

A”

Aalto University
School of Science

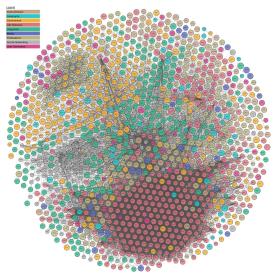
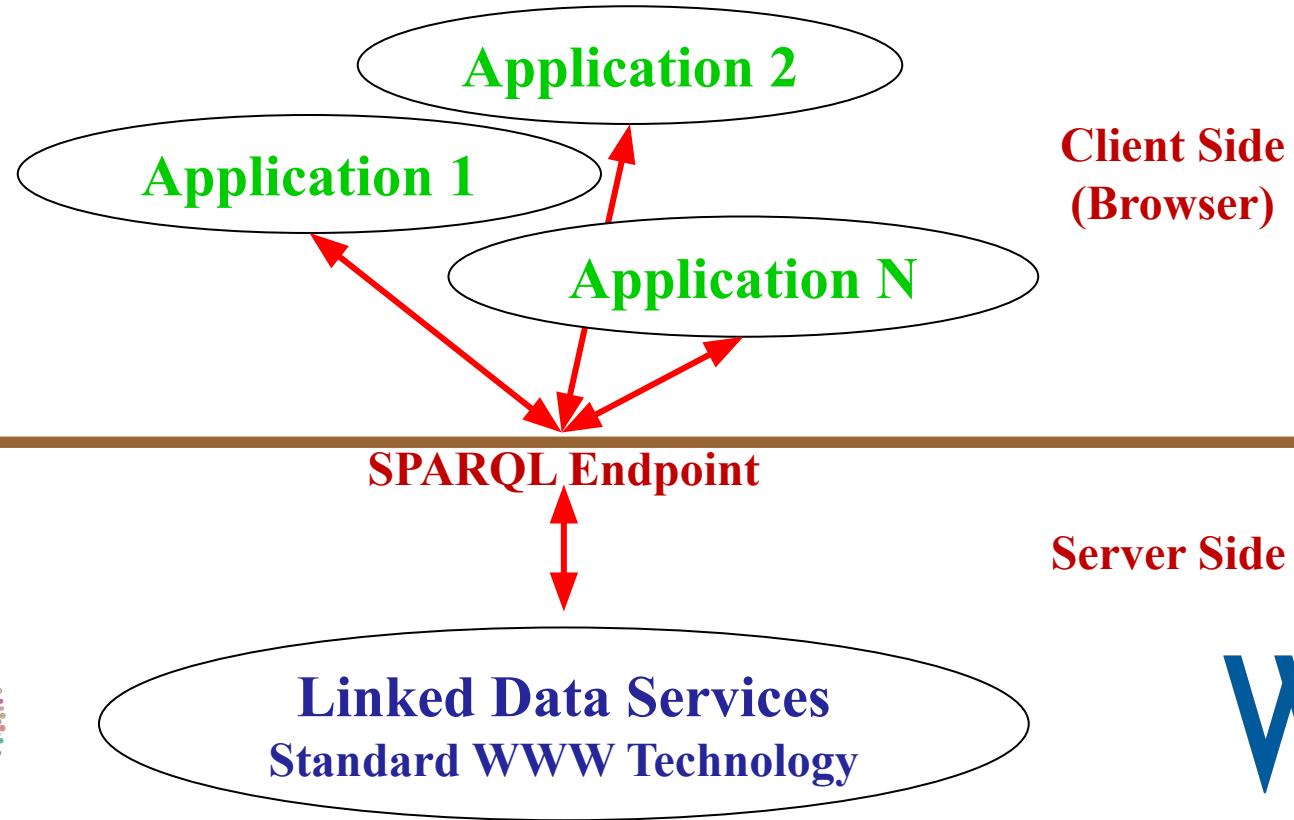


HELDIG
Helsinki Centre for Digital Humanities

How to Use Linked Data Infrastructure for Digital Humanities? – Practical View

Jouni Tuominen, University of Helsinki & Aalto University

Linked Data Application Ecosystem



Datasets

Linked Data Finland

Below you find examples of datasets (services) published by LDF.fi, arranged according to their application domain.

Encyclopedic

1. [Finnish Wikipedia as Linked Data \(DBpedia\)](#). First publication of the Finnish DBpedia linked open data via a SPARQL endpoint.

Lexical

1. [WordNet](#). Large lexical database of English with translations collected by the Open Multilingual WordNet Project.

Cultural Heritage

1. [MuseumFinland](#). The data behind the classic [online application](#) from 2004 that was rewarded e.g. the international Semantic Web Challenge Award.
2. [Semantic Kalevala and Folklore](#). Arguably the first publication of folklore as Linked Open Data in the world.
3. Data from CultureSampo (Kulttuurisampo) (work in progress). Data from the [CultureSampo](#) application that got the [Outstanding Paper Award 2011-2012](#) of the Semantic Web Journal.
4. [BookSampo \(Kirjasampo\)](#). Data behind the famous collaborative [Kirjasampo](#) application of the Finnish Public Libraries that contains rich semantic descriptions of virtually all Finnish fiction literature.

History

1. [Semantic National Biography](#). First national history ontology created in collaboration with Finnish historians.
2. [World War I Linked Open Data](#). Result on an international collaboration regarding sharing data about war history.
3. Finnish war victim databases published by the National Archives of Finland:
 - [War Victims in Finland 1914–1922](#)
 - [Prisoner-of-war deaths and people handed over in Finland 1939–1955](#)
 - [Casualties during the Finnish wars 1939–1945](#)
4. [WarSampo](#). Large heterogeneous sets of data about the World War II in Finland as linked open data.



Try it! <http://ldf.fi>

Law

1. [Finnish Law as Linked Open Data \(Semantic Finlex\)](#). Finnish Law and law cases available as (Linked) Open Data for the first time!

Spatial

1. [Finnish Geographic Names](#). Information on 800,00 Finnish places translated into Linked Data from the [registry](#) maintained by the [National Land Survey of Finland](#).
2. [Names Archive of the Institute for the Languages of Finland](#). Information on 2.3 million place name records from the [Names Archive](#) of the [Institute for the Languages of Finland](#). The [NameSampo \(Nimisampo\)](#) service is based on this data and other place name datasets.

Linked Open Universities

1. [Linked Open Aalto](#). Aalto University's pioneering work in opening its data repositories as Linked Data for applications.

Linked Science

1. [Bird Observations](#) of the nation wide [Tiira.fi](#) Service. Collaborative citizen science data on the semantic web for applications, such as [BirdWatch](#).
2. [Bird Observations of Halias Station with Hanko Weather Data](#). Exceptional dataset of systematic bird observations for ca. 30 years from the Halias bird observation station in Hanko linked with weather observation data.

Ontologies

1. [ONKI Light on SPARQL Ontology Service](#) for thesauri. Large Linked Data collection of national thesauri developed into ontologies by the [FinnONTO project](#) 2003-2012.
2. [Agent Ontology](#). First attempt to create a shared national data repository of historical persons and organizations.
3. [Finnish Places as Linked Data](#). First attempt to create a shared national Linked Data repository of historical and contemporary places.
4. [Finnish History Events](#). First attempt to create a shared Linked Data repository of national historical events created in collaboration with Finnish historians.

Open Data Service

Access open data sources maintained by the National Library of Finland

Data Catalog

Our data catalog showcases the open data sets and APIs of the National Library.



[View catalog](#) [View API](#) [View datasets](#)

Linked Data

Linked Bibliographic Data

The national bibliography Fennica is available as RDF Linked Open Data.

Browse our Linked Data

Collections

- [Fennica](#)

Concept Schemes

- [Finnish Corporate Names](#)
- [YSO - General Finnish ontology](#)
- [YSO places](#)

Access

- [SPARQL endpoint](#)
- [Linked Data Fragments server](#)
- [Downloadable data dumps](#)

Documentation

- [Fennica RDF data model documentation](#)
- [What is included in Fennica \(in Finnish\)](#)



The screenshot shows the Finto vocabulary service homepage. The top navigation bar includes links for 'vocabularies', 'About', 'Feedback', 'Help', 'suomeksi', and 'på svenska'. A search bar is also present. The main content area features the 'finto' logo and a 'Welcome to the Finto service!' message. It lists several vocabularies and ontologies under two categories: 'GENERAL' and 'SOCIETY'. The 'GENERAL' category includes: Alärs - General thesaurus in Swedish, Etelä-Suomen kunnat ja kaupungit, General Finnish ontology YSO, KOKO Ontology, Metainfoontaanotto, Pordus categories, YSA - General Finnish thesaurus, and YSA ja YSO:n käsite-ohjelmatset. The 'SOCIETY' category includes: IPTC NewsCodes, JUHO - Julkishallituksen ontologia, Julkisten palvelujen luokitus, and JUPO - Finnish Ontology for Public Administration.

Finto vocabulary service

The Finnish thesaurus and ontology service provides access to controlled vocabularies such as thesauri, classifications and ontologies as Linked Data.



Main page
Community portal
Project chat
Create a new Item
Create a new Lexeme
Recent changes
Random item
Query Service
Nearby
Help
Donate

In other projects

Wikimedia Commons
MediaWiki
Meta-Wiki
Wikispecies
Wikibooks
Wikimania
Wikinews
Wikimedia
Wikisource
Wikispecies
Wikivoyage
Wiktionary

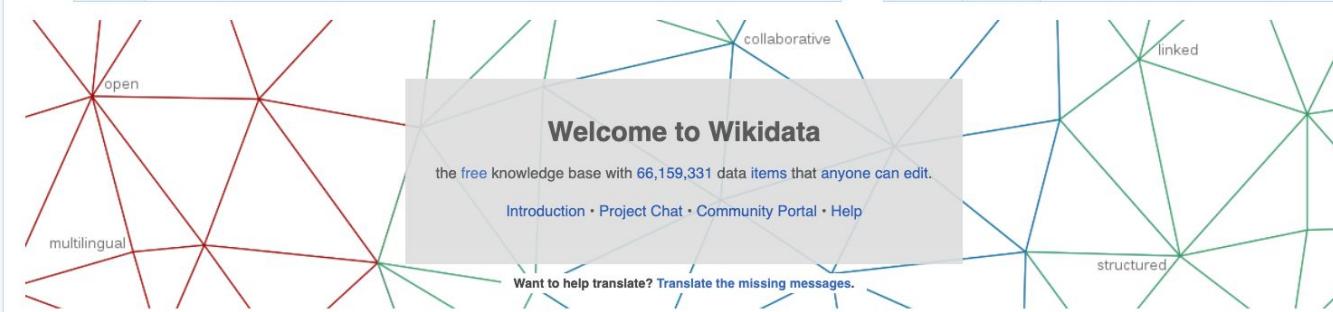
Print/export
Create a book
Download as PDF
Printable version

Tools
What links here
Related changes
Special pages
Permanent link
Page information
Wikidata item

In Wikipedia
Deutsch
English
Eesti
Suomi
हिन्दी
Русский
Davisämägiella
Svenska
中文

291 more

Edit links



Welcome to Wikidata

the free knowledge base with 66,159,331 data items that anyone can edit.

[Introduction](#) • [Project Chat](#) • [Community Portal](#) • [Help](#)

Want to help translate? [Translate the missing messages.](#)

Welcome!

Wikidata is a free and open knowledge base that can be read and edited by both humans and machines.

Wikidata acts as central storage for the **structured data** of its Wikimedia sister projects including Wikipedia, Wikivoyage, Wiktionary, Wikisource, and others.

Wikidata also provides support to many other sites and services beyond just Wikimedia projects! The content of Wikidata is available under a free license, exported using standard formats, and can be interlinked to other open data sets on the linked data web.

Get involved

Learn about Wikidata

- What is Wikidata? Read the [Wikidata introduction](#).
- Explore Wikidata by looking at a featured showcase item for author [Douglas Adams](#) (Q42).
- Get started with Wikidata's [SPARQL query service](#).

Contribute to Wikidata

- Learn to edit Wikidata: follow the [tutorials](#).
- Work with other volunteers on a subject that interests you: [join a WikiProject](#).
- Individuals and organisations can also [donate data](#).

Meet the Wikidata community

- Visit the [community portal](#) or attend a [Wikidata event](#).
- Create a [user account](#).
- Talk and ask questions on the [Project chat](#) or via live IRC chat.

Use data from Wikidata

- Learn how you can [retrieve and use data from Wikidata](#).

More...

News

Learn about data

New to the wonderful world of data? [Develop and improve your data literacy](#) through content designed to get you up to speed and feeling comfortable with the fundamentals in no time.



Item: [Earth](#) (Q2)



Property: [highest point](#) (P610)



custom value:
[Mount Everest](#)
(Q513)

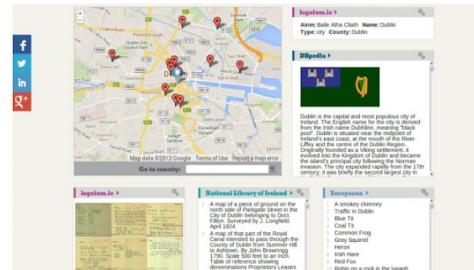
Current highlights

- Timi Hansen (Q1813648)
- Jan Erik Kongshaug (Q273429)
- 35 Aquarii (Q1747913)
- 36 Aquarii (Q4635709)
- the last McDonalds burger in Iceland (Q73491844)
- His Dark Materials (Q56195117)
- Jacques Dupont (Q275830) (pictured)



Discover

Innovative applications and contributions from the Wikidata community

[Our mission](#)[Priorities](#)[Network Association](#)[Services](#)[Resources](#)[Join us](#)[News](#)[Europeana Collections](#)[Get an API key](#)[Jobs](#)[Press](#)[Contact us](#)

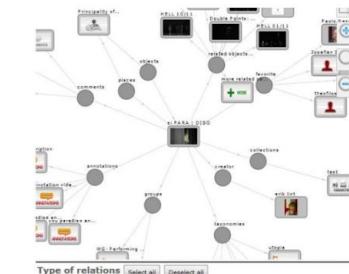
Europeana Linked Open Data feeds Irish place name database

Europeana Linked Open Data feeds Irish place name database [SEE MORE](#)

TOOLS CREATED WITH THE EUROPEANA LOD API

Amsterdam Museum Linked Open Data

Amsterdam Museum Linked Open Data- The Linked Open Data Cloud connects items from various domains, including cultural heritage. By using unique web-identifiers (URIs) for objects and a common framework for describing them (RDF), and by linking to existing resources, a web of semantically-linked data emerges.

[SEE MORE](#)

ECLAP Linked Open Graph

ECLAP Linked Open Graph allows users to see, explore and browse the relationships among the ECLAP content and other types of resource created on the ECLAP platform.

[SEE MORE](#)

Linked Data browsing for humans and machines

saari: Ukko

[edit]

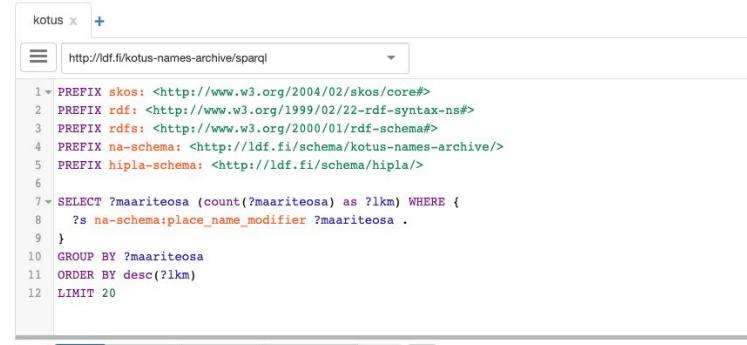


68.936487, 27.282297

Collection	1-kokoelma
Collection parish (in ca 1938)	Inari
Collector	Portti, Reija
http://ldf.fi/schema/kotus-names-names-archive/positioning_accuracy	Paikka sijaitsee keruukartalla tämän karttaruudun alueella.
Latitude	68.936487
Longitude	27.282297
Name	Ukko
Name type	paikannimi
Same as	https://nimiaristo.fi/wiki/Q5601617
Stamp date	1990
Type	<u>saari</u>

SPARQL endpoints for querying data for analysis, visualization, mash-up apps

e.g. CSV



A screenshot of a web-based SPARQL endpoint interface. The URL in the address bar is <http://ldf.fi/kotus-names-archive/sparql>. The page displays a SPARQL query and its results.

```
1 PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
2 PREFIX rdfs: <http://www.w3.org/1999/02/22-rdf-syntax-ns#>
3 PREFIX rdf: <http://www.w3.org/2000/01/rdf-schema#>
4 PREFIX na-schema: <http://ldf.fi/schema/kotus-names-archive/>
5 PREFIX hipla-schema: <http://ldf.fi/schema/hipla/>
6
7 SELECT ?maariteosa (count(?maariteosa) as ?lkm) WHERE {
8   ?s na-schema:place_name_modifier ?maariteosa .
9 }
10 GROUP BY ?maariteosa
11 ORDER BY desc(?lkm)
12 LIMIT 20
```

The results table shows 20 entries:

maariteosa	lkm
Iso	"13064"^^xsd:integer
Mylly	"10644"^^xsd:integer
Riihi	"8926"^^xsd:integer
Pitkä	"8180"^^xsd:integer
Kivi	"8136"^^xsd:integer
Pikkū	"7783"^^xsd:integer
Väli	"7490"^^xsd:integer
Ranta	"6950"^^xsd:integer
Ala	"6686"^^xsd:integer
Koti	"5970"^^xsd:integer
Koivu	"5521"^^xsd:integer
Perä	"5424"^^xsd:integer
Kallio	"5085"^^xsd:integer
Uusi	"4976"^^xsd:integer
Raja	"4928"^^xsd:integer
Palo	"4554"^^xsd:integer
Suo	"4412"^^xsd:integer
Sauna	"4369"^^xsd:integer
Joki	"4334"^^xsd:integer
Metsä	"4327"^^xsd:integer

Download data dumps

@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
@prefix schema: <http://schema.org/> .
@prefix skos: <http://www.w3.org/2004/02/skos/core#> .
@prefix xml: <http://www.w3.org/XML/1998/namespace> .
@prefix xsd: <http://www.w3.org/2001/XMLSchema#> .

<http://urn.fi/URN:NBN:fi:bib:me:W00003542600> schema:author <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:contributor <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Mikael Agricolan tekstet : 1, ABC kiria ; Rucoufkiria",
"Mikael Agricolan tekstet : 1, Abckiria, rucuskiria",
"Mikael Agricolan tekstet : 2, Se Wfi Teftamenti",
"Mikael Agricolan tekstet : 2, Se wsi testamentti",
"Mikael Agricolan tekstet : 3, Käsikirja, Messu eli Herran echtolinen, Se meiden Herran Iesusen Christusen pina, Davidin psaltari, Weisut ia ennustoxet, Ne prophetat, Haggaj, Sacharia, Maleachi",
"Mikael Agricolan tekstet : 3, Käsikirja",
"Mikael Agricolan tekstet : Tekstien selvennys" .

<http://urn.fi/URN:NBN:fi:bib:me:W00023266800> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Suomalaisia suurmiehiä" .

<http://urn.fi/URN:NBN:fi:bib:me:W00025575600> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Mikael Agricolan edelläkävijä : Pyhän Stefanin, Perman ensimmäisen piispan, elämäntyö" .

<http://urn.fi/URN:NBN:fi:bib:me:W00028705000> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Nuori Mikael Agricola" .

<http://urn.fi/URN:NBN:fi:bib:me:W00029465400> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Mikael Agricolasta E. W. Pakkalaan : Suomen kirkon paimenien elämäkerrasto" .

<http://urn.fi/URN:NBN:fi:bib:me:W00031602000> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "En väg till en av världslitteraturens stora namnlösa skalder : vem var Michael Agricola?" .

<http://urn.fi/URN:NBN:fi:bib:me:W00041137700> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Fiskaresonen : Finlands förgätlige wälgorare" .

<http://urn.fi/URN:NBN:fi:bib:me:W00041920500> schema:contributor <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Mikael Agricola ja Erasmus Rotterdamainen" .

<http://urn.fi/URN:NBN:fibib:me:W00046892800> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Mikael Agricola : bibliografinen opas" .

<http://urn.fi/URN:NBN:fi:bib:me:W00047053600> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Vanhan kirjasuomen lukemisto" .

<http://urn.fi/URN:NBN:fi:bib:me:W00047350200> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Michael Agricola : der Reformatator Finnlands : sein Leben und sein Werk" .

<http://urn.fi/URN:NBN:fi:bib:me:W00047843300> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Mikael Agricola, der erste finnische Bibelübersetzer" .

<http://urn.fi/URN:NBN:fi:bib:me:W00048912200> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:contributor <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Oma kieli : Mikael Agricolan tekstejä nykysuomaksi" .

<http://urn.fi/URN:NBN:fi:bib:me:W00049272700> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Agricolan aika" .

<http://urn.fi/URN:NBN:fi:bib:me:W00060415000> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Suomalaisen eksegetikan ja orientalistiikan juria : Roots of exegesis and oriental studies in Finland" .

<http://urn.fi/URN:NBN:fi:bib:me:W00060662600> schema:about <http://urn.fi/URN:NBN:fi:au:pn:000103346> ;
schema:name "Mikael Agricola",
"Mikael Agricola : elämä ja tekset" .

SPARQL example with AcademySampo's Ylioppilasmatrikkeli data 1640–1899



<http://yasgui.org>

```
3 PREFIX skos: <http://www.w3.org/2004/02/skos/core#>
4 PREFIX : <http://ldf.fi/yoma/>
5 PREFIX gvp: <http://vocab.getty.edu/ontology#>
6 PREFIX foaf: <http://xmlns.com/foaf/0.1/>
7 PREFIX geo: <http://www.w3.org/2003/01/geo/wgs84_pos#>
8
9 # persons and their student nations|
10
11 SELECT * WHERE {
12   ?person a foaf:Person ;
13     :student_nation ?sn ;
14     skos:prefLabel ?person_name .
15   ?sn skos:prefLabel ?sn_label . FILTER (LANG(?sn_label)='fi')
16 }
```

Table Response Pivot Table Google Chart Geo </>

Showing 1 to 50 of 19,864 entries (in 2.243 seconds)

Search: Show 50 entries

	person	sn	person_name	sn_label
1	http://ldf.fi/yoma/p10	http://ldf.fi/yoma/sn15	"Maexmontanus, Gabriel"@fi	"Satakuntalainen osakunta"@fi
2	http://ldf.fi/yoma/p10000	http://ldf.fi/yoma/sn15	"Sundvall, Henrik Gustaf (1768-1786)"@fi	"Satakuntalainen osakunta"@fi
3	http://ldf.fi/yoma/p10081	http://ldf.fi/yoma/sn15	"Langberg, Nils Karl (1765-1802)"@fi	"Satakuntalainen osakunta"@fi
4	http://ldf.fi/yoma/p10136	http://ldf.fi/yoma/sn15	"Sigelli, Erik (1764-1813)"@fi	"Satakuntalainen osakunta"@fi
5	http://ldf.fi/yoma/p10137	http://ldf.fi/yoma/sn15	"Aulén, Matias (1762-1821)"@fi	"Satakuntalainen osakunta"@fi
6	http://ldf.fi/yoma/p10140	http://ldf.fi/yoma/sn15	"Astrén, David (1764-1838)"@fi	"Satakuntalainen osakunta"@fi
7	http://ldf.fi/yoma/p1019	http://ldf.fi/yoma/sn15	"Kolkonius, Abraham (1629-1706)"@fi	"Satakuntalainen osakunta"@fi
8	http://ldf.fi/yoma/p1020	http://ldf.fi/yoma/sn15	"Melartopaeus, Gabriel (-1686)"@fi	"Satakuntalainen osakunta"@fi



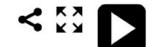
```
6 PREFIX foaf: <http://xmlns.com/foaf/0.1/>
7 PREFIX geo: <http://www.w3.org/2003/01/geo/wgs84_pos#>
8
9 # persons born in 1750-1840 and their student nations
10
11 SELECT * WHERE {
12   ?person a foaf:Person ;
13   :student_nation ?sn ;
14   skos:prefLabel ?person_name .
15   ?sn skos:prefLabel ?sn_label . FILTER (LANG(?sn_label)='fi')
16
17   ?person :has_birth [ schema:date/gvp:estStart ?date ] .
18   FILTER ("1750-01-01"^^xsd:date <= ?date && ?date <= "1840-01-01"^^xsd:date)
19 }
```

Table Response Pivot Table Google Chart Geo [Download](#) </>

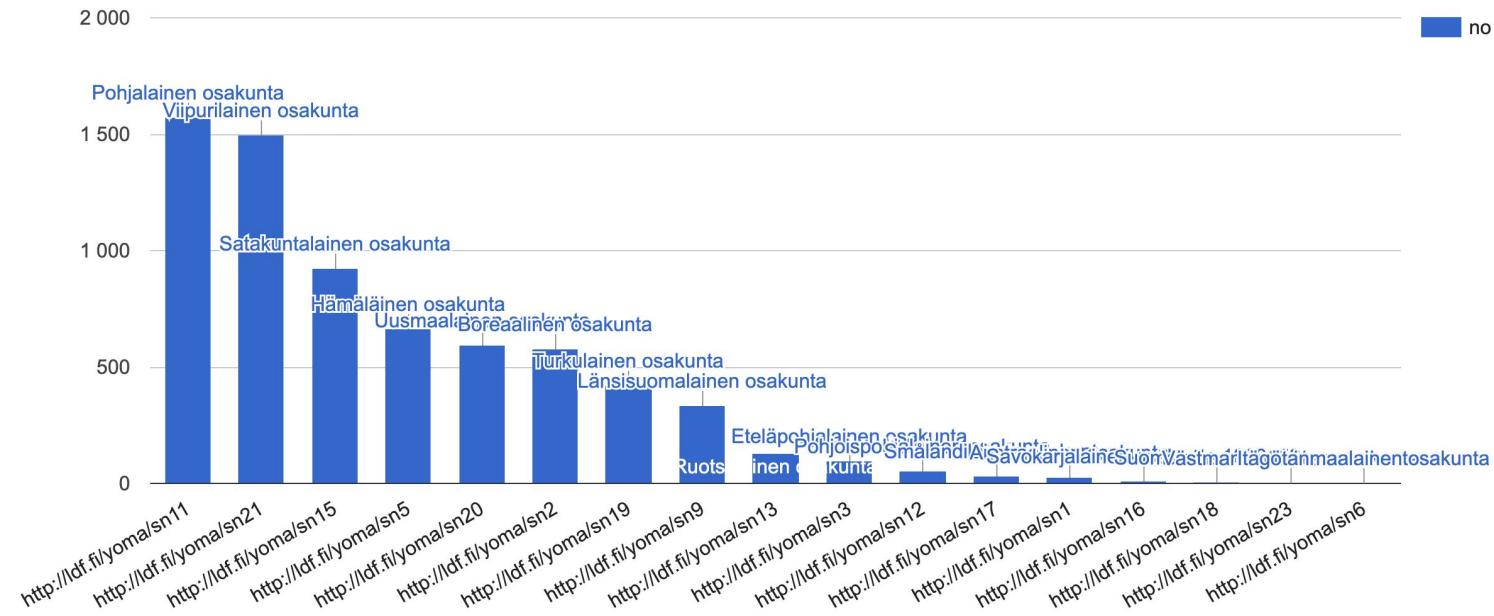
Showing 1 to 50 of 6,945 entries (in 1.699 seconds)

Search: Show 50 entries

	person	sn	person_name	sn_label	date
1	http://ldf.fi/yoma/p10000	http://ldf.fi/yoma/sn15	"Sundvall, Henrik Gustaf (1768-1786)"@fi	"Satakuntalainen osakunta"@fi	"1768-09-26"^^xsd:date
2	http://ldf.fi/yoma/p10081	http://ldf.fi/yoma/sn15	"Langberg, Nils Karl (1765-1802)"@fi	"Satakuntalainen osakunta"@fi	"1765-10-29"^^xsd:date
3	http://ldf.fi/yoma/p10136	http://ldf.fi/yoma/sn15	"Sigelli, Erik (1764-1813)"@fi	"Satakuntalainen osakunta"@fi	"1764-05-10"^^xsd:date
4	http://ldf.fi/yoma/p10137	http://ldf.fi/yoma/sn15	"Aulén, Matias (1762-1821)"@fi	"Satakuntalainen osakunta"@fi	"1762-02-08"^^xsd:date
5	http://ldf.fi/yoma/p10140	http://ldf.fi/yoma/sn15	"Astrén, David (1764-1838)"@fi	"Satakuntalainen osakunta"@fi	"1764-06-27"^^xsd:date
6	http://ldf.fi/yoma/p10326	http://ldf.fi/yoma/sn15	"Kekoni, Johan Fredrik (1770-1820)"@fi	"Satakuntalainen osakunta"@fi	"1770-12-09"^^xsd:date
7	http://ldf.fi/yoma/p10351	http://ldf.fi/yoma/sn15	"Moliis, Henrik Johan (1769-1837)"@fi	"Satakuntalainen osakunta"@fi	"1769-05-11"^^xsd:date
8	http://ldf.fi/yoma/p10352	http://ldf.fi/yoma/sn15	"Weckman, Henrik (1765-1824)"@fi	"Satakuntalainen osakunta"@fi	"1765-12-30"^^xsd:date



```
11 ▼ SELECT * WHERE {
12 ▼   {
13 ▼     SELECT ?sn (COUNT(?person) AS ?no) WHERE {
14       ?person a foaf:Person ;
15         :student_nation ?sn ;
16         skos:prefLabel ?person_name .
17       ?sn skos:prefLabel ?sn_label . FILTER (LANG(?sn_label)='fi')
18
19 ▼     ?person :has_birth [ schema:date/gvp:estStart ?date ] .
20     FILTER ("1750-01-01"^^xsd:date <= ?date && ?date <= "1840-01-01"^^xsd:date)
21   } GROUP BY ?sn
22   ORDER BY DESC (?no)
23 }
24 ?sn skos:prefLabel ?sn_label . FILTER (LANG(?sn_label)='fi')
```



```

9 # the distribution of the student nations and birth places of persons born in 1750-1840
10
11 SELECT * WHERE {
12 {
13   SELECT ?place ?sn (COUNT(?person) AS ?no) WHERE {
14     ?person a foaf:Person ;
15       :student_nation ?sn ;
16       skos:prefLabel ?person_name .
17     ?sn skos:prefLabel ?sn_label . FILTER (LANG(?sn_label)='fi')
18
19   ?person :has_birth [ schema:place ?place ;
20     schema:date/gvp:estStart ?date ] .
21   FILTER ("1750-01-01"^^xsd:date <= ?date && ?date <= "1840-01-01"^^xsd:date)
22 } GROUP BY ?place ?sn

```



Table Response Pivot Table Google Chart Geo

Showing 1 to 50 of 1,173 entries (in 1.154 seconds)

Search: Show 50 entries

	place	sn	no	sn_label	place_label
1	http://ldf.fi/yoma/places/m4584	http://ldf.fi/yoma/sn19	"261"^^xsd:integer	"Turkulainen osakunta"@fi	"Turku"@fi
2	http://ldf.fi/yoma/places/m2913	http://ldf.fi/yoma/sn11	"196"^^xsd:integer	"Pohjalainen osakunta"@fi	"Oulu"@fi
3	http://ldf.fi/yoma/places/m3595	http://ldf.fi/yoma/sn15	"193"^^xsd:integer	"Satakuntalainen osakunta"@fi	"Pori"@fi
4	http://ldf.fi/yoma/places/m4400	http://ldf.fi/yoma/sn20	"156"^^xsd:integer	"Uusmaalainen osakunta"@fi	"Helsinki"@fi
5	http://ldf.fi/yoma/places/m2876	http://ldf.fi/yoma/sn11	"114"^^xsd:integer	"Pohjalainen osakunta"@fi	"Vaasa"@fi
6	http://ldf.fi/yoma/places/m2460	http://ldf.fi/yoma/sn11	"102"^^xsd:integer	"Pohjalainen osakunta"@fi	"Mustasaari"@fi
7	http://ldf.fi/yoma/places/m4584	http://ldf.fi/yoma/sn9	"98"^^xsd:integer	"Länsisuomalainen osakunta"@fi	"Turku"@fi
8	http://ldf.fi/yoma/places/m1741	http://ldf.fi/yoma/sn11	"80"^^xsd:integer	"Pohjalainen osakunta"@fi	"Kokkola"@fi

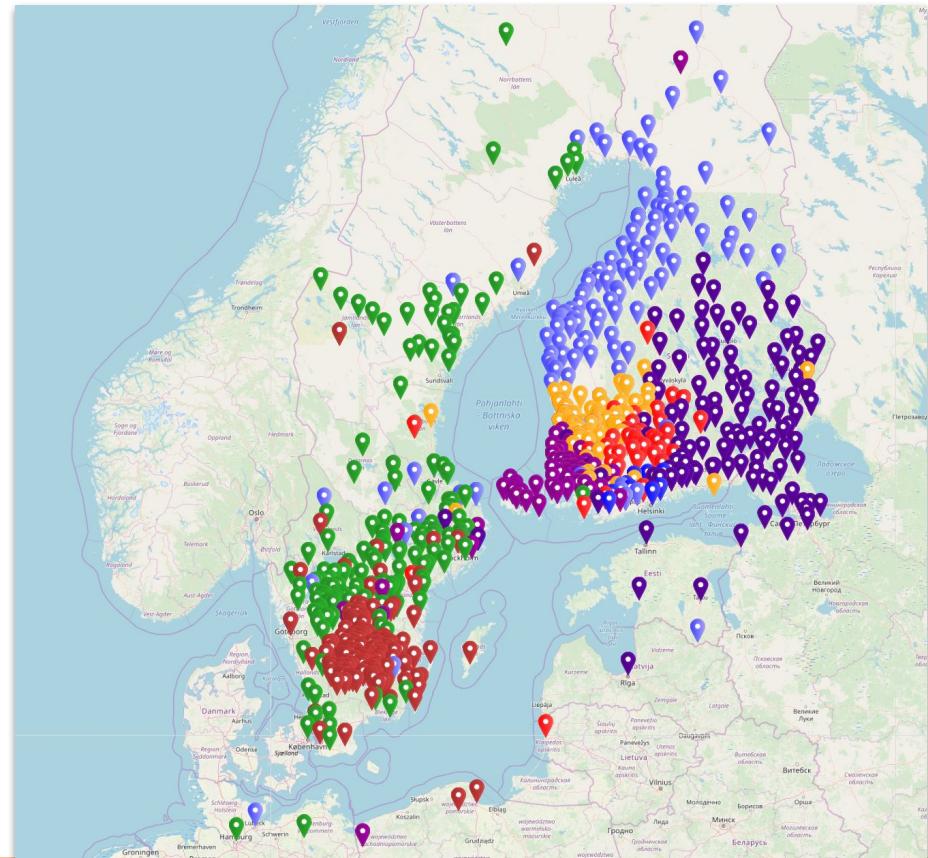


```
5 PREFIX gvp: <http://vocab.getty.edu/oncology/>
6 PREFIX foaf: <http://xmlns.com/foaf/0.1/>
7 PREFIX geo: <http://www.w3.org/2003/01/geo/wgs84_pos#>
8
9 # the distribution of the student nations and birth places of persons born in 1750-1840, with coordinates and color-coding of the places
10
11 SELECT * WHERE {
12 {
13   SELECT ?place ?sn (COUNT(?person) AS ?no) WHERE {
14     ?person a foaf:Person ;
15       :student_nation ?sn .
16     ?sn skos:prefLabel ?sn_label . FILTER (LANG(?sn_label)='fi')
17
18   ?person :has_birth [ schema:place ?place ;
19     schema:date/gvp:estStart ?date ] .
20   FILTER ("1750-01-01"^^xsd:date <= ?date && ?date <= "1840-01-01"^^xsd:date)
21 } GROUP BY ?place ?sn
22 ORDER BY (?no)
23 }
24 ?sn skos:prefLabel ?sn_label . FILTER (LANG(?sn_label)='fi')
25 ?place skos:prefLabel ?locationLabel ;
26   geo:lat ?lat ;
27   geo:long ?long .
28 BIND (CONCAT("+STR(?long)+" "+STR(?lat)+"") AS ?location)
29
30 VALUES (?sn ?locationColor) {
31   (:sn11 'rgb(64,64,255)') # Pohja
32   (:sn20 'blue') # Uusmaa
33   (:sn21 'indigo') # Viipuri
34   (:sn9 'yellow') # Länsis.
35   (:sn5 'red') # Hämäläinen
36   (:sn16 'green') # Savokarjalainen osakunta
37   (:sn2 'purple')# Boreal
38   (:sn15 'orange')# Satakunta
39   (:sn13 '#DD4') # Suedois
40   (:sn17 'brown') # Småland
41 }
42 }
```

Places

Places of birth 1640–1800,
color by Student Nation:

- Swedish
- Botnia
- West Finland
- Tavastia
- Boreal
- Nyland
- Wyburg
- Småland



Learn SPARQL! Thanks!

https://www.wikidata.org/wiki/Wikidata:SPARQL_tutorial

<https://programminghistorian.org/en/lessons/graph-databases-and-SPARQL>

This screenshot shows the 'Wikidata:SPARQL tutorial' page on Wikipedia. The page title is 'Wikidata:SPARQL tutorial'. It features a sidebar with various links such as 'Community portal', 'Project chat', 'Create a new item', 'Recent changes', 'Random item', 'Query Service', 'Nearby', 'Help', 'Donate', 'Print/export', 'Create a book', 'Download as PDF', 'Printable version', 'Tools', 'What links here', 'Related changes', 'Special pages', 'Permanent link', 'Page information', and 'In Wikipedia'. The main content area contains several sections: 'Before we start', 'SPARQL basics', 'Our first query', 'Advanced query patterns', 'Instances and classes', 'Property paths', 'Qualifiers', 'ORDER and LIMIT', 'Optional', 'Expressions, FILTER and BIND', 'Data types', 'Operators', and 'BIND, BOUND, IF'. At the bottom of the page, there is a note about WDQS (Wikidata Query Service) and a 'Contents' section.

This screenshot shows a lesson titled 'Using SPARQL to access Linked Open Data' from 'The Programming Historian'. The page includes a navigation bar with 'ABOUT', 'CONTRIBUTE', 'LESSONS', 'BLOG', and language links ('EN', 'ES', 'FR'). The main content features a fish illustration, the author's name 'Matthew Lincoln', and a brief description of the lesson: 'This lesson explains why many cultural institutions are adopting graph databases, and how researchers can access these data through the query language called SPARQL.' Below this, there are sections for 'EDITED BY' (Fred Gibbs), 'REVIEWED BY' (Patrick Murray-John, Jason Heppeler, Will Hanley), and publication details ('PUBLISHED 2015-11-24', 'MODIFIED 2018-07-16', 'DIFFICULTY Medium'). A note at the bottom states: 'This lesson has been translated into Spanish: [Usos de SPARQL para acceder a datos abiertos enlazados](#)'.