



Lexicographical Data: words and phrases on Wikidata

Léa Lacroix
Wikidata Labs, May 2019

Table of contents

- Introduction
- Words in Wikidata: how does it work?
- Why is it interesting?
- Examples of reuse
- Frequently asked questions
- Editing Lexemes
- Tools to edit Lexemes
- Reusing Lexemes
- Resources
- Activities

Wikidata: the basics



WIKIDATA

- A knowledge base
- Part of the Wikimedia projects
- Structured data
- Linked to other databases
- Multilingual
- Collaborative
- Released under public domain (CC0)
- Based on facts and references
- Made for humans and machines

Douglas Adams (Q42)

English writer and humorist

[edit](#)

[Douglas Noël Adams](#) | [Douglas Noel Adams](#) | [Douglas N. Adams](#) | [DNA](#)

▼ In more languages

Language	Label	Description	Also known as
English	Douglas Adams	English writer and humorist	Douglas Noël Adams Douglas Noel Adams Douglas N. Adams DNA
German	Douglas Adams	britischer Schriftsteller	Douglas Noël Adams Douglas Noel Adams
French	Douglas Adams	écrivain anglais de science-fiction	Douglas Noel Adams Douglas Noël Adams
Italian	Douglas Adams	scrittore inglese	Douglas Noel Adams Douglas N. Adams

[All entered languages](#)

Statements

instance of human [edit](#)

[► 2 references](#)

[+ add value](#)

image Douglas adams portrait cropped.jpg [edit](#)

[media legend](#)

Portræt af Douglas Adams (Danish)


Douglas Adams portrait. (English)

Portrait de Douglas Adams. (French)

Wikipedia (71 entries) [edit](#)

- [ar](#) دوڭلاس آدمز
- [arz](#) دوڭلاس ادامز
- [ast](#) Douglas Adams
- [azb](#) دافلاس آدامز
- [az](#) Duqlas Adams
- [bar](#) Douglas Adams
- [be_x_old](#) Дуглас Адамз
- [be](#) Дуглас Адамс
- [bg](#) Дъглас Адамс
- [bn](#) ডগলাস অ্যাডামস
- [bs](#) Douglas Adams
- [ca](#) Douglas Adams
- [cs](#) Douglas Adams
- [cy](#) Douglas Adams
- [da](#) Douglas Adams
- [de](#) Douglas Adams
- [el](#) Ντάγκλας Άνταμς
- [en](#) Douglas Adams
- [eo](#) Douglas Adams
- [es](#) Douglas Adams
- [et](#) Douglas Adams
- [eu](#) Douglas Adams
- [fa](#) داگلاس آدامز
- [fi](#) Douglas Adams
- [fr](#) Douglas Adams
- [ga](#) Douglas Adams
- [gl](#) Douglas Adams
- [he](#) דאָגלס אַדמס
- [hr](#) Douglas Adams

- [Main page](#)
- [Community portal](#)
- [Project chat](#)
- [Create a new item](#)
- [Recent changes](#)
- [Random item](#)
- [Query Service](#)
- [Nearby](#)
- [Help](#)
- [Donate](#)
-
- [Tools](#)
- [What links here](#)
- [Related changes](#)
- [Special pages](#)
- [Permanent link](#)
- [Page information](#)
- [Concept URI](#)
- [Cite this page](#)
- [Automatic addition](#)



**Until 2018,
Wikidata was
only describing
concepts**

Now it also includes

words!

Wait, what's the difference?

Concept “mouse”

- Specie of mammal
- Taxon name
- Average size
- Picture
- Encyclopedia of Life ID



Lexeme “mouse”

- Language: English
- Lexical category: noun
- Plural form: mice (irregular)
- Etymology: Proto-Germanic *mūs
- Senses: animal, computer device
- Translations: souris (fr), rato (pt)
- Audio pronunciation ►

/maʊs/

L-id

Lexeme

Lemma - *standard form or dictionary form of the lexeme*

Lexical category

Language

Statements - *e.g. derived-from, homonym, etc.*

Senses

Gloss - *short description*

Statements - *e.g. translations, synonyms, refers-to-concept, etc.*

Forms

Representation

Grammatical features

Statements - *e.g. region, period, pronunciation, etc.*

More info:
[mw:Extension:Wikibase Lexeme/Data Model](#)



(L407)

casa

pt

edit

Language [Portuguese](#)Lexical category [noun](#)

grammatical gender



feminine

edit

▼ 0 references

+ add reference

+ add value

derived from



casa


edit

▼ 0 references

+ add reference

+ add value

Senses

L407-S1	English	building, habitation	 edit
	Portuguese	prédio	

Statements about L407-S1

translation		house (structure built or serving as an abode of human beings)	 edit
		▼ 0 references	+ add reference
			+ add value

Forms

L407-F1	casas	 edit
	pt	

Grammatical features [plural](#)



Statements about L407-F1


IPA transcription		/ˈka.zas/	 edit
		language of work or name	Brazilian Portuguese
			+ add reference

Why is it interesting?

- Structured data = machine readable
- Plain text = only for humans, need to build complex algorithms
- Can be reused by tools, research, dictionaries, translation services
- CC0 = open knowledge, can be reused by all
- Huge variety of languages, including undeserved ones
- International community = more people to help



Examples of reuse: question answering algorithms

QAnswer [About](#) [FAQ](#)  

Confidence :  87 %

Is this the right answer ? Yes No

dragons

dragons  

Examples of reuse: language-learning games

DerDieDas

Practice your German articles with Wikidata

What is the correct article?

- der
- die
- das
- I don't know

Funktion

Submit



Round: 1/10



Points: 0

Der Die Das <http://auregann.fr/derdiedas/>

Other uses in the future

- Support for Wiktionary, Wikisource & other Wikimedia projects
- Research
- Text analysis, text mining
- Translation tools
- New generation of dictionaries
- Language-learning tools

A few numbers

- **45400** Lexemes in **340** languages and dialects
- **42** Lexemes in Portuguese
- **12000** Senses (definitions)
- More statistics: <https://tools.wmflabs.org/ordia/>

Frequently asked questions

What's the difference with Wiktionary?

- Wiktionary = plain text + templates, Wikidata = structured data
- Wikidata can be easily parsed and reused
- Wikidata works with Lexemes, Wiktionary combines Lexemes
- Wiktionary may have extra info (examples, quotes...)
- Wikidata aims to support Wiktionaries (if they want to)

Frequently asked questions

How to enter dialects or scripts?

- Use mis-x-Q... as language of the lemma

(L12607)	صفر	صِفْر
	ar	ar-x-Q775724

Language [Arabic](#)

Lexical category [numeral](#)


Frequently asked questions

How to search for Lexemes?

- Type “L:word” in the search box and press Enter
- Works with lemmas and Forms
- No suggestion appears, don’t worry

Search results

To search for Wikidata items by their title on a given site

 L:casa

Advanced parameters:

Search in: (Main) X Property X

[casa \(L407\)](#)

Portuguese, noun

6 statements, 2 forms - 10:21, 18 May 2019

[casa \(L350\)](#)

Italian, noun

1 statement, 2 forms - 10:21, 18 May 2019

[casa \(L438\)](#)

Latin, noun

0 statements, 0 forms - 10:21, 18 May 2019

Frequently asked questions

Is it possible to query Lexemes?

- Yes! The Query Service supports Lexemes
- All words in Portuguese <https://w.wiki/45n>
- Longest words in English <https://w.wiki/45o>
- More queries & ideas:
https://www.wikidata.org/wiki/Wikidata:Lexicographical_data/Ideas_of_queries
- Get help: https://www.wikidata.org/wiki/Wikidata:Request_a_query

Frequently asked questions

Does QuickStatements work for Lexemes?

- Not really :(
- Possible: add new statements on the Lexeme level for existing Lexemes
- Not possible: create new Lexemes, Forms or Senses

Any questions so far?



Editing Lexemes

- Check if the Lexeme exists (L:singen)
- Find an example <https://www.wikidata.org/wiki/Lexeme:L2058>
- Create a new Lexeme <https://www.wikidata.org/wiki/Special:NewLexeme>
- Add statements (auxiliary verb)
- Add a Sense
- Add translation (needs another Sense)
- Add a Form (present, first-person singular)

A few tips for editing

- Look at what already exists before creating
- Find an example for inspiration
- Look for the most used properties in Ordia
<https://tools.wmflabs.org/ordia/property/>
- Try, don't be afraid of doing wrong :)
- In doubt: ask the other editors for help ([LexData talk page](#), [Telegram](#))

Everything is new!

- Started from scratch in May 2018
- Everything is to create
- Still plenty of questions, ways to models
- Maybe new properties to be created
- Not everything works perfectly (eg mobile interface)
- Some documentation needs improvement

Tools to edit Lexemes

- Wikidata Lexeme Forms, to create Lexemes and generate a lot of Forms <https://tools.wmflabs.org/lexeme-forms/>
- Possibility to create new templates (eg. conjugations, declinations)

English verb

present

They every day.

third-person singular

He every day.

simple past

He every day last week.

present participle

They are right now.

past participle

We have for hours.

Create

Advanced

Tools to edit Lexemes

- **Wikidata Senses**, to add Senses to existing Lexemes
<https://tools.wmflabs.org/lexeme-senses/>
- Add Senses for Portuguese words in Portuguese:
<https://tools.wmflabs.org/lexeme-senses/add/pt>

Ordia

Wikidata

zebro

pt · noun · L5451

Add the first Sense to this Lemma!

Give me another lemma

Add

Tools to edit Lexemes

- Ordia text-to-Lexeme transforms a text into Lexemes and helps with creation <https://tools.wmflabs.org/ordia/text-to-lexemes>

Text to lexemes

A Barata diz que tem sete saias de filó
É mentira da barata, ela tem é uma só
Ah ra ra, iá ro ró, ela tem é uma só !



ro					
ró					
aias					
ete					
ó					
əm	tem	ter	verb	third-person singular // present indicative	L41087-S1
ima					
:					
é	é	ser	verb	third-person singular // present indicative	L39470-S1
é	é	ser	verb	third-person singular // present indicative	L39470-S2

Tools to edit Lexemes

- **Lingua Libre**, record words in your language
https://lingualibre.fr/wiki/LinguaLibre:Main_Page
- Generate lists of words from Lexemes
https://lingualibre.fr/wiki/Help:Create_your_own_lists
- Automatically adds the pronunciation as a statement



Tools to reuse Lexemes

- The Query Service
 - Lexemes don't appear in the documentation... yet ^^
- The API

```
wbladdform  
wbladdsense  
wbleditformelements  
wbleditsenseelements  
wblinktitles  
wblmergelexemes  
wblremoveform  
wblremovesense
```

Helpful pages

- Create and edit Lexemes <Special:NewLexeme>
- Suggest or discuss new properties Wikidata:Property_proposal/Lexemes
- Discuss with the community about how to model words &
- Report any bug or wish for the future Wikidata_talk:Lexicographical_data
- Try the existing tools Wikidata:Tools/Lexicographical_data
- Suggest ideas of tools Wikidata:Lexicographical_data/Ideas_of_tools
- Ideas & examples of queries
https://www.wikidata.org/wiki/Wikidata:Lexicographical_data/Ideas_of_queries



More questions?

Activities

- Add Senses in Portuguese
<https://tools.wmflabs.org/lexeme-senses/add/pt>
- Create more Lexemes in Portuguese
 - Using text-to-Lexemes
<https://tools.wmflabs.org/ordia/text-to-lexemes>

Activities

- Create Portuguese templates in Wikidata Lexeme Forms
 - Create the page for Portuguese
https://www.wikidata.org/wiki/Wikidata:Wikidata_Lexeme_Forms#Language_support
 - Help translating the interface
 - Add new templates (example:
https://www.wikidata.org/wiki/Wikidata:Wikidata_Lexeme_Forms/French)
 - Ping Lucas (user:Lucas Werkmeister) to include the templates in the tool (or for any question)

Activities

- Once templates are ready: create Forms in Portuguese
- Developers: create a tool or a game using lexicographical data (see also: [ideas of tools](#))



Thank you!

Léa Lacroix

User: Lea Lacroix (WMDE)

lea.lacroix@wikimedia.de

W