

Wikidata API & Command-Line Tools

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Tools

Wikibase API

<https://www.mediawiki.org/wiki/Wikibase/API>

querying, adding, removing and editing information on any Wikibase instance

Wikibase command line interface

<https://github.com/maxlath/wikibase-cli>

the Command-line interface interface to Wikibase instances

Wikidata taxonomy

<https://github.com/nichtich/wikidata-taxonomy>

<https://wntaxonomy.readthedocs.io>

command-line tool and library to extract taxonomies from Wikidata

Wikidata client library for Python

<https://github.com/dahlia/wikidata>

easy APIs to use Wikidata for Python

Wikidata Integrator

<https://github.com/SuLab/WikidataIntegrator>

Python module integrating the MediaWiki API and the Wikidata SPARQL endpoint

Wikidata extraction tools (old)

<https://github.com/jimbelton/wikidata>

extract items from a JSON dump of wikidata.org

Wikibase API

<https://www.mediawiki.org/wiki/Wikibase/API>

<https://developer.ibm.com/articles/use-wikidata-in-ai-and-cognitive-applications-pt1/>

The official and most comprehensive API

Basics

- All Query modules
- Get properties of pages
- List pages matching a criterion
- Get module parameters information
- Get meta information about the wiki and us

Authentication

- Get tokens for data modifying operations
- Login
- Logout

Accounts and Users

- Create an account
- Block or unblock a user
- Get info about the current user
- Get the current user's watchlist as a feed
- Change user options
- Change user group membership
- Send an email

Page Operations

- Parse content of a page
- Create and edit a page
- Upload a file
- Import a page
- Delete a page
- Watch or unwatch a page
- Purge cache for page(s)
- Rollback a page
- Move a page
- Patrol a page or revision
- Restore revisions of a deleted page
- Change a page's protection level
- Change a page's language
- More...

Search

- Search for a title or text
- Fetch results in an OpenSearch format
- Search for wiki pages near a location
- Search for a language
- Perform a prefix search for page titles

Developer Utilities

- Access libraries
- Cross-site requests
- Creating an API module in an extension
- Using the API in MediaWiki and extensions
- Restricting API usage
- Localisation
- Implementation Strategy

Wikibase Command Line Interface

Wikibase Command Line Interface

<https://github.com/maxlath/wikibase-cli>

Installation:

```
npm install -g wikibase-cli
```

Search for entities

```
$ wd search feinstein
Q21452207  Feinsein family name
Q7733638   The Feinsein Institute for Medical Research
Q3703178   David Feinsein
Q48705413  Feinsein and study design. scientific article publi
Q18354968  Feinsein AK Mag
Q49302322  Feinsein Lake lake of the United States of America
Q16250366  Feinsein International Center
Q43259048  Showcase Providence Place IMAX Theatre movie theater
Q230733    Dianne Feinsein United States Senator from Californ
Q2713108   10988 Feinsein asteroid
```

Get Summary, Label and Aliases

```
$ wd summary Q230733
```

```
id Q230733  
Label Dianne Feinstein  
Description United States Senator from California  
instance of (P31): human (Q5)
```

```
$ wd label Q230733 -l ru  
Файнстайн, Дайэнн
```

```
$ wd aliases Q230733  
Dianne Goldman Berman Feinstein  
| Dianne Emiel Goldman
```

Get Claims

```
$ wd claims Q230733
```

```
instance of (P31):          human (Q5)
name in native language (P1559):  Dianne Feinstein
place of birth (P19):        San Francisco (Q62)
sex or gender (P21):        female (Q6581072)
spouse (P26):               Richard C. Blum (Q7324532)
```

```
$ wd claims Q230733 birth
```

```
place of birth (P19): San Francisco (Q62)
date of birth (P569): 1933-06-22T00:00:00.000Z
```

Get Raw Data

```
$ wd data Q230733 Q7324532  
# A quick way to access an entity's raw JSON data
```

```
wd data Q230733 | jq . | less  
# format JSON with jq  
wd data --format ttl Q230733  
# get the data in RDF turtle
```

```
wd data --simplify Q230733 | jq .
```

```
{,  
  "claims": {  
    "P463": [  
      "Q218868"  
    ],  
    "P21": [  
      "Q6581072"  
    ],  
    "P373": [  
      "Dianne Feinstein"  
    ],  
    "P214": [  
      "26242096"  
    ]  
  }  
}
```


Simple Queries

author

Isaac Asimov

```
$ wd query --property P50 --object Q34981
# works that Asimov authored
Q23758 Q260711 Q368390 Q372968 Q375422 ...
```

```
$ wd summary Q23758 Q260711 Q368390 Q372968
```

id Q23758

Label Three Laws of Robotics

Description set of rules devised by the science fiction author Isaac Asimov
subclass of (P279): rule (Q1151067)

id Q260711

Label X Stands for Unknown

Description book

instance of (P31): written work (Q47461344)

id Q368390

Label Galactic Empire

Infor **Description** trilogy by Isaac Asimov

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Wikidata Taxonomy

Wikidata Taxonomy

<https://github.com/nichtich/wikidata-taxonomy>

<https://wntaxonomy.readthedocs.io>

Installation:

```
npm install -g wikidata-taxonomy
```

Wikidata Taxonomy

Print taxonomies defined using any property

```
$ wdtaxonomy Q634
```

```
# subclasses of planet (Q634)
```

```
$ wdtaxonomy Q458 -P P463
```

```
# Members of (P463) the European Union (Q458)
```

Print taxonomies in reverse order

```
$ wdtaxonomy Q634 -r
```

```
# super-classes of planet (Q634)
```

```
wdtaxonomy Q458 -P P463 -r
```

```
# Orgs that the European Union (Q458) is a member of (P463)
```

Output Format

connected Wikimedia sites

instances

The screenshot shows a hierarchical list of planet types. Each entry consists of a name, a Wikidata ID in parentheses, a count of instances (indicated by a green dot and a number), and a count of connected Wikimedia sites (indicated by red arrows and numbers). The entries are: coreless planet (Q5278195) with 10 instances and 2 sites; lava planet (Q15057366) with 15 instances and 2 sites; mega-Earth (Q17325117) with 15 instances; planet of the Solar System (Q17362350) with 2 instances; outer planet (Q30014) with 25 instances, 4 subclasses, and 3 sites; Inferior and superior planets (Q337768) with 17 instances and 1 site; superior planet (Q844911) with 8 instances and 1 subclass; a sub-entry for outer planet (Q30014) with 25 instances, 4 subclasses, and 3 sites; inner planet (Q3504248) with 12 instances, 4 subclasses, and 2 sites; inferior planet (Q3901935) with 6 instances, 2 subclasses, and 1 site; giant planet (Q21857994) with 14 instances; another sub-entry for outer planet (Q30014) with 25 instances, 4 subclasses, and 3 sites; and gas giant (Q121750) with 81 instances and 11 subclasses.

Planet Type	Wikidata ID	# instances	# connected Wikimedia sites
coreless planet	(Q5278195)	10	2
lava planet	(Q15057366)	15	2
mega-Earth	(Q17325117)	15	0
planet of the Solar System	(Q17362350)	2	0
outer planet	(Q30014)	25	3
Inferior and superior planets	(Q337768)	17	1
superior planet	(Q844911)	8	0
outer planet (sub-entry)	(Q30014)	25	3
inner planet	(Q3504248)	12	2
inferior planet	(Q3901935)	6	1
giant planet	(Q21857994)	14	0
outer planet (sub-entry)	(Q30014)	25	3
gas giant	(Q121750)	81	11

additional superclasses