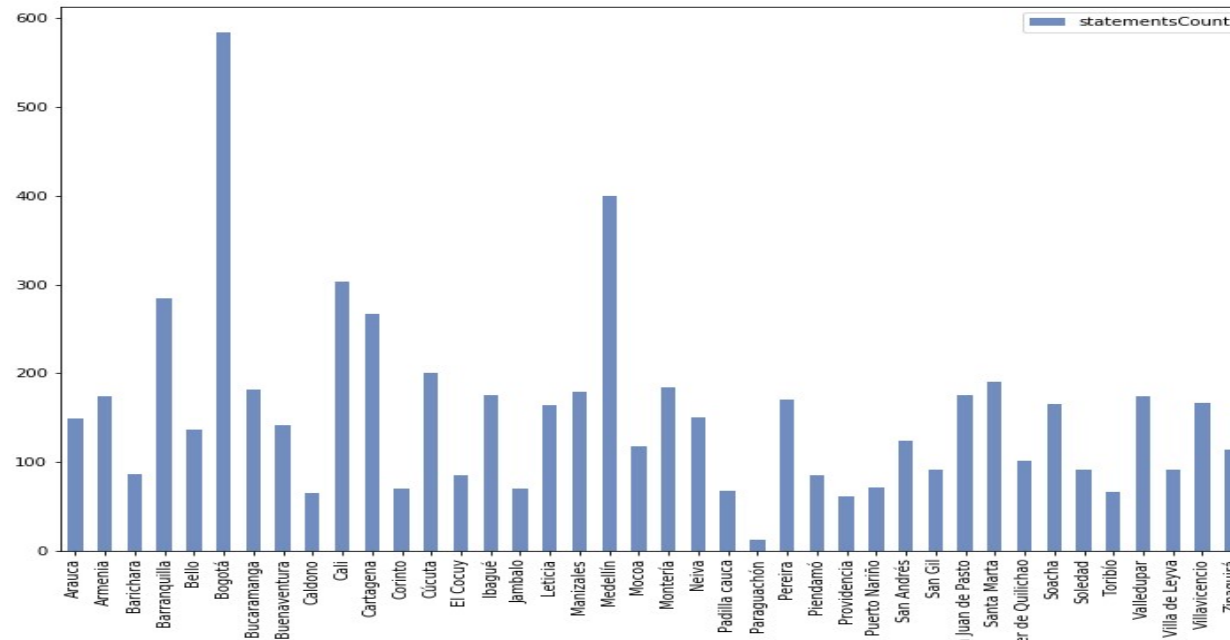
2. Cities of Colombia

Cities, Towns and Villages

S.No.	Focus category	List of cities
5.	Villages	Villa de Leyva (Q1409503), San Gil (Q1294128), Barichara (Q1576773) and Zipaquirá (Q205429)
6.	Small towns	Mocoa (Q579803), Villavicencio (Q749224), Soledad (Q767071), Pasto (Q320015) and Neiva (Q638260)
7.	Towns in Conflict	Cúcuta (Q216847), Medellín, Arauca (Q626543), Paraguachón (Q6060938), Corinto (Q2236398), Piendamó (Q2433349), Santander de Quilichao (Q1093175), Caldonó (Q1391900), Jambaló (Q1525285), Puerto Tejada (Q1256377), Toribío (Q1870972)

3. Urban Information on Wikidata

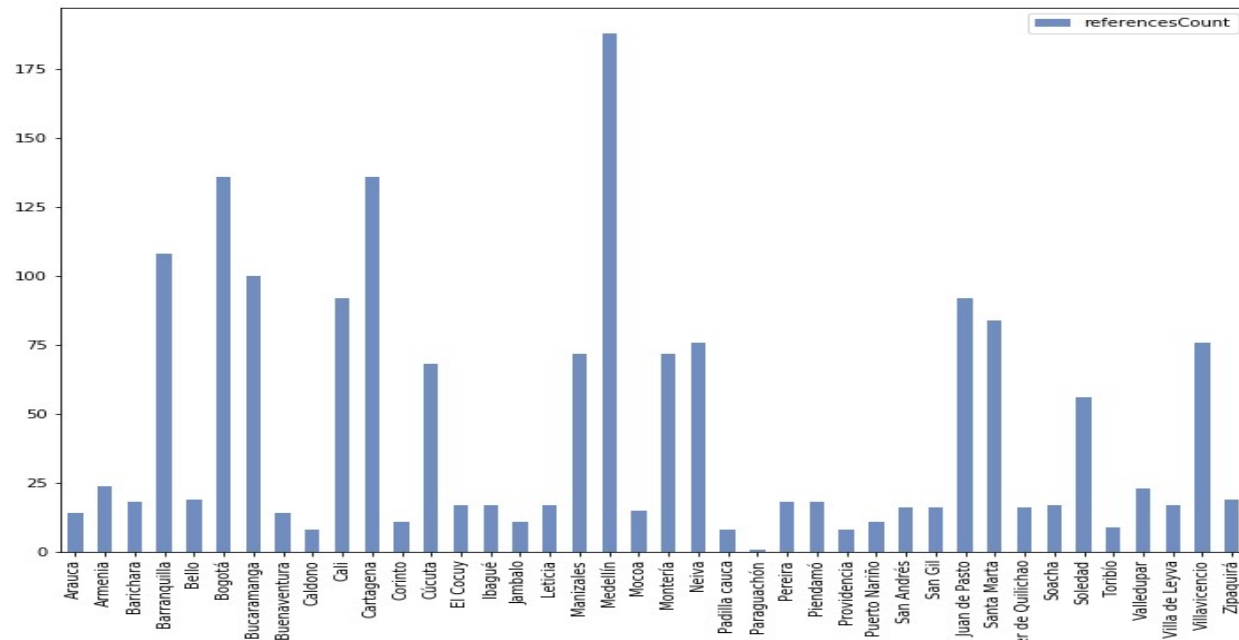
Statements of selected villages, towns and cities on Wikidata



Number of statements of selected villages, towns and cities on Wikidata

3. Urban Information on Wikidata

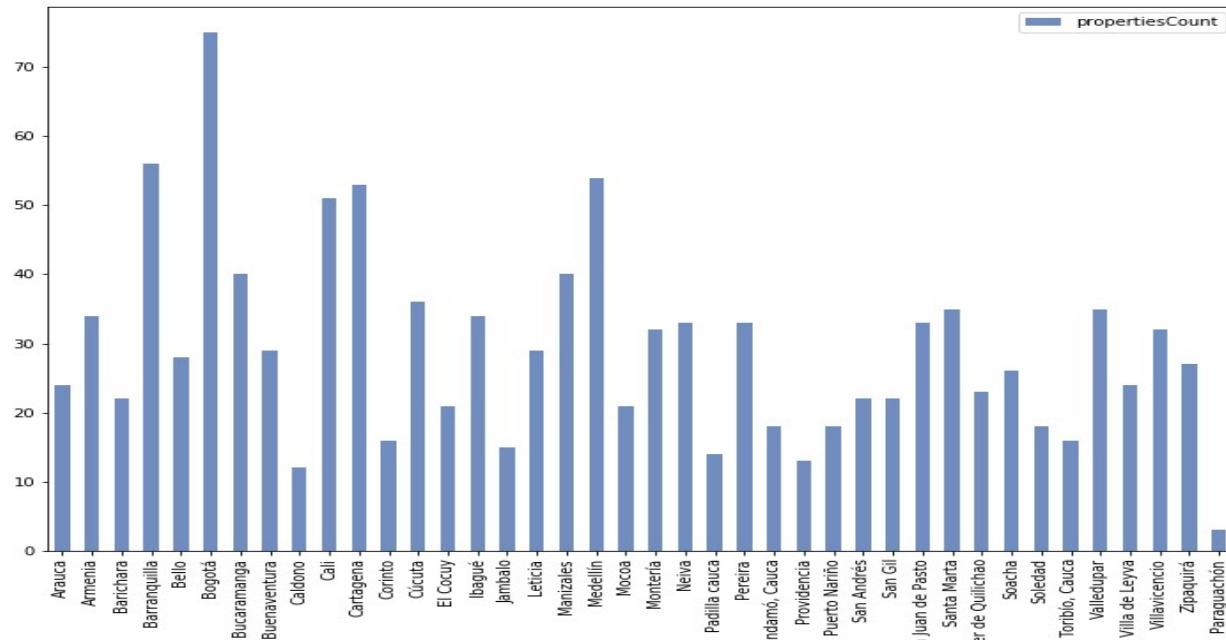
References on statements



Number of references of statements of selected villages, towns and cities on Wikidata

3. Urban Information on Wikidata

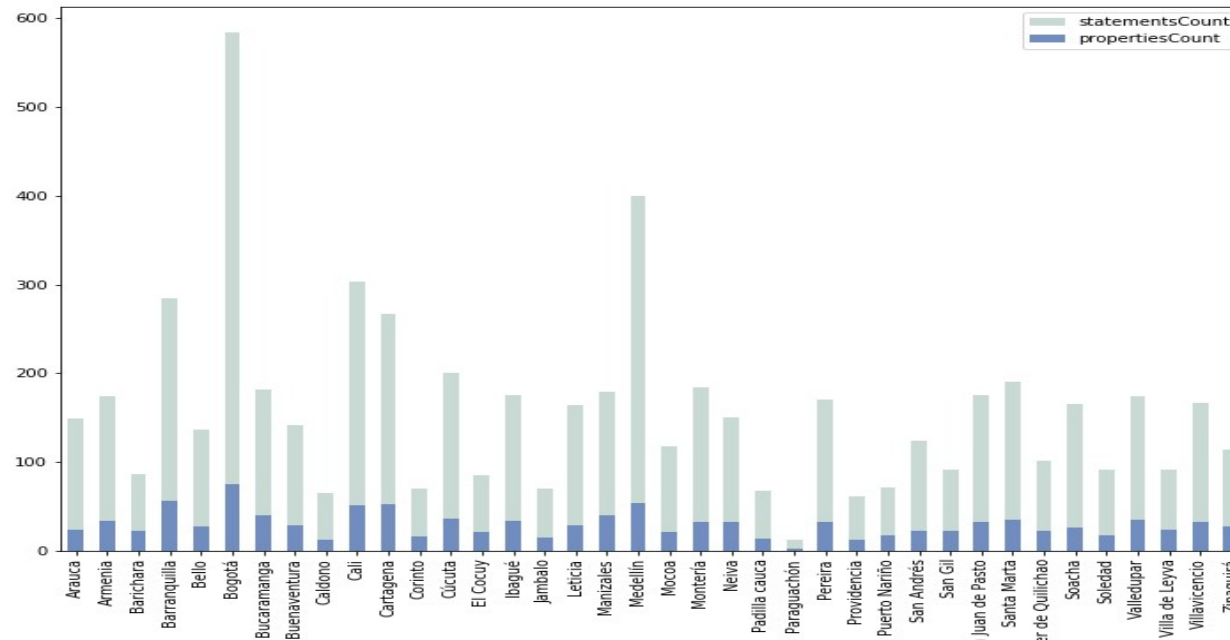
Distinct properties



Number of distinct properties to describe the selected villages, towns and cities on Wikidata

3. Urban Information on Wikidata

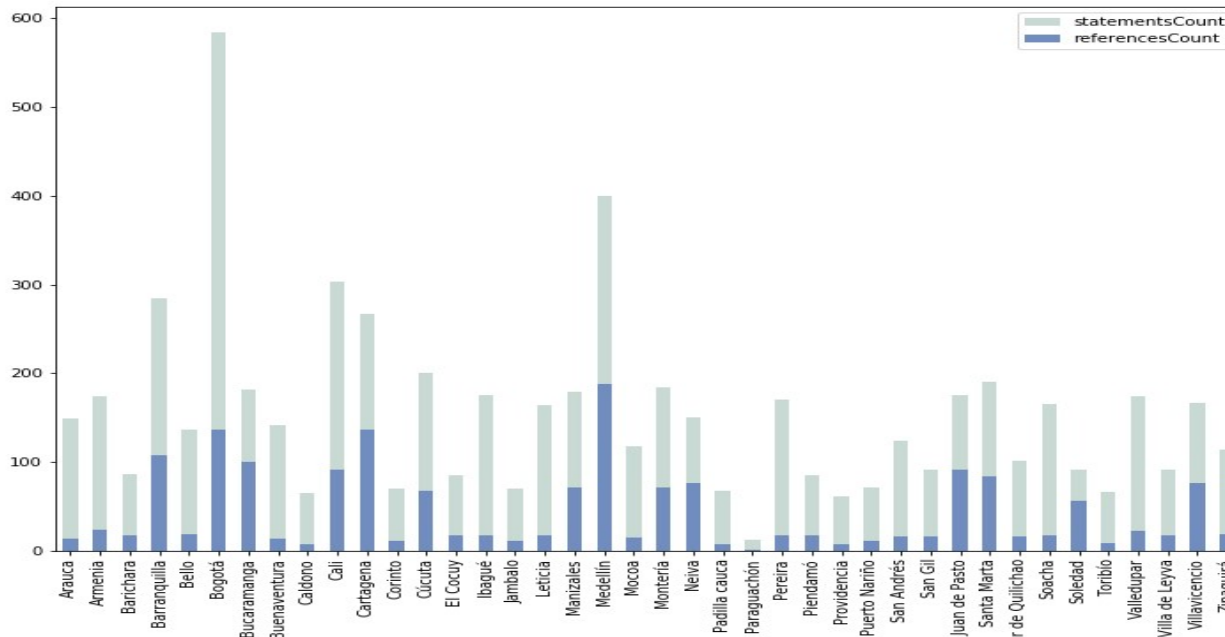
Comparison of statements and properties



Comparison of number of statements and properties to describe the selected villages, towns and cities on Wikidata

3. Urban Information on Wikidata

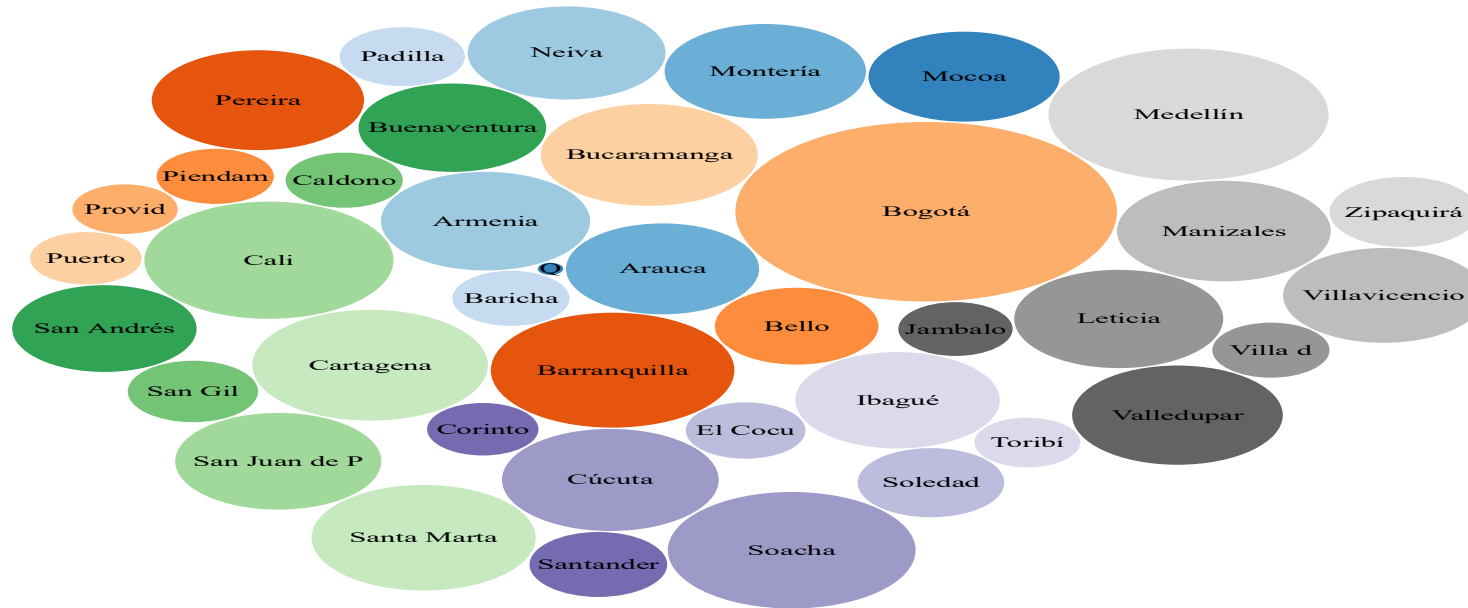
Comparison of statements and references



Comparison of number of statements and properties to describe the selected villages, towns and cities on Wikidata

3. Urban Information on Wikidata

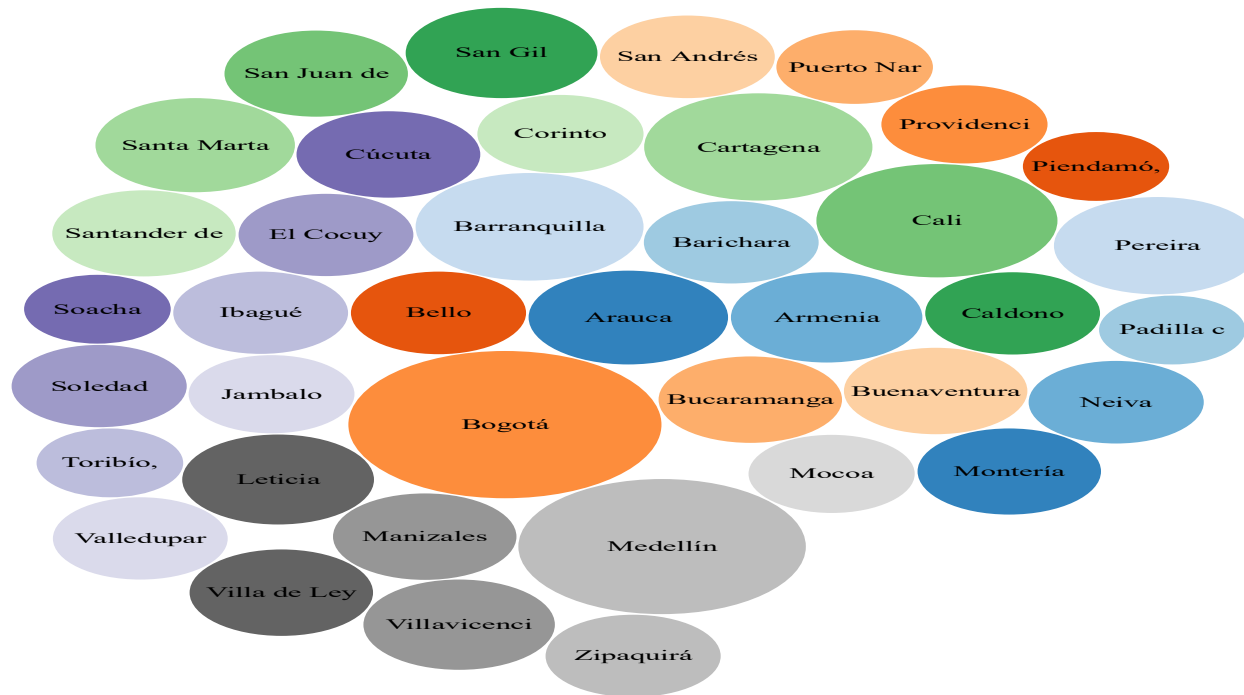
Translation status of labels on Wikidata



Bubble graph demonstrating the number of available multilingual labels on Wikidata

3. Urban Information on Wikidata

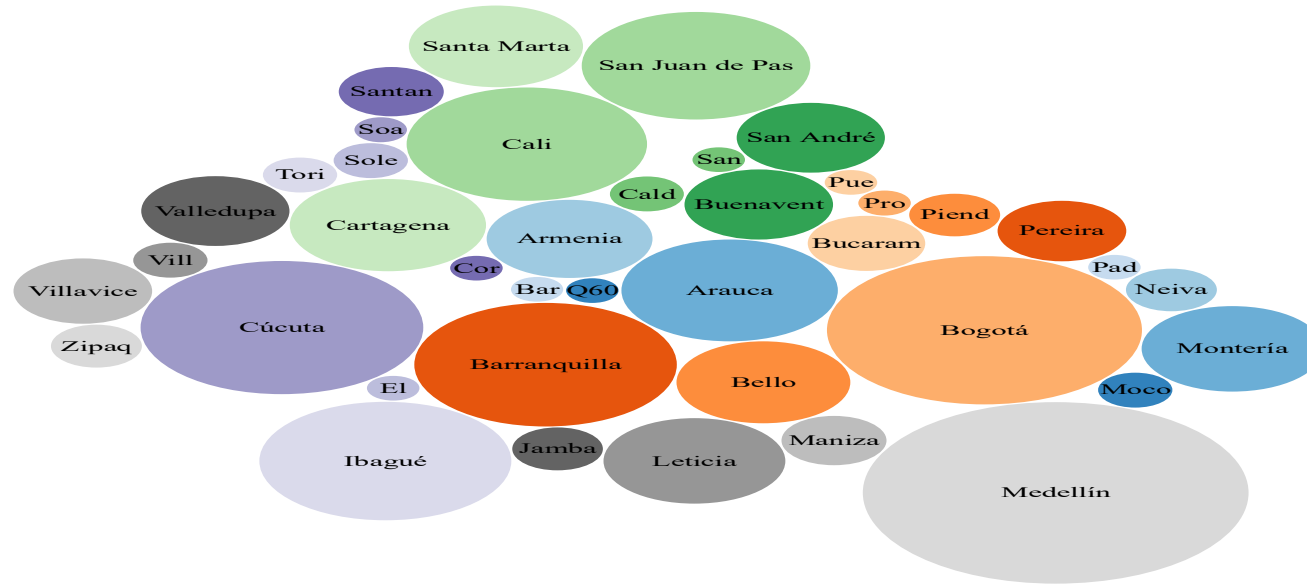
Translation status of descriptions on Wikidata



Bubble graph demonstrating the number of available multilingual descriptions on Wikidata

3. Urban Information on Wikidata

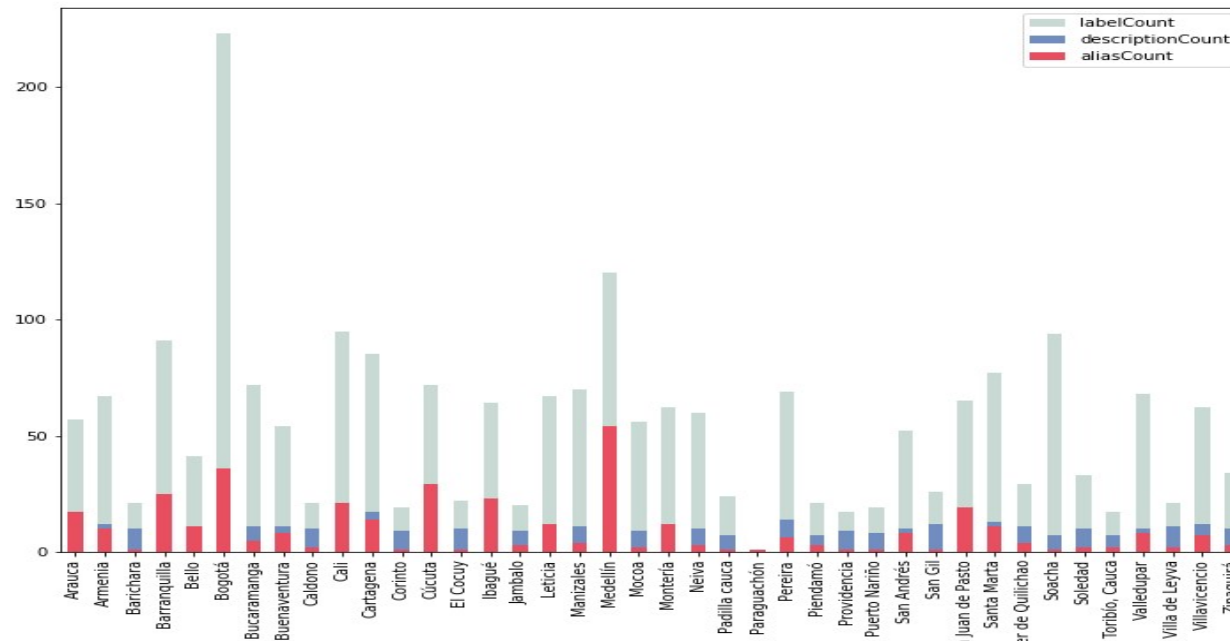
Translation status of aliases on Wikidata



Bubble graph demonstrating the number of available multilingual aliases on Wikidata

3. Urban Information on Wikidata

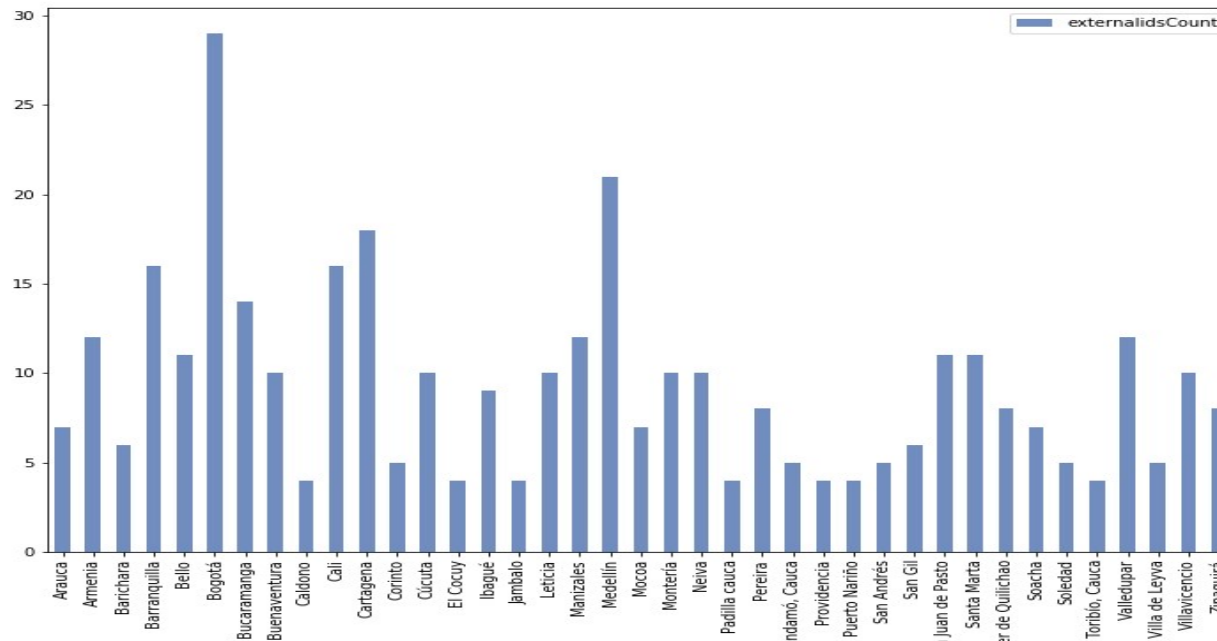
Translation status: Comparison



Comparison of the translation status of labels, descriptions and aliases on Wikidata

3. Urban Information on Wikidata

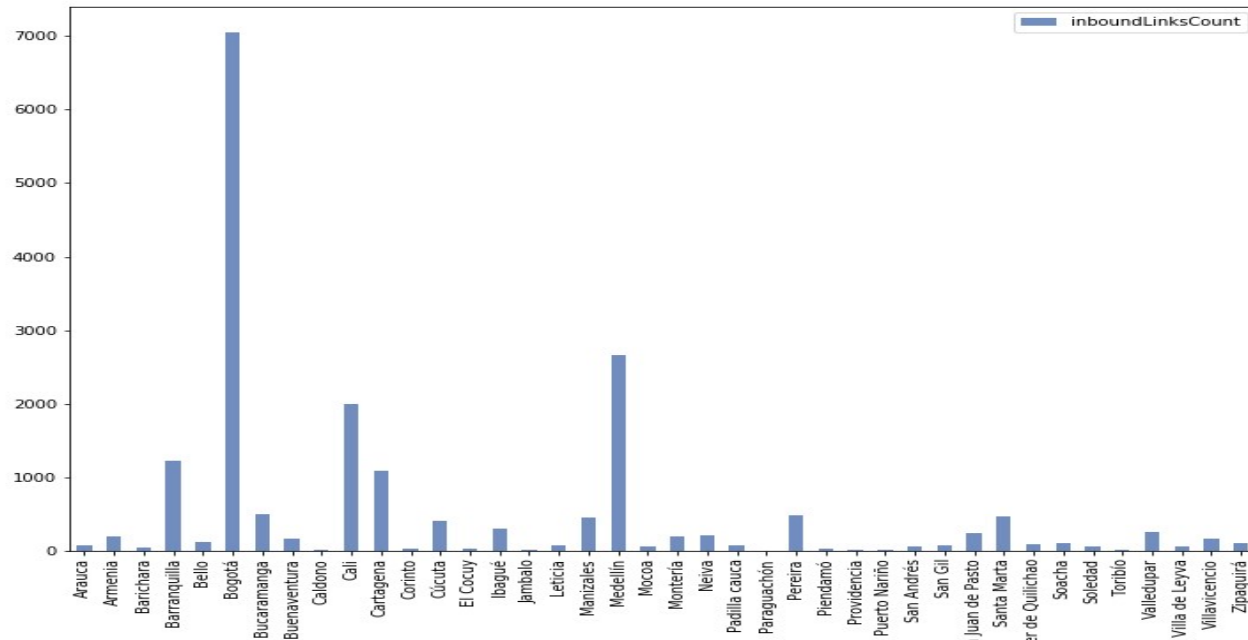
Use of External identifiers on Wikidata



Number of external identifiers used by the selected towns, villages and cities on Wikidata

3. Urban Information on Wikidata

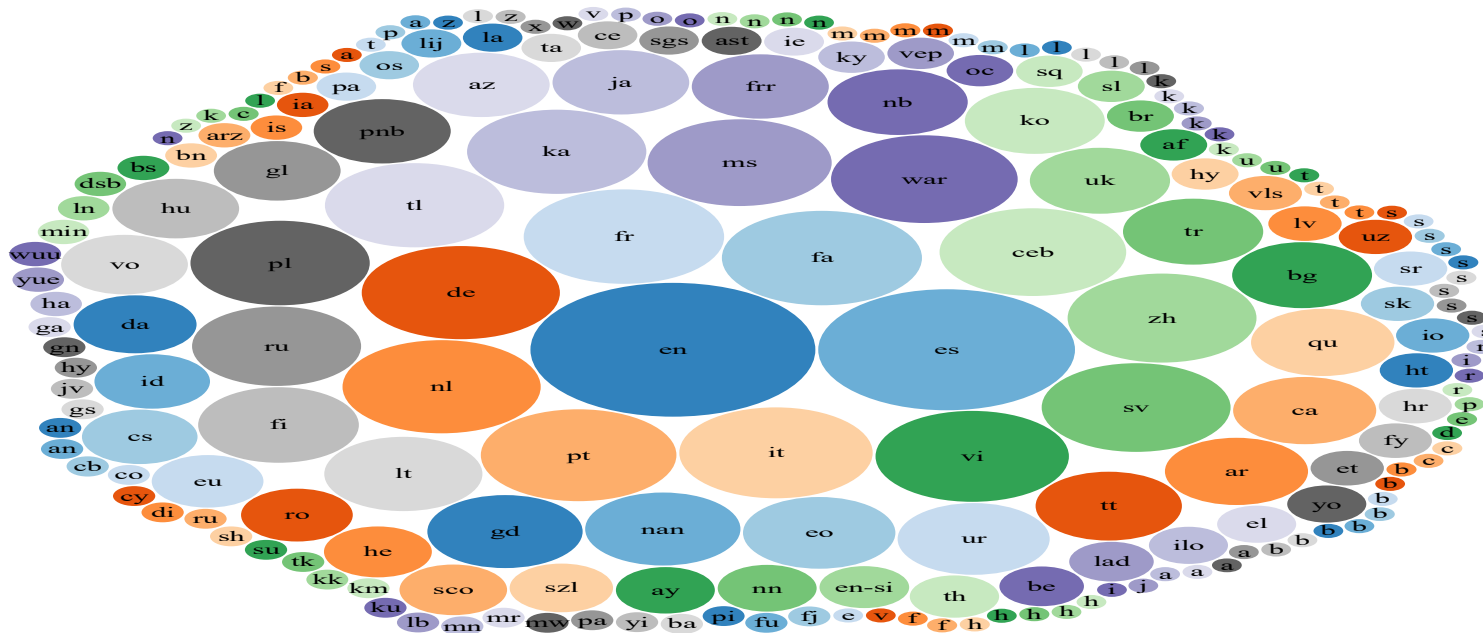
Incoming Wikidata links



Number of incoming Wikidata links to the selected towns, villages and cities on Wikidata

3. Urban Information on Wikidata

Languages used by Wikimedia articles



Languages used by Wikimedia articles for the selected Wikidata selected towns, villages and cities

4. Discussion

Current usage

- Four major cities: Bogotá, Medellín, Cartagena, Cali have significantly good number of statements and references
- Bogotá uses 75 distinct properties, compared to Paris (131), London (109), New York (108) and Berlin (129).
- 96 distinct properties are used by the selected Colombian cities, towns and villages
- No property using the Wikidata datatype GeoShape is currently being utilized
- A total of 36 external identifiers to various external data sources including national libraries and encyclopedic entries are currently used
- Bogotá has 29 distinct external identifiers, compared to Paris (58), London (57), New York (50) and Berlin (59).

4. Discussion

Summary of current translations

Measure	Labels	Description	Alias
count	40	40	40
mean	54.70000	11.500000	9.375000
std	38.87996	5.223222	11.331118
minimum	1	0	1
maximum	223	32	54

4. Discussion

Summary

Measure	Statements	References	Inbound Links	Wikimedia articles
count	40.000000	40.000000	40.000000	40.000000
mean	154.775000	43.450000	480.625000	45.375000
std	102.644142	44.839857	1195.322158	39.173963
min	13.000000	1.000000	1.000000	1.000000
max	584.000000	188.000000	7048.000000	235.000000

5. Conclusion

Concluding remarks

- Potentials of multilingual and structured nature of Wikidata need to be explored more
- Periodic monitoring of statements, translations and references needed

5. Conclusion

Future Works

- Greater participation from public-private partnership including tourism agencies
- Generic tools to monitor urban data information
- Tools to understand and detect possible vandalism cases

Wikidata

1. Kaffee, L. A., Piscopo, A., Vougiouklis, P., Simperl, E., Carr, L., & Pintscher, L. (2017, August). A glimpse into Babel: an analysis of multilinguality in Wikidata. In Proceedings of the 13th International Symposium on Open Collaboration (p. 14). ACM.
2. Müller-Birn, C., Karran, B., Lehmann, J., & Luczak-Rösch, M. (2015, August). Peer-production system or collaborative ontology engineering effort: What is Wikidata?. In Proceedings of the 11th International Symposium on Open Collaboration (p. 20). ACM.
3. Samuel, J. (2017) Collaborative Approach to Developing a Multilingual Ontology: A Case Study of Wikidata. In : Research Conference on Metadata and Semantics Research. Springer, Cham, 2017. p. 167-172.
4. Samuel, J. (2018). Towards Understanding and Improving Multilingual Collaborative Ontology Development in Wikidata. In: WikiWorkshop 2018

Thank you

Questions?

Cities with the count of multilingual labels

```
SELECT ?cityLabel (count(?label) as ?count) {
  {
    SELECT DISTINCT ?cityLabel ?label (lang(?label) as ?langLabel) {
      VALUES ?city {
        #main cities
        wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
        wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
        #departmental captials
        wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
        #intermediary capitals
        wd:Q328518 wd:Q235190 wd:Q852725
        #touristic cities
        wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
        #villages
        wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
        #small towns
        wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
        #towns in conflict
        wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
      ?city rdfs:label ?label.
      SERVICE wikibase:label { bd:serviceParam
        wikibase:language "[AUTO_LANGUAGE],en". }
    }
  }
}
GROUP by ?cityLabel
HAVING (?count > 10)
ORDER by DESC(?count)
```

Property used on Wikidata for selected Colombian cities

```
SELECT DISTINCT ?property {
  VALUES ?city {
    #main cities
    wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
    wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
    #departmental captials
    wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
    #intermediary capitals
    wd:Q328518 wd:Q235190 wd:Q852725
    #touristic cities
    wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
    #villages
    wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
    #small towns
    wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
    #towns in conflict
    wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
  ?city ?prop [].
  FILTER(REGEX(STR(?prop), "http://www.wikidata.org/prop/direct/"))
  BIND(REPLACE(STR(?prop), "http://www.wikidata.org/prop/direct/", "") AS ?property) .
}
```

Property labels used on Wikidata for selected Colombian cities

```
SELECT ?typeLabel ?propertyLabel ?property{
  VALUES ?property {
    wd:P6 wd:P17 wd:P18 wd:P31 wd:P37 wd:P41 wd:P47 wd:P94 wd:P112 wd:P150 wd:P163 wd:P190 wd:P194 wd:P208 wd:P213
    wd:P214 wd:P227 wd:P237 wd:P242 wd:P244 wd:P268 wd:P269 wd:P281 wd:P300 wd:P373 wd:P395 wd:P402 wd:P421 wd:P473
    wd:P571 wd:P625 wd:P646 wd:P856 wd:P901 wd:P906 wd:P910 wd:P935 wd:P948 wd:P950 wd:P982 wd:P989 wd:P1017 wd:P1082
    wd:P1151 wd:P1225 wd:P1296 wd:P1313 wd:P1376 wd:P1417 wd:P1441 wd:P1448 wd:P1464 wd:P1465 wd:P1549 wd:P1566
    wd:P1667 wd:P1705 wd:P1791 wd:P1792 wd:P1830 wd:P1842 wd:P1997 wd:P2044 wd:P2046 wd:P2924 wd:P3219 wd:P3222
    wd:P3417 wd:P3451 wd:P3722 wd:P5008 wd:P5573 wd:P6404 wd:P6766 wd:P7325 wd:P131 wd:P2427 wd:P6782 wd:P691
    wd:P998 wd:P1343 wd:P206 wd:P443 wd:P1813 wd:P2184 wd:P2716 wd:P361 wd:P2043 wd:P2049 wd:P1281 wd:P1889
    wd:P1014 wd:P461 wd:P460 wd:P158 wd:P5760 }
  ?property wikibase:propertyType ?type.
  SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en". }
}
ORDER by ?typeLabel
```

Property used on Wikidata for selected Colombian cities

```
SELECT ?cityLabel (count(DISTINCT ?property) as ?count){
  VALUES ?city {
    #main cities
    wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
    wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
    #departmental captials
    wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
    #intermediary capitals
    wd:Q328518 wd:Q235190 wd:Q852725
    #touristic cities
    wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
    #villages
    wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
    #small towns
    wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
    #towns in conflict
    wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
  ?city ?prop [].
  FILTER(REGEX(STR(?prop), "http://www.wikidata.org/prop/direct/"))
  BIND(REPLACE(STR(?prop), "http://www.wikidata.org/prop/direct/", "") AS ?property) .

  SERVICE wikibase:label { bd:serviceParam wikibase:language "[AUTO_LANGUAGE],en,es". }
}
GROUP by ?cityLabel
ORDER by ?cityLabel
```

Cities with the count of multilingual labels

```
SELECT ?cityLabel (count(?label) as ?count){
{
  SELECT DISTINCT ?city ?label{
    VALUES ?city {
      #main cities
      wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
      wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
      #departmental captials
      wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
      #intermediary capitals
      wd:Q328518 wd:Q235190 wd:Q852725
      #touristic cities
      wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
      #villages
      wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
      #small towns
      wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
      #towns in conflict
      wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
    ?city rdfs:label ?label.
  }
}
SERVICE wikibase:label { bd:serviceParam
  wikibase:language "[AUTO_LANGUAGE],en". }
}
GROUP by ?cityLabel
ORDER by ?cityLabel
```

Cities with the count of multilingual description

```
SELECT ?cityLabel (count(?description) as ?count){
{
  SELECT DISTINCT ?city ?description{
    VALUES ?city {
      #main cities
      wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
      wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
      #departmental captials
      wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
      #intermediary capitals
      wd:Q328518 wd:Q235190 wd:Q852725
      #touristic cities
      wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
      #villages
      wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
      #small towns
      wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
      #towns in conflict
      wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
    ?city schema:description ?description.
  }
}
SERVICE wikibase:label { bd:serviceParam
  wikibase:language "[AUTO_LANGUAGE],en". }
}
GROUP by ?cityLabel
ORDER by ?cityLabel
```

Cities with the count of multilingual alias

```
SELECT ?cityLabel (count(?alias) as ?count){
{
  SELECT DISTINCT ?city ?alias{
    VALUES ?city {
      #main cities
      wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
      wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
      #departmental captials
      wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
      #intermediary capitals
      wd:Q328518 wd:Q235190 wd:Q852725
      #touristic cities
      wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
      #villages
      wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
      #small towns
      wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
      #towns in conflict
      wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
    ?city skos:altLabel ?alias.
  }
}
SERVICE wikibase:label { bd:serviceParam
  wikibase:language "[AUTO_LANGUAGE],en". }
}
GROUP by ?cityLabel
ORDER by ?cityLabel
```

Cities with the number of inbound links from other items

```
SELECT ?cityLabel (count(?subject) as ?count){
{
  SELECT DISTINCT ?subject ?prop ?city {
    VALUES ?city {
      #main cities
      wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
      wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
      #departmental captials
      wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
      #intermediary capitals
      wd:Q328518 wd:Q235190 wd:Q852725
      #touristic cities
      wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
      #villages
      wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
      #small towns
      wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
      #towns in conflict
      wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
    ?subject ?prop ?city.
  }
}
SERVICE wikibase:label { bd:serviceParam
  wikibase:language "[AUTO_LANGUAGE],en". }
}
GROUP by ?cityLabel
ORDER by ?cityLabel
```

Languages with the count of Wikipedia articles on selected Colombian cities

```
SELECT DISTINCT ?cityLabel ?sitelinks {  
  VALUES ?city {wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766  
    wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260}.  
  ?city wikibase:sitelinks ?sitelinks.  
  FILTER(?sitelinks > 10)  
  SERVICE wikibase:label { bd:serviceParam  
    wikibase:language "[AUTO_LANGUAGE],en". }  
}  
ORDER by DESC(?sitelinks)
```

Languages with the count of Wikipedia articles on selected Colombian cities

```
SELECT ?lang (count(?city) as ?count) {  
  {  
    SELECT DISTINCT ?city ?lang {  
      hint:Query hint:optimizer "None"  
      VALUES ?city {wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766  
        wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260}.  
      [] schema:about ?city;  
        schema:inLanguage ?lang.  
    }  
  }  
}  
GROUP BY ?lang  
ORDER BY DESC(?count)
```

Count of Wikimedia articles on selected Colombian cities

```
SELECT DISTINCT ?cityLabel ?sitelinks {
  VALUES ?city {
    #main cities
    wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
    wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
    #departmental captials
    wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
    #intermediary capitals
    wd:Q328518 wd:Q235190 wd:Q852725
    #touristic cities
    wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
    #villages
    wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
    #small towns
    wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
    #towns in conflict
    wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
  ?city wikibase:sitelinks ?sitelinks.
  SERVICE wikibase:label { bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en,es". }
}
ORDER by ?cityLabel
```

Count of Wikimedia articles on selected Colombian cities

```
SELECT ?cityLabel (count(?article) as ?count) {
  {
    SELECT DISTINCT ?city ?article {
      hint:Query hint:optimizer "None"
      VALUES ?city {
        #main cities
        wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
        wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
        #departmental captials
        wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
        #intermediary capitals
        wd:Q328518 wd:Q235190 wd:Q852725
        #touristic cities
        wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
        #villages
        wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
        #small towns
        wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
        #towns in conflict
        wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
      ?article schema:about ?city.
    }
  }
  SERVICE wikibase:label { bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en,es". }
}
GROUP BY ?cityLabel
ORDER BY ?cityLabel
```

Languages of Wikimedia articles on selected Colombian cities

```
SELECT ?lang (count(?city) as ?count) {
  {
    SELECT DISTINCT ?city ?article ?lang {
      hint:Query hint:optimizer "None"
      VALUES ?city {
        #main cities
        wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
        wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
        #departmental captials
        wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
        #intermediary capitals
        wd:Q328518 wd:Q235190 wd:Q852725
        #touristic cities
        wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
        #villages
        wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
        #small towns
        wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
        #towns in conflict
        wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
      ?article schema:about ?city;
        schema:inLanguage ?lang.
    }
  }
}
GROUP BY ?lang
ORDER BY DESC(?count)
```

Wikimedia articles on selected Colombian cities

```
SELECT DISTINCT ?city ?lang ?group {
  hint:Query hint:optimizer "None"
  VALUES ?city {
    #main cities
    wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
    wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
    #departmental captials
    wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
    #intermediary capitals
    wd:Q328518 wd:Q235190 wd:Q852725
    #touristic cities
    wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
    #villages
    wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
    #small towns
    wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
    #towns in conflict
    wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
  [] schema:about ?city;
    schema:inLanguage ?lang;
    schema:isPartOf [wikibase:wikiGroup ?group].
}
```

SPARQL Query

Count of Wikimedia articles on selected Colombian cities

```
SELECT ?cityLabel (count(?lang) as ?count){
{
  SELECT DISTINCT ?city ?lang ?group {
    hint:Query hint:optimizer "None"
    VALUES ?city {
      #main cities
      wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
      wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
      #departmental captials
      wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
      #intermediary capitals
      wd:Q328518 wd:Q235190 wd:Q852725
      #touristic cities
      wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
      #villages
      wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
      #small towns
      wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
      #towns in conflict
      wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
    [] schema:about ?city;
      schema:inLanguage ?lang;
      schema:isPartOf [wikibase:wikiGroup ?group].
  }
}
FILTER(str(?group)="wikipedia")
SERVICE wikibase:label { bd:serviceParam
  wikibase:language "[AUTO_LANGUAGE],en,es". }
}
GROUP by ?cityLabel
ORDER by ?cityLabel
```

Wikimedia articles and associated WikiGroup on selected Colombian cities

```
SELECT ?cityLabel ?group (count(?lang) as ?count){
{
  SELECT DISTINCT ?city ?lang ?group {
    hint:Query hint:optimizer "None"
    VALUES ?city {
      #main cities
      wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
      wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
      #departmental captials
      wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
      #intermediary capitals
      wd:Q328518 wd:Q235190 wd:Q852725
      #touristic cities
      wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
      #villages
      wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
      #small towns
      wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
      #towns in conflict
      wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
    [] schema:about ?city;
      schema:inLanguage ?lang;
      schema:isPartOf [wikibase:wikiGroup ?group].
    }
  } SERVICE wikibase:label { bd:serviceParam
    wikibase:language "[AUTO_LANGUAGE],en,es". }
}
GROUP by ?cityLabel ?group
ORDER by ?cityLabel
```

Reference count of Wikidata statements of selected Colombian cities

```
SELECT ?cityLabel (count(?reference) as ?count){
{
  SELECT ?city ?statement ?reference
  {
    VALUES ?city {
      #main cities
      wd:Q2841 wd:Q48278 wd:Q51103 wd:Q62823 wd:Q657461 wd:Q767071 wd:Q216847 wd:Q1011151 wd:Q222755 wd:Q243766
      wd:Q749224 wd:Q209016 wd:Q816024 wd:Q376903 wd:Q51111 wd:Q996581 wd:Q320015 wd:Q235190 wd:Q852725 wd:Q638260
      #departmental captials
      wd:Q2841 wd:Q62823 wd:Q51103 wd:Q243766 wd:Q48278
      #intermediary capitals
      wd:Q328518 wd:Q235190 wd:Q852725
      #touristic cities
      wd:Q657461 wd:Q134678 wd:Q681111 wd:Q214913 wd:Q767738 wd:Q209016 wd:Q1655984
      #villages
      wd:Q1409503 wd:Q1294128 wd:Q1576773 wd:Q205429
      #small towns
      wd:Q579803 wd:Q749224 wd:Q767071 wd:Q320015 wd:Q638260
      #towns in conflict
      wd:Q216847 wd:Q626543 wd:Q6060938 wd:Q2236398 wd:Q2433349 wd:Q1093175 wd:Q1391900 wd:Q1525285 wd:Q1256377 wd:Q1870972}.
    ?city ?prop ?statement.
    OPTIONAL{?statement prov:wasDerivedFrom ?reference}
    FILTER(REGEX(STR(?statement), "http://www.wikidata.org/entity/statement/"))
  }
}
SERVICE wikibase:label { bd:serviceParam
  wikibase:language "[AUTO_LANGUAGE],en,es". }
}
GROUP by ?cityLabel
ORDER by ?cityLabel
```