



# Abstract Wikipedia: Language vs. Knowledge

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Wikipedia Day 2024, Wikimedia New York City

# Agenda

- Wiki work, unshared
- Wikifunctions
- Language *vs.* Knowledge
- Early usage of Wikifunctions
- The Abstract Wikipedia vision



01

# Wiki work, unshared

# Wikipedias have the same work

- Creating and updating articles
- Patrolling changes and managing the flow
- Welcoming newbies and building a community
- Re-working content to be consistent and high-quality
- Curating the content for readers
- Agreeing ways forward as a community



# Wikipedias don't have the same size

	English Wikipedia	Malay Wikipedia	Hausa Wikipedia
Monthly contributors	<b>125,000</b>	<b>680</b>	<b>60</b>
Module: pages	19,000	1,000	500
Speakers	1.5 billion	300 million	70 million
Unique devices	900 million	6 million	200,000



# Malay Wikipedia's Modul:

- Modul:AFC submission catcheck
- Modul:Adjacent stations
- Modul:Adjacent stations/Amtrak
- Modul:Adjacent stations/BJS
- Modul:Adjacent stations/ERL
- Modul:Adjacent stations/JR East
- Modul:Adjacent stations/Jabatan Kereta Api Negeri Sabah
- Modul:Adjacent stations/KLRT
- Modul:Adjacent stations/KTM
- Modul:Adjacent stations/KTM Antarabandar
- Modul:Adjacent stations/KTM ETS
- Modul:Adjacent stations/KTM Komuter
- Modul:Adjacent stations/Kereta Api Bawah Tanah Beijing
- Modul:Adjacent stations/LIRR
- Modul:Adjacent stations/Long Island Rail Road
- Modul:Adjacent stations/Los Angeles Metro Rail
- Modul:Adjacent stations/NJ Transit
- Modul:Adjacent stations/Paris Métro
- Modul:Adjacent stations/RTD
- Modul:Adjacent stations/Rapid KL
- Modul:Adjacent stations/SEPTA
- Modul:Adjacent stations/SHM
- Modul:Adjacent stations/SMRT
- Modul:Adjacent stations/San Diego Trolley
- Modul:Citation/CS1/whitelist
- Modul:Citation/CS1/Whitelist/doc
- Modul:Citation/CS1/Whitelist/kotak pasir
- Modul:Citation/CS1/Whitelist/sandbox
- Modul:Citation/CS1/autofix
- Modul:Citation/CS1/doc
- Modul:Citation/CS1/kotak pasir
- Modul:Citation/CS1/kotak pasir/styles.css
- Modul:Citation/CS1/styles.css
- Modul:Cite LSA
- Modul:Cite Q
- Modul:Cite iucn
- Modul:Cite tweet
- Modul:Cite web
- Modul:Clade
- Modul:Clade/example
- Modul:Clade/example/doc
- Modul:Clade/gallery
- Modul:Clade/labels
- Modul:CladeN
- Modul:Clickable button 2
- Modul:Collapsible list
- Modul:College color
- Modul:College color/contrast
- Modul:College color/data
- Modul:College contrast
- Modul:Find country
- Modul:Find sources
- Modul:Find sources/autodoc
- Modul:Find sources/autodoc/config
- Modul:Find sources/config
- Modul:Find sources/links/free news sources
- Modul:Find sources/links/google
- Modul:Find sources/links/google books
- Modul:Find sources/links/google free images
- Modul:Find sources/links/google news
- Modul:Find sources/links/google newspapers
- Modul:Find sources/links/google scholar
- Modul:Find sources/links/highbeam
- Modul:Find sources/links/jstor
- Modul:Find sources/links/new york times
- Modul:Find sources/links/wikipedia library
- Modul:Find sources/links/wikipedia reference search
- Modul:Find sources/templates
- Modul:Find sources/templates/Find sources
- Modul:Find sources/templates/Find sources mainspace
- Modul:FishRef
- Modul:Flag
- Modul:Flagg
- Modul:Flagg/Altvar data

<https://ms.wikipedia.org/wiki/Special:AllPages/Module>



# Malay Wikipedia's Modul:Age

## Modul:Age

🗺️ 84 bahasa ▾

Modul [Perbincangan](#)

[Baca](#) [Sunting sumber](#) [Lihat sejarah](#) ☆

Daripada Wikipedia, ensiklopedia bebas.

*Pendokumenan untuk modul ini boleh diciptakan di [Modul:Age/doc](#)*

```
1  -- Implement various "age of" and other date-related templates.
2
3  local mtext = {
4      -- Message and other text that should be localized.
5      -- Also need to localize text in table names in function dateDifference.
6      ['mt-bad-param1'] =      'Invalid parameter $1',
7      ['mt-bad-param2'] =      'Parameter $1=$2 is invalid',
8      ['mt-bad-show'] =        'Parameter show=$1 is not supported here',
9      ['mt-cannot-add'] =      'Cannot add "$1"',
10     ['mt-conflicting-show'] = 'Parameter show=$1 conflicts with round=$2',
11     ['mt-date-wrong-order'] = 'The second date must be later in time than the first date',
12     ['mt-dd-future'] =        'Death date (first date) must not be in the future',
13     ['mt-dd-wrong-order'] =    'Death date (first date) must be later in time than the birth date
14     (second date)',
15     ['mt-invalid-bd-age'] =     'Invalid birth date for calculating age',
16     ['mt-invalid-dates-age'] = 'Invalid dates for calculating age',
17     ['mt-invalid-end'] =       'Invalid end date in second parameter',
18     ['mt-invalid-start'] =     'Invalid start date in first parameter',
19     ['mt-need-jdn'] =          'Need valid Julian date number',
20     ['mt-need-valid-bd'] =     'Need valid birth date: year, month, day',
21     ['mt-need-valid-bd2'] =    'Need valid birth date (second date): year, month, day',
22     ['mt-need-valid-date'] =   'Need valid date',
```

<https://ms.wikipedia.org/wiki/Modul:Age>



# Malay Wikipedia's Modul:Age

## Modul:Age: Sejarah semakan

Modul [Perbincangan](#)

[Baca](#) [Sunting sumber](#)

[Lihat log bagi laman ini](#) (lihat log salah guna)

### ▼ Tapis semakan

Pemilihan perbezaan: tandakan butang radio bagi versi-versi yang ingin dibandingkan dan tekan butang *enter* atau butang di bawah.

Petunjuk: **(kini)** = perbezaan dengan versi terkini, **(akhir)** = perbezaan dengan versi sebelumnya, **k** = suntingan kecil.

**Bandingkan versi-versi yang dipilih**

**Sunting teg-teg s**

Pilih: [Semua](#), [Tiada](#), [Songsang](#)

- (kini | akhir)  12:03, 14 Disember 2022 [Hayate891](#) (bincang | sumb.) . . (33,355 bait) **(+1,212)** . . (kemaskini) (batalkan | hargai) *(Terdapat 1 perbezaan yang mungkin tidak mudah alih, Suntingan web mudah alih, Advanced mobile edit)*
- (kini | akhir)  01:09, 20 April 2020 [SNN95](#) (bincang | sumb.) **k** . . (32,143 bait) (0) . . (kemaskini) (batalkan | hargai)
- (kini | akhir)  15:30, 14 April 2020 [SNN95](#) (bincang | sumb.) . . (32,143 bait) **(+12,552)** . . (kemaskini) (batalkan | hargai)
- (kini | akhir)  1 Modul:Age n 2017 [SNN95](#) (bincang | sumb.) . . (19,591 bait) **(+5)** . . (batalkan | hargai)
- (kini | akhir)  15:35, 27 April 2017 [Polar](#) (bincang | sumb.) . . (19,586 bait) **(+19,586)** . . (Mencipta laman baru dengan kandungan ' various "age of" and other date-related templates. local \_Date, \_current\_date local function get\_exports(frame) -- Return objects exported fr...)

**Bandingkan versi-versi yang dipilih**

**Sunting teg-teg s**

Pilih: [Semua](#), [Tiada](#), [Songsang](#)





# Malay Wikipedia's Modul:Age

Semakan pada 15:35, 27 April 2017 (sunting)

Polar (bincang | sumb.)

*'Mencipta laman baru dengan kandungan "-- Implement various "age of" and other date-related templates. local\_Date, \_current\_date local function get\_exports(frame) -- Return objects exported fr...'*

Semakan pada 15:02, 20 Jun 2017 (sunting) (batalan) (harga)

SNN95 (bincang | sumb.)

Suntingan berikutnya →

aris 288:

```
local names = {
  abbr_off = {
    plural = 's',
    sep = '&nbsp;',
    y = 'year',
    m = 'month',
    w = 'week',
    d = 'day',
    H = 'hour',
    M = 'minute',
    S = 'second',
  },
```

Baris 288:

```
local names = {
  abbr_off = {
    plural = '',
    sep = '&nbsp;',
    y = 'tahun',
    m = 'bulan',
    w = 'minggu',
    d = 'hari',
    H = 'jam',
    M = 'minit',
    S = 'saat',
  },
```



# English Wikipedia's Module:Age

Module:Age



## Parameters

The following options are available:

Parameter	Description
<code>duration=on</code>	The finishing date is included in the result; that adds one day to the age.
<code>fix=on</code>	Adjust invalid time units. See <a href="#">Template:Extract#Fix</a> .
<code>format=commas</code>	A value of 1,000 or more is displayed with commas.
<code>format=raw</code>	Numbers are displayed without commas and negative numbers are displayed with a hyphen for <code>{{#expr}}</code> . In addition, <code>{{age}}</code> outputs a plain number and will not include a span to indicate if the result relies on the current date.
<code>format=cardinal</code>	Display the resulting number using words such as "five" instead of 5. See <a href="#">below</a> .
<code>format=ordinal</code>	Display the resulting number using words such as "fifth" instead of 5. See <a href="#">below</a> .
<code>prefix=text</code>	Insert the given <i>text</i> before the result but after any sort key. For example, <code>{{age 23 July 1910 14 July 1976}}</code> outputs a hidden sort key.



# English Wikipedia's Module:Age

## Module:Age: Revision history

[?](#) Help

[Module](#) [Talk](#)

[Read](#) [Edit source](#) [View history](#) [☆](#) [Tools](#) [▽](#)

[View logs for this page \(view filter log\)](#)

[▽](#) **Filter revisions**

External tools: [Find addition/removal](#) [Find edits by user](#) [\(Alternate\)](#) [Page statistics](#) [Pageviews](#) [Fix dead links](#)

For any version listed below, click on its date to view it. For more help, see [Help:Page history](#) and [Help:Edit summary](#). (cur) = difference from current version, (prev) = difference from preceding version, m = [minor edit](#), → = [section edit](#), ← = [automatic edit summary](#)

[Compare selected revisions](#)

[Change visibility of selected revisions](#)

Select: [All](#), [None](#), [Invert](#)

- [\(cur | prev\)](#)  [23:16, 28 December 2023](#) [Johnuniq \(talk | contribs | block\)](#) .. (33,801 bytes) **(+337)** .. *(output nothing for Template:Birth\_date\_and\_age + Template:Death\_date\_and\_age if 'YYYY' is first parameter to avoid TemplateData auto value errors from Template:Infobox\_musical\_artist) (undo | thank)*
- [\(cur | prev\)](#)  [07:27, 11 June 2023](#) [Johnuniq \(talk | contribs | block\)](#) .. (33,464 bytes) **(+2)** .. *(change default for {{age}} from range=no to range=dash per Template talk:Age#Inaccurate age shown) (undo | thank)*
- [\(cur | prev\)](#)  [07:08, 21 May 2022](#) [Johnuniq \(talk | contribs | block\)](#) .. (33,462 bytes) **(+226)** .. *(update from Module:Age/sandbox: implement sortable=on + sortable=table for Template:Death date and age) (undo | thank)*
- [\(cur | prev\)](#)  [03:37, 24 April 2021](#) [Johnuniq \(talk | contribs | block\)](#) .. (33,236 bytes) **(+1,048)** .. *(update from Module:Age/sandbox; this aids localization; used at bnwiki + bswiki) (undo | thank)*
- [\(cur | prev\)](#)  [02:55, 3 August 2020](#) [Johnuniq \(talk | contribs | block\)](#) .. (32,188 bytes) **(+50)** .. *(update from sandbox: implement show=M (minutes) and show=s (seconds)) (undo | thank)*

<https://en.wikipedia.org/wiki/Module:Age?action=history>



# Module:Age

🌐 86 languages ▾



# Module:Age

## Modul:Age

Modul [Perbincangan](#)

Daripada Wikipedia, ensiklopedia bebas.

Pendokumenan untuk modul ini boleh diciptakan di *Modul:Age/doc*

```
1 -- Implement various "age of" and other date-related templates.
2
3 local mtext = {
4     -- Message and other text that sh
5     -- Also need to localize text in
6     ['mt-bad-param1'] =
7     ['mt-bad-param2'] =
8     ['mt-bad-show'] =
9     ['mt-cannot-add'] =
10    ['mt-conflicting-show'] =
11    ['
12     모듈:Age
13     모듈 토론
14     (secor
15     위키백과, 우리 모두의 백과사전.
16     ['
17     {{!}} 모듈 설명문서 [보기] [편집] [역사] [새로 고침]
```

## Модуль:Age

Материал из Википедии — свободной энциклопедии

**ДОКУМЕНТАЦИЯ**

[ [просмотр](#) | [править](#) | [история](#) | [обновить](#) ]

Во избежание поломок страниц, использующих этот модуль, экспериментируйте в *песочнице* (создать) или *песочнице для модулей*.  
Пожалуйста, добавляйте категории на подстраницу /doc. Подстраницы этого модуля.

```
1 -- Implement various "age of" and other date-related templates.
```

## 模組:Age

模块 [讨论](#)

维基百科，自由的百科全书

**模块文档** [\[查看\]](#) [\[编辑\]](#) [\[历史\]](#) [\[清除缓存\]](#)



此模块被引用於約115,000個頁面。  
為了避免造成大規模的影響，所有對此模块的編  
測試後無誤的版本可以一次性地加入此模块中，  
模板引用數量會自動更新。

## Módulo:Edad

Módulo [Discusión](#)

**Documentación del módulo** [\[ver\]](#) [\[editar\]](#) [\[hist\]](#)

Módulo Edad (*código · doc*) **Module:Age**

*A continuación se muestra*

## Parameters

available:

### Description

The finishing date is included in the result; that adds one day to the age.

Adjust invalid time units. See [Template:Extract#Fix](#).

A value of 1,000 or more is displayed with commas.

Numbers are displayed without commas and negative numbers are displayed with a hyphen for `{{#expr}}`. In addition `{{age}}` outputs a

[84 bahasa](#)

[84种语言](#)

[阅读](#) [查看源代码](#) [查看历史](#) [☆](#)

## Vorlage:Alter

## Dokumentation

Mit dieser Vorlage wird die Anzahl der Jahre zwischen zwei Daten oder einem Datum und dem heutigen wiedergegeben, wodurch sich die Vorlage besonders zur Altersangabe eignet.

**Inhaltsverzeichnis** [\[Verbergen\]](#)

**Dokumentation**  
[Verwendung](#)  
[Syntax](#)  
[Beispiele](#)  
[Siehe auch](#)  
[Werkzeuge](#)

**Verwendung** [\[ Quelltext bearbeiten \]](#)

**TemplateData**  
Diese Vorlage gibt das Alter in Jahren zwischen zwei Datumsangaben zurück. Falls der zweite Satz Parameter nicht übergeben wird, wird die Differenz zwischen dem



<https://en.wikipedia.org/wiki/Module:Age> and others linked from <https://www.wikidata.org/wiki/Q12085840>



**WIKIFUNCTIONS**



02

# Wikifunctions

# An "age" function

Function: age (Z11206)

Function (Z8)

Page [Discussion](#)

**Try this function**

**Enter inputs**

- **date**
  - type
    -
  - **day of month**
    - type
      -
    - > value
      -
    - > month
      -
  - **year**
    - type
      -
    - > value
      -
  - > era
    -





# Wikifunctions is here



## Welcome to Wikifunctions

Wikifunctions is a [free](#) library of [functions](#) that anyone can edit.

### Welcome!

**Wikifunctions** is a Wikimedia project for everyone to collaboratively create and maintain a library of code functions to support the Wikimedia projects and beyond, in the world's natural and programming languages.

A "function" is a sequence of programming instructions that makes a calculation based on data you provide. Functions can answer questions, such as how many days have passed between two dates, or the distance between two cities.

### Get started



• [Run a Function](#) • [Project chat](#) • [Community portal](#) • [Suggest a function](#) • [Catalogue of available functions](#)

### Functions to try out

- [reverse string \(Z10012\)](#): Inverts the order of the characters in a String (see Z10548 for one with Unicode grapheme support) • [is palindrome \(Z10096\)](#): test if a string is the same when read forward and backward (see Z10553 for one with Unicode grapheme support)
- [substring exists \(Z10070\)](#): Check if a substring exists within another string • [To Uppercase \(Z10018\)](#): Convert a string to uppercase letters • [To Lowercase \(Z10047\)](#): Convert a string to lowercase letters
- [join strings \(Z10000\)](#): combine two strings, one after the other • [Trim String \(Z10079\)](#): Remove starting and ending whitespaces • [is empty string \(Z10008\)](#): true if the input string is empty



# A "not" function

Function: not (Z10216)

*Function (Z8)*

[Page](#) [Discussion](#)

[Read](#) [View history](#) [Tools](#) ▾

[About](#) [Details](#)

takes a truth value and returns its opposite

## Name

 [Show name in other languages](#)

## Aliases

[EN](#) negate

[EN](#) negation

[EN](#) !

## Try this function

### Enter inputs

> value to be negated ...

true  false

[Run function](#)



# ... that anyone can run

**Try this function**

**Enter inputs**

> value to be negated ...

true  false

**Run function**

**Result**

> false

[Details](#)

**Try this function**

**Enter inputs**

> value to be negated ...

true  false

**Run function**

**Result**

> true

[Details](#)



# ... controlled by the community

Function: not (Z10216)

Function (Z8)

Page [Discussion](#)

[Read](#) [View history](#) [Tools](#) ▾

[About](#) [Details](#)

Anyone can propose a new implementation or test. Proposed code is reviewed by the Wikifunctions community before it becomes an available implementation or verified test. [Learn more about the review process.](#)

Function definition [Edit](#)

Input [Boolean](#)

Label value to be negated

Output [Boolean](#)

 [Show more languages](#)

[Add implementation](#)

[Add test](#)

Implementations				<a href="#">Connect</a>	<a href="#">Disconnect</a>
<input type="checkbox"/>	Name	Status	Language	Passed tests	
<input type="checkbox"/>	<a href="#">JavaScript negation</a>	<a href="#">Connected</a>	javascript	-	
<input type="checkbox"/>	<a href="#">negation as a composition</a>	<a href="#">Connected</a>	Composition	-	
<input type="checkbox"/>	<a href="#">Python negation</a>	<a href="#">Connected</a>	python	-	
<input type="checkbox"/>	<a href="#">negation in JavaScript function syntax</a>	<a href="#">Connected</a>	javascript	-	

Tests							<a href="#">Connect</a>	<a href="#">Disconnect</a>
<input type="checkbox"/>	Name	Status	JavaScript negation	negation as a composition	Python negation	negation in JavaScript function syntax		
<input type="checkbox"/>	<a href="#">false negated is true</a>	<a href="#">Connected</a>	<a href="#">Passed</a> ⓘ	<a href="#">Passed</a> ⓘ	<a href="#">Passed</a> ⓘ	<a href="#">Passed</a> ⓘ		
<input type="checkbox"/>	<a href="#">true negated is false</a>	<a href="#">Connected</a>	<a href="#">Passed</a> ⓘ	<a href="#">Passed</a> ⓘ	<a href="#">Passed</a> ⓘ	<a href="#">Passed</a> ⓘ		



# ... implemented in JavaScript

## Implementation: negation in JavaScript function syntax (Z10586)



Implementation (Z14)

Page [Discussion](#)

[Read](#) [View history](#) [Tools](#) ▾

### About



#### labels

negation in JavaScript function syntax

2 languages

### Function explorer

**Name** Z10216

not

#### Inputs

Boolean Z10216K1

value to be negated

#### Output

Boolean

### Contents

#### function

[not](#)

#### Implementation

code

#### language

javascript

#### code

```
1 - function Z10216( Z10216K1 ) {  
2     return !Z10216K1;  
3 }
```

### Tests



✓ true negated is false

Passed [Details](#)

✓ false negated is true

Passed [Details](#)

### Try this implementation

#### Enter inputs

> value to be negated ...

true  false

[Run function](#)



# ... or in Python

## Implementation: Python negation (Z10538)

Implementation (Z14)



Page [Discussion](#)

[Read](#) [View history](#) [Tools](#) ▾

**About**

**labels**  
Python negation

4 languages

**Function explorer**

<b>Name</b>	Z10216
not	
<b>Inputs</b>	
Boolean	Z10216K1
value to be negated	
<b>Output</b>	
Boolean	

**Contents**

**function**

[not](#)

**Implementation**

code

**language**

python

**code**

```
1 - def Z10216(Z10216K1):
2   return not Z10216K1
```

**Tests**

- ✓ true negated is false  
Passed [Details](#)
- ✓ false negated is true  
Passed [Details](#)

**Try this implementation**

**Enter inputs**

> value to be negated ...

true  false

[Run function](#)



# ... or in a composition

## Implementation: negation as a composition (Z10537)

[Implementation \(Z14\)](#)



[Page](#) [Discussion](#)

[Read](#) [View history](#) [Tools](#) ▾

### About



#### labels

negation as a composition

3 languages

### Function explorer

#### Name

not

#### Inputs

Boolean

value to be negated

#### Output

Boolean

### Contents

#### function

[not](#)

#### Implementation

composition

#### composition

> If ([Argument reference](#) (value to be negated), [Boolean \(false\)](#), [Boolean \(true\)](#))

### Tests



true negated is false  
Passed [Details](#)

false negated is true  
Passed [Details](#)

### Try this implementation

#### Enter inputs

> value to be negated ...

true  false

[Run function](#)



# ... or in a composition in Polish

## Implementacja: negacja jako złożenie (Z10537)

Implementacja (Z14)

 Pomoc

Strona [Dyskusja](#)

[Czytaj](#) [Wyświetl historię](#) [Narzędzia](#) ▾

### Informacje

#### etykiety

negacja jako złożenie

 3 języki

### Ekspłorator funkcji

#### Nazwa

negacja logiczna

#### Wejścia

Wartość logiczna

wartość do zanegowania

#### Wyjście

Wartość logiczna

### Zawartość

#### funkcja

[negacja logiczna](#)

#### Implementacja

złożenie funkcji

#### złożenie funkcji

>  jeśli

([Odwołanie do argumentu](#) (wartość do zanegowania), [Wartość logiczna \(fałsz\)](#),

[Wartość logiczna \(prawda\)](#))

### Przypadki testowe

 prawda po zanegowaniu daje fałsz  
Pozytywny [Szczegóły](#)

 fałsz po zanegowaniu daje prawdę  
Pozytywny [Szczegóły](#)

### Wypróbuj tę implementację

#### Wprowadź dane wejściowe

> wartość do zanegowania ...

prawda  fałsz

[Wywołaj funkcję](#)





# January 2024 status of Wikifunctions

## Working

- You can create functions, implementations, & test cases
- You can use booleans, strings, and lists; more coming soon

## Coming later

- Calling functions embedded within Wikipedia articles *etc.*
- Calling functions from tools, gadgets, and 3rd party apps
- Using Wikidata items and Lexemes



03

# Language vs. Knowledge

# Functions on strings: toy examples

**Try a function**

**Function**

Reverse String ▾

**Enter Inputs**

> Value

diputs

**Run function**



# Functions on strings: toy examples

**Try a function**

**Function**

Reverse String ▼

**Enter Inputs**

> Value

diputs

**Run function**

**Result**

- stupid

[Details](#)



# Functions on strings: toy examples

Function: Encode NATO phonetic alphabet code (Z10309)

*Function (Z8)*

Page [Discussion](#)

[About](#) [Details](#)

## Details

Try this function

Enter Inputs

> Value

[Run function](#)

Result

- WHISKEY INDIA KILO INDIA

[Details](#)



# Functions to make model content?

Try this function

Enter inputs

> subject

> type

> location

**Run function**

**Result**

- Berlin is the largest city in Germany.

[Details](#)

Try this function

Enter inputs

> subject

> type

> location

**Run function**

**Result**

- Berlin ist die größte Stadt in Deutschland.

[Details](#)



# 04

# Early usage of Wikifunctions

# Functions to support languages

## Function: Finnish nominative plural (Z11205)

*Function (Z8)*

[Page](#) [Discussion](#)

[About](#) [Details](#)

Input Finnish nominative singular. Output Finnish nominative plural.

### Try this function

#### Enter inputs

> input

[Run function](#)

#### Result

• vanhemmat

[Details](#)





# Functions to support languages

(L31797)

vanhempi

fi

Language [Finnish](#)

Lexical category [noun](#)

## Forms

L31797-F1

vanhempi

fi

Grammatical features [nominative case](#), [singular](#)

Statements about L31797-F1

L31797-F2

vanhemmat

fi

Grammatical features [nominative case](#), [plural](#)

Statements about L31797-F2



# Functions to support languages



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The free dictionary

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Show possessive inflection  
Show inflection

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## vanhempi

**Contents** [\[show\]](#)

### Finnish [\[edit\]](#)

#### Pronunciation [\[edit\]](#)

- **IPA**<sup>(key)</sup>: /ˈvanhempi/, [ˈvɑ̃hɛmpɪ]
- Rhymes: **-anhempi**
- Syllabification<sup>(key)</sup>: van-hem-pi

#### Adjective [\[edit\]](#)

##### vanhempi

1. *comparative degree of vanha*
2. senior

*vanhempi konstaapeli*

senior constable

#### Declension [\[edit\]](#)

**Inflection of vanhempi (Kotus type 16\*/H/vanhempi, mp-mm gradation)** [\[more ▼\]](#)

<b>nominative</b>	vanhempi	vanhemmat
<b>genitive</b>	vanhemman	vanhempien
<b>partitive</b>	vanhempaa	vanhempia
<b>illative</b>	vanhempaan	vanhempiin

**Possessive forms of vanhempi (type vanhempi)** [\[more ▼\]](#)

#### Derived terms [\[edit\]](#)

- vanhemmiten

#### Noun [\[edit\]](#)

##### vanhempi

1. parent



# Functions to support languages

Wikidata Lexeme Forms

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## suomen kielen substantiivi

### yksikön nominatiivi

Tämä on .

### monikon nominatiivi

Nämä .

### yksikön genetiivi

Tämän .

### monikon genetiivi

Näiden .

### yksikön partitiivi

Tätä .

### monikon partitiivi

Näitä .

### yksikön essiivi

Tällaisena .

### monikon essiivi

Tällaisina .

### yksikön translatiivi

Yhdeksi .

### monikon translatiivi

Moniksi .

### yksikön inessiivi

Tässä .

### monikon inessiivi

Näissä .

### yksikön elatiivi

Tästä .

### monikon elatiivi

Näistä .



# Functions to support languages

582 lexemes

Part of speech

478 lexemes

Conditions

Property

[add condition](#)

Input form

[add feature](#) Leave blank to use lemma

Output form

[add feature](#) or [continue](#)

197 forms

Input filter (default operator =)

How many forms to check (limit)

At which one to start (offset)

Function

Lexeme	Lemma	Input	Recorded	Function	OK
<a href="#">L708940</a>	borba	borba	borbe	borbe	✓
<a href="#">L683117</a>	boca	boca	boce	boce	✓
<a href="#">L1010847</a>	bitka	bitka	bitke	bitke	✓
<a href="#">L1012623</a>	biskupica	biskupica	biskupice	biskupice	✓
<a href="#">L692268</a>	beskonačnost	beskonačnost	beskonačnosti	beskonačnosti	✓
<a href="#">L683112</a>	basna	basna	basne	basne	✓
<a href="#">L683203</a>	baka	baka	bake	bake	✓
<a href="#">L683111</a>	bajka	bajka	bajke	bajke	✓
<a href="#">L616895</a>	babica	babica	babice	babice	✓
<a href="#">L683204</a>	baba	baba	babe	babe	✓
<a href="#">L684121</a>	astronomija	astronomija	astronomije	astronomije	✓
<a href="#">L683113</a>	arterija	arterija	arterije	arterije	✓
<a href="#">L736557</a>	aritmetika	aritmetika	aritmetike	aritmetike	✓
<a href="#">L1012810</a>	arheologinja	arheologinja	arheologinje	arheologinje	✓
<a href="#">L1012813</a>	arheologija	arheologija	arheologije	arheologije	✓
<a href="#">L683155</a>	aorta	aorta	aorte	aorte	✓
<a href="#">L688516</a>	anatomija	anatomija	anatomije	anatomije	✓
<a href="#">L736559</a>	algebra	algebra	algebre	algebre	✓
<a href="#">L235530</a>	ada	ada	ade	ade	✓
<a href="#">L986503</a>	Wikipedija	Wikipedija	Wikipedije	Wikipedije	✓



**05**

# **The Abstract Wikipedia vision**

# Basic "natural language" functions...



## Function: smart paradigm for English plural (Z10241)

 Add languages 

Function (Z8)

Page [Discussion](#)

[Read](#) [Edit source](#) [View history](#)  [More](#) 

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This is where the summary of the function's description will go, once that feature is available. It will let you explain why the function exists, how it is often used, and what alternatives might work better for different situations. In edit mode, this will be a multi-lingual editable wikitext box.

### Examples for using the function

input	Output
Plural Of Chair Is Chairs	
Plural Of Fairy Is Fairies	

### Details

#### Evaluate Function

function: *smart paradigm for English plural*

- input: String

[Call Function](#)

Orchestration result

Evaluation result

String babies

[Show metrics](#)



# ... can build together

## Function: Statement of birth place (Z10132)

[Add languages](#)

Function (Z8)

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This is where the summary of the function's description will go, once that feature is available. It will let you explain why the function exists, how it is often used, and what alternatives might work better for different situations. In edit mode, this will be a multi-lingual editable wikitext box.

### Details

#### Evaluate Function

function: *Statement of birth place*

• personName: String

• placeName: String

[Call Function](#)

Orchestration result

Evaluation result

*String* Albert Einstein was born in Ulm.

[Show metrics](#)



# Vision: Functions could create prose

Marie Curie was a Polish chemist and physicist. She was born 7 November 1867 in Warsaw and died 4 July 1934 in Passy. Marie Curie was a pioneer in the research of radioactivity. She researched radium. She was awarded the Nobel Prize in Physics in 1903, together with Pierre Curie and Henri Becquerel, for pioneering the research of radioactivity. She was awarded the Nobel Prize in Chemistry in 1909, for the discovery of polonium and radium. Marie Curie was the first woman to win the Nobel Prize.

מארי קירי הייתה כימאית ופיזיקאית פולנייה. היא נולדה ב-7 בנובמבר 1867 בוורשה ומתה ב-4 ביולי 1934 בפאסי (סבואה עילית). מארי קירי הייתה חלוצה בחקר הרדיואקטיביות. היא חקרה רדיום. היא זכתה בפרס נובל לפיזיקה ב-1903, יחד עם פייר קירי ואנרי בקרל, על חלוציות בחקר הרדיואקטיביות. היא זכתה בפרס נובל לכימיה ב-1909, על גילוי הפולוניום והרדיום. מארי קירי הייתה האישה הראשונה שזכתה בפרס נובל.





# ... that updates across languages

Marie Curie was a Polish chemist and physicist. She was born 7 November 1867 in Warsaw and died 4 July 1934 in Passy. Marie Curie was a pioneer in the research of radioactivity. She researched radium. She was awarded the Nobel Prize in Physics in 1903, together with Pierre Curie and Henri Becquerel, for pioneering the research of radioactivity. She was awarded the Nobel Prize in Chemistry in 1911, for the discovery of polonium and radium. Marie Curie was the first woman to win the Nobel Prize.

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# Controlled by Wikimedia communities



## PlaceOfBirth

Person: Albert Einstein

Place: Ulm

“\$Person was born  
in \$Place.”

Albert Einstein was  
born in Ulm.



# Controlled by Wikimedia communities



## PlaceOfBirth

Person: Albert Einstein

Place: Ulm

“\$Person je rođen u  
\$Place:locative.”

Albert Einstein je  
rođen u Ulmu.



# Starting gently: Item descriptions



- Main page
- Community portal
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- Create a new Item
- Recent changes
- Random item
- Query Service
- Nearby
- Help
- Donate
- Lexicographical data
- Create a new Lexeme
- Recent changes
- Random Lexeme
- Tools
- What links here
- Related changes
- Special pages
- Permanent link
- Page information
- Concept URI
- Cite this page

## University of Lagos (Q1782980)

Nigerian public university  
Unilag | UNILAG

> In more languages

Language	Label	Description	Also known as
English	University of Lagos	Nigerian public university	Unilag UNILAG
German	University of Lagos	Universität in Nigeria	Universität Lagos Unilag
Croatian	No label defined	No description defined	
Uzbek	No label defined	No description defined	
Arabic	جامعة لاغوس	جامعة في لاغوس، نيجيريا	جامعة لاغوس
Asturian	Universidá de Lagos	universidá de Nixeria	Unilag
South Azerbaijani	ئونیورسیتی ییلایووردو	No description defined	
Belarusian	Лагаскі ўніверсітэт	No description defined	Універсітэт Лагаса
Catalan	Universitat de Lagos	No description defined	
Welsh	Prifysgol Lagos	No description defined	
Danish	Lagos Universitet	nigeriansk universitet	
Greek	Πανεπιστήμιο του Λάγος	No description defined	
Esperanto	Universitato de Lagoso	No description defined	
Spanish	Universidad de Lagos	Una universidad en Lagos	
Estonian	Lagose Ülikool	No description defined	
French	université de Lagos	université au Nigeria	
Irish	Oliscóil Lagos	No description defined	
Scottish Gaelic	Ollthigh Lagos	No description defined	
Hausa	Jami'ar Lagos	Jami'ar a'umma a Najeriya	JL Unilag
Hebrew	אוניברסיטת לאגוס	אוניברסיטה בניגריה	

Wikipedia (12 entries) edit

- ar جامعة لاغوس
- azb لاقوس بيلايوردو
- de University of Lagos
- en University of Lagos
- eo Universitato de Lagoso
- es Universidad de Lagos
- et Lagose Ülikool
- fr Université de Lagos
- it Lagoso universitetas
- pt Universidade Moshood Abiola
- simple University of Lagos
- yo Yunifásití ilú Èkó

Wikibooks (0 entries) edit

Wikinews (0 entries) edit

Wikiquote (0 entries) edit

Wikisource (0 entries) edit

Wikiversity (0 entries) edit

Wikivoyage (0 entries) edit



# Later, harder work: Automatic lists

## ☰ List of national capitals by population

[Article](#) [Talk](#)


[Read](#)

From Wikipedia, the free encyclopedia

This is a **list of national capitals, ordered according to population**. [Capitals of dependent territories](#) and [disputed territories](#) are marked in *italics*. The population statistics given refer only to the official capital area, and do not include the wider metropolitan/urban district.

### Table [ [edit](#) | [edit source](#) ]

\* indicates "**Cities of COUNTRY or TERRITORY**" links.

	Country (or territory) <sup>↕</sup>	Capital <sup>↕</sup>	Population <sup>▲</sup>	% of country <sup>↕</sup>	Source <sup>↕</sup>
1	 <b>Palau</b>	Ngerulmud	0	0.0%	2010
2	 <b>South Georgia and the South Sandwich Islands (UK)</b>	King Edward Point	22	73.3%	2018
3	 <b>Pitcairn Islands (UK)</b>	Adamstown	40	100.0%	2021
4	 <b>Cocos (Keeling) Islands (Australia)</b>	West Island	134	24.6%	2011



# More contentious work: Infoboxes

**Audrey Tang Feng**

唐鳳



**Minister of Digital Affairs**

**Incumbent**

## Personal details

<b>Born</b>	Autrijus Tang Tsung-han (唐宗漢) 18 April 1981 (age 42) Taipei, Taiwan
<b>Political party</b>	Independent
<b>Parents</b>	Tang Kuang-hua (father) Li Ya-ching (mother)
<b>Relatives</b>	Bestian Tang Tsung-hao (brother)





**Thank you!**



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