

SMWCon Fall 2017

October 4 to 6, Rotterdam

Introduction and tutorial to Semantic MediaWiki

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Overview

- What does semantic mean?
- What is Semantic MediaWiki?
- How does it work?
- How-tos and examples galore!
 - Setting values
 - Querying pages

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What does semantic mean?

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What does semantic mean?

sem•an•tic (sĭ-măn'tĭk)

adj.: of or relating to meaning,
especially meaning in language.

→ Basically information is given an explicit meaning.

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What is Semantic MediaWiki?

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What is Semantic MediaWiki?

- First proposed in August 2005 at Wikimania in Frankfurt am Main, Germany
 - Paper by Markus Krötzsch, Denny Vrandečić and Max Völkel
 - “Wikipedia and the Semantic Web – The MissingLinks”

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What is Semantic MediaWiki?

- First released in September 2005 (v0.1)
 - Extension to the MediaWiki software
- First stable release in December 2007 (v1.0)
- Upcoming stable release in Q4.2017 or Q1. 2018 (v3.0)
 - Now a full-fledged framework extending MediaWiki with many spin-off extensions

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What is Semantic MediaWiki?

- Aims at making data more readable for humans and machines
 - Lets you store and query data within the wiki's pages
 - Lets you publish data via the Semantic Web

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What is Semantic MediaWiki?

- Can be used to transform a wiki into a powerful information and/or data management system
 - Best used if out of the box software does not provide the required functionality
 - Best used if creating a software with the required functionality is too expensive

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How does it work?

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How does it work?

Fact:

→ Berlin has a population of 3,520,031 people.

A fact consists of three parts:

- Wikipage (subject), e.g. “Berlin”
- Property (predicate), e.g. “Has population”
- Value (object), e.g. “3,520,031”

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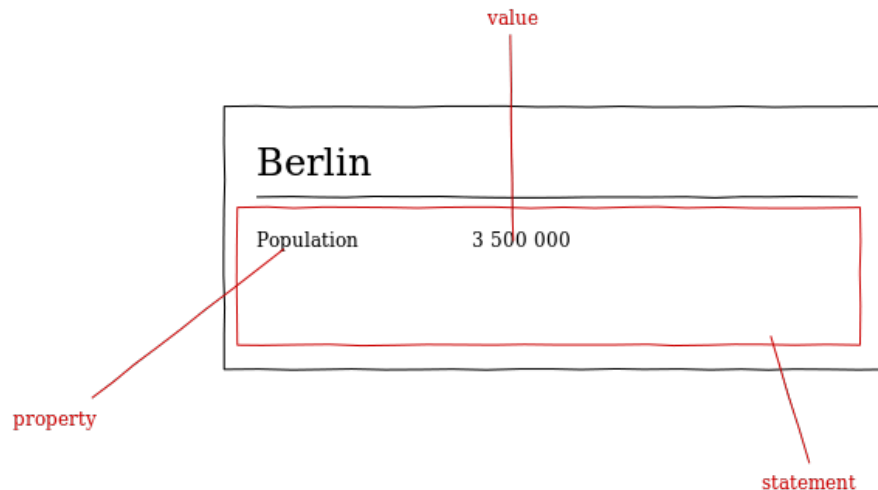
How does it work?

- These three parts can be split into a relation and a statement:
 - Relation: Berlin has a population.
 - Statement: The population is “3,520,031”.

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How does it work?

- A statement consists of a property and its value:
 - Property (predicate), e.g. “Has population”
 - Value (object), e.g. “3,520,031”



→ Adding a statement to a page (subject) is called annotation.

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How does it work?

- A property must have a datatype:
 - Needed to give the property a certain meaning
e.g. a property of datatype “Telephone number” can only validely hold telephone numbers
 - Page namespace: “Property”
 - Page name: “Has telephone number“
 - Page content: `[[Has type::Telephone number]]`
 - This is the datatype assignment.
- Default is datatype “Page” if nothing was explicitly added.

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How does it work?

- A property must have a datatype:
 - Needed to be able to also do a formal check of the assigned value
 - e.g. a property value of “abc” annotated to a property of datatype “Telephone number”
 - An error message will be issued.

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How does it work?

- A property must have a datatype:
 - Needed to allow a certain behaviour, i.e. add links, add formatting, etc.
 - e.g. a property value of “+49-30-45-08-49-40” added to a property of datatype “Telephone number” will automatically be linked and additionally preceded with URI prefix “tel:”

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How does it work?

- A property must have a datatype:
 - There are a lot of datatypes
 - e.g. “Page”, “Text”, “Number”, “Email”, “URL”, “Telephone number”, “Temperature”, “Boolean”, etc.
 - See “Special:Types” on your wiki
 - A property can only use one datatype.

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How does it work?

- A property can be a “special property”:
 - It has a predefined meaning and purpose
e.g. “Has type” to hold the datatype information
 - It cannot be created manually since it is already provided by Semantic MediaWiki

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How does it work?

- A property can be a “special property”:
 - It cannot be changed and used otherwise, i.e. must be unique in naming and usage.
 - There are a lot of special properties, e.g. “Has type”, “Allows value”, “Modification date”, “Has improper value for”, “Has subobject”, “Has query”, etc.
 - See “*Special:Properties*” on your wiki (marked in italics)

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How does it work?

- A property can be a “special property”
 - Some special properties are assigned manually
e.g. special property “Has type” which assigns the datatype to a user defined property
 - Some special properties are assigned automatically
e.g. “Has improper value for” stores incorrect values assigned to a property

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How-tos and examples galore!

Annotate information/data

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How-tos and examples galore! Annotate information/data.

- Setting values (syntax):
 - In-text annotation (single value for one property)

```
[[Property name::Property value]]
```

The property value is directly shown on the page. Note that this is not working with restricted characters as part of the data value, e.g. “ : : ” as in IPv6 addresses: annotation must use the `#set` parser function.

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How-tos and examples galore! Annotate information/data.

- Setting values (syntax):
 - In-text annotation (multiple values for one property)

```
[[Property name::Property value 1]]
```

```
[[Property name::Property value 2]]
```

The property values are directly shown on the page.

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How-tos and examples galore! Annotate information/data.

- Setting values (syntax):
 - In-text annotation (single value for one property)

```
[[Property name::Property value| ]]
```

The property value is not directly shown on the page. Probably better here: annotation using the `#set` parser function.

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How-tos and examples galore! Annotate information/data.

- Setting values (syntax):
 - `#set` annotation (single value for one property)

```
{{#set:Property name=Property value}}
```

The property value is not directly shown on the page. Note that this must be used if there are restricted characters as part of the data value, e.g. “: :” as in IPv6 addresses:

```
{{#set:Has IPv6 address=2001:db8::1428:57ab}}
```

Note that there is a way to directly show values added via `#set`.

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How-tos and examples galore! Annotate information/data.

- Setting values (syntax):

- `#set` annotation (multiple values for one property)

```
{{#set:  
  Property name=Property value 1; Property value 2  
  |+sep=;  
}}
```

The property values are not directly shown on the page. Uses the `+sep` parameter.

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How-tos and examples galore! Annotate information/data.

- Setting values (syntax):

- #set annotation (single value for one property)

```
{{#set:  
  Property name=Property value  
  |template=Show property value  
}}
```

The property value is directly shown on the page. Uses the `template` parameter.

Template “Show property value”:

```
{{{value}}}
```

The annotated data value is directly shown with `{{{value}}}`.

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How-tos and examples galore! Annotate information/data.

- **Setting values (syntax):**

- `#set` annotation (multiple values for one property)

```
{{#set:  
  Property name=Property value 1; Property value 2  
  |+sep=;  
  |template=Show property values  
}}
```

The property value is directly shown on the page. Uses the `template` parameter. Requires ParserFunctions extension (`#if`).

Template “Show property values”:

```
{{{value}}}{#if: {{{last-element}}} | |, }}
```

The trailing separator is being avoided with `{{{last-element}}}`.

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How-tos and examples galore! Annotate information/data.

- **Let's work with a real life use case:**

Organizing information about books.

- Information to be stored:

- Title of the book
- Author of the book
- Publisher of the book
- Publishing year of the book
- Publishing country of the book
- ISBN of the book
- Rating for the book

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How-tos and examples galore! Annotate information/data.

- Let's work with a real life use case:

Organizing information about books.

- Needed properties and their datatypes:

- “Has book title” → datatype “Text”
- “Has book author” → datatype “Page”
- “Has book publisher” → datatype “Page”
- “Has book publishing year” → datatype “Date”
- “Has book ISBN” → datatype “Text”
- “Has book publishing country” → datatype “Page”
- “Has book rating” → datatype “Number”

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How-tos and examples galore! Annotate information/data.

- Let's work with a real life use case:

Organizing information about books.

- Syntax to store and annotate the information:

```
This page is about the book called [[Has book title::The
Picture of Dorian Gray]] written by [[Has book author::Oscar
Wilde]]. It was last published by [[Has book publisher::Titan
Books]] in the [[Has book publishing country::UK]], [[Has
book publishing year::2015]]. The ISBN is [[Has book
ISBN::978-1783293650]]. My personal rating for this book is
[[Has book rating::1]].
```

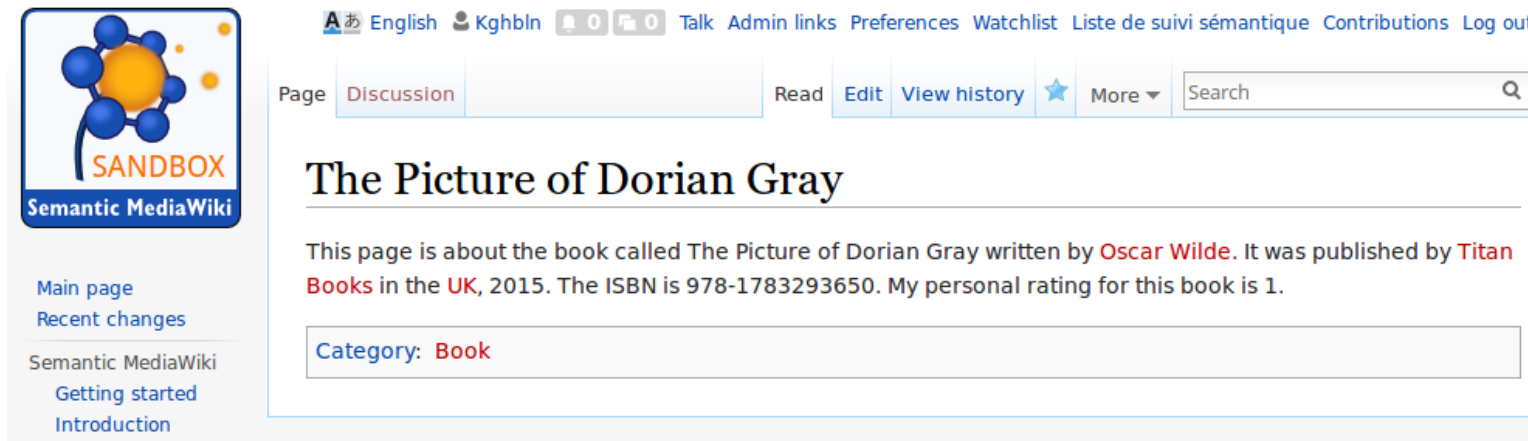
```
[[Category:Book]]
```

Most probably one would prefer a tabular instead of a text presentation for this kind of subject but that's entirely up to you. Also you will most probably rather use a form (requires the Page Forms extension) and a template to edit and display the data.

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How-tos and examples galore! Annotate information/data.

- Let's work with a real life use case:
Organizing information about books.



The screenshot shows a Semantic MediaWiki page titled "The Picture of Dorian Gray". The page content includes a description: "This page is about the book called The Picture of Dorian Gray written by **Oscar Wilde**. It was published by **Titan Books** in the **UK**, 2015. The ISBN is 978-1783293650. My personal rating for this book is 1." Below the text, there is a category box labeled "Category: Book". The page header shows navigation links such as "English", "Kghbln", "Talk", "Admin links", "Preferences", "Watchlist", "Liste de suivi sémantique", "Contributions", and "Log out". The sidebar on the left contains links for "Main page", "Recent changes", "Semantic MediaWiki", "Getting started", and "Introduction".

Here you cannot see if the information is stored semantically. Therefore use special page "Browse" via the sidebar to have a look and see what annotations are stored. →

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How-tos and examples galore! Annotate information/data.

- Let's work with a real life use case:
Organizing information about books.

Special page Search

Browse wiki [RDF](#) [Help](#)

The Picture of Dorian Gray	
Has book ISBN	978-1783293650 + Q
Has book author	Oscar Wilde + Q
Has book publisher	Titan Books + Q
Has book publishing country	UK + Q
Has book publishing year	2015 + Q
Has book rating	1 + Q
Has book title	The Picture of Dorian Gray + Q
Creation date	15:44:24, 25 September 2016 + Q
Categories	Book
Last editor is	User:Kghbln + Q
Modification date	16:01:45, 25 September 2016 + Q
Is a new page	false + Q
Page creator	User:Kghbln + Q
Page author	User:Kghbln + Q
Number of revisions	3 + Q
Page ID	1,442 + Q
Revision ID	3,857 + Q

hide properties that link here

No properties link to this page.

Special page Search

Browse wiki **property names (left)** **property values (right)** [RDF](#) [Help](#)

The Picture of Dorian Gray	
Has book ISBN	978-1783293650 + Q
Has book author	Oscar Wilde + Q
Has book publisher	Titan Books + Q
Has book publishing country	UK + Q
Has book publishing year	2015 + Q
Has book rating	1 + Q
Has book title	The Picture of Dorian Gray + Q
Creation date	15:44:24, 25 September 2016 + Q
Categories	Book categories
Last editor is	User:Kghbln + Q
Modification date	16:01:45, 25 September 2016 + Q
Is a new page	false + Q
Page creator	User:Kghbln + Q
Page author	User:Kghbln + Q special properties (orange)
Number of revisions	3 + Q
Page ID	1,442 + Q
Revision ID	3,857 + Q

hide properties that link here

No properties link to this page.

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How-tos and examples galore! Querying pages.

- Relevant documentation:
 - Property naming
 - Datatypes
 - In-text annotation
 - #set-annotation
 - Special properties
 - Special page "Browse"

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How-tos and examples galore!

Querying pages

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- `#show query`

- `{{#show: Page name |?Property name }}`

- * Display only a single property value for a single page.

- * This is not about selecting pages which is what Semantic MediaWiki is actually there for.

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):
 - `#ask` or inline or embedded or semantic query
 - Consists of two parts
 - Query condition
 - Which pages containing information should be selected.
 - Printout statement with display format
 - Which information found on the selected pages should be displayed and how should it be displayed.

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- `#ask query`

- Query condition (selecting pages)

```
{{#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  printout statement  
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- `#ask query`

- Printout statement (displaying information) with default thus basic display formatting

```
{{#ask:  
  query condition  
  |?Has book title  
  |?Has book author  
  |?Has book publishing year  
  |?Has book ISBN  
  |?Has book rating  
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- `#ask query`

- Query condition + printout statement

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book title  
  |?Has book author  
  |?Has book publishing year  
  |?Has book ISBN  
  |?Has book rating  
}}
```


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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask` query (result)

Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [★](#) [More](#)

Books

	Has book title	Has book author	Has book publishing year	Has book ISBN	Has book rating
Das Glasperlenspiel	Das Glasperlenspiel	Hermann Hesse	2012	978-3518463574	1
Il Gattopardo	Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
Johann Christof	Johann Christof	Romain Rolland	1977	978-3423020329	1
Siddhartha	Siddhartha	Hermann Hesse	1974	978-3518366820	1
The Picture of Dorian Gray	The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
The Turn of the Screw	The Turn of the Screw	Henry James	1991	978-0486266848	2
Venus in Furs	Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3

... but the first column is missing a label!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book title  
  |?Has book author  
  |?Has book publishing year  
  |?Has book ISBN  
  |?Has book rating  
  |mainlabel=title  
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask` query (result)

Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [More](#)

Books

titel	Has book title	Has book author	Has book publishing year	Has book ISBN	Has book rating
Das Glasperlenspiel	Das Glasperlenspiel	Hermann Hesse	2012	978-3518463574	1
Il Gattopardo	Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
Johann Christof	Johann Christof	Romain Rolland	1977	978-3423020329	1
Siddhartha	Siddhartha	Hermann Hesse	1974	978-3518366820	1
The Picture of Dorian Gray	The Picture of Dorian Gray	Oscar Wilde	2015	978-1782950500	1
The Turn of the Screw	The Turn of the Screw	Henry James	1991	978-0486266848	2
Venus in Furs	Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3

... but the book title is duplicated!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- `#ask query`

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book author  
  |?Has book publishing year  
  |?Has book ISBN  
  |?Has book rating  
  |mainlabel=title  
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`

Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [★](#) [More](#)

Books

titel	Has book author	Has book publishing year	Has book ISBN	Has book rating
Das Glasperlenspiel	Hermann Hesse	2012	978-3518463574	1
Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
Johann Christof	Romain Rolland	1977	978-3423020329	1
Siddhartha	Hermann Hesse	1974	978-3518366820	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
The Turn of the Screw	Henry James	1991	978-0486266848	2
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3

... but the column labels should be changed!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book author=author  
  |?Has book publishing year=year  
  |?Has book ISBN=ISBN  
  |?Has book rating=rating  
  |mainlabel=title  
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`

Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [★](#) [More](#)

Books

title	author	year	ISBN	rating
Das Glasperlenspiel	Hermann Hesse	2012	978-3518463574	1
Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
Johann Christof	Romain Rolland	1977	978-3423020329	1
Siddhartha	Hermann Hesse	1974	978-3518366820	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
The Turn of the Screw	Henry James	1991	978-0486266848	2
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3

... but the column labels should not be linking to the property page!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book author=author  
  |?Has book publishing year=year  
  |?Has book ISBN=ISBN  
  |?Has book rating=rating  
  |mainlabel=title  
  |headers=plain  
}}
```


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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`

Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [★](#) [More](#)

Books

title ↕	author ↕	year ↕	ISBN ↕	rating ↕
Das Glasperlenspiel	Hermann Hesse	2012	978-3518463574	1
Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
Johann Christof	Romain Rolland	1977	978-3423020329	1
Siddhartha	Hermann Hesse	1974	978-3518366820	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
The Turn of the Screw	Henry James	1991	978-0486266848	2
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3

... but the tabel should be sorted by year!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book author=author  
  |?Has book publishing year=year  
  |?Has book ISBN=ISBN  
  |?Has book rating=rating  
  |mainlabel=title  
  |headers=plain  
  |sort=Has book publishing year  
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`

Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [★](#) [More](#)

Books

title ↕	author ↕	year ↕	ISBN ↕	rating ↕
Siddhartha	Hermann Hesse	1974	978-3518366820	1
Johann Christof	Romain Rolland	1977	978-3423020329	1
Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
The Turn of the Screw	Henry James	1991	978-0486266848	2
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3
Das Glasperlenspiel	Hermann Hesse	2012	978-3518463574	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1

... but the year should be sorted in descending order!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book author=author  
  |?Has book publishing year=year  
  |?Has book ISBN=ISBN  
  |?Has book rating=rating  
  |mainlabel=title  
  |headers=plain  
  |sort=Has book publishing year  
  |order=descending  
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`

Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [★](#) [More](#)

Books

title ↕	author ↕	year ↕	ISBN ↕	rating ↕
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
Das Glasperlenspiel	Hermann Hesse	2015	978-3518463574	1
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3
The Turn of the Screw	Henry James	1991	978-0486266848	2
Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
Johann Christof	Romain Rolland	1977	978-3423020329	1
Siddhartha	Hermann Hesse	1974	978-3518366820	1

... but the author should also be sorted but in ascending order!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book author=author  
  |?Has book publishing year=year  
  |?Has book ISBN=ISBN  
  |?Has book rating=rating  
  |mainlabel=title  
  |headers=plain  
  |sort=Has book publishing year,Has book author  
  |order=descending,ascending  
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`



Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [★](#) [More](#)

Books

title ↕	author ↕	year ↕	ISBN ↕	rating ↕
Das Glasperlenspiel	Hermann Hesse	2015	978-3518463574	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3
The Turn of the Screw	Henry James	1991	978-0486266848	2
Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
Johann Christof	Romain Rolland	1977	978-3423020329	1
Siddhartha	Hermann Hesse	1974	978-3518366820	1

... but the values for year and rating should be centered!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book author=author  
  |?Has book publishing year=year|+align=center  
  |?Has book ISBN=ISBN  
  |?Has book rating=rating|+align=center  
  |mainlabel=title  
  |headers=plain  
  |sort=Has book publishing year,Has book author  
  |order=descending,ascending  
}}
```


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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`

Page [Discussion](#) [Read](#) [Edit](#) [View history](#) [★](#) [More](#)

Books

title ↕	author ↕	year ↕	ISBN ↕	rating ↕
Das Glasperlenspiel	Hermann Hesse	2015	978-3518463574	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3
The Turn of the Screw	Henry James	1991	978-0486266848	2
Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
Johann Christof	Romain Rolland	1977	978-3423020329	1
Siddhartha	Hermann Hesse	1974	978-3518366820	1

... but I would like to have a short introductory sentence!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):


- #ask query

```
{{#ask:
  [[Category:Book]]
  [[Has book title::+]]
  |?Has book author=author
  |?Has book publishing year=year|+align=center
  |?Has book ISBN=ISBN
  |?Has book rating=rating|+align=center
  |intro=<b>This table shows the books I have stored here:</b>
  |mainlabel=title
  |headers=plain
  |sort=Has book publishing year,Has book author
  |order=descending,ascending
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`



The screenshot shows a MediaWiki page with a navigation bar at the top. The page title is "Books". Below the title, there is a heading "This table shows the books I have stored here:". The table has five columns: title, author, year, ISBN, and rating. The table contains seven rows of book data.

title	author	year	ISBN	rating
Das Glasperlenspiel	Hermann Hesse	2015	978-3518463574	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3
The Turn of the Screw	Henry James	1991	978-0486266848	2
Il Gattopardo	Giuseppe Tomasi di Lampedusa	1990	978-8807810282	2
Johann Christof	Romain Rolland	1977	978-3423020329	1
Siddhartha	Hermann Hesse	1974	978-3518366820	1

... but I would like show only the first three results!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{ {#ask:  
  [[Category:Book]]  
  [[Has book title::+]]  
  |?Has book author=author  
  |?Has book publishing year=year|+align=center  
  |?Has book ISBN=ISBN  
  |?Has book rating=rating|+align=center  
  |intro=<b>This table shows the books I have stored here:</b>  
  |mainlabel=title  
  |headers=plain  
  |sort=Has book publishing year,Has book author  
  |order=descending,ascending  
  |limit=3  
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`



The screenshot shows a MediaWiki page with a navigation bar at the top. The page title is "Books". Below the title, there is a heading "This table shows the books I have stored here:". The table has five columns: title, author, year, ISBN, and rating. The table contains three rows of data. Below the table, there is a link for "... autres résultats".

title ↕	author ↕	year ↕	ISBN ↕	rating ↕
Das Glasperlenspiel	Hermann Hesse	2015	978-3518463574	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3
... autres résultats				

... in English and a bit more specific please!

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{{#ask:
  [[Category:Book]]
  [[Has book title::+]]
  |?Has book author=author
  |?Has book publishing year=year|+align=center
  |?Has book ISBN=ISBN
  |?Has book rating=rating|+align=center
  |intro=<b>This table shows the books I have stored here:</b>
  |mainlabel=title
  |searchlabel=... more books
  |headers=plain
  |sort=Has book publishing year,Has book author
  |order=descending,ascending
  |limit=3
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask query (result)`



The screenshot shows a MediaWiki page with a navigation bar at the top containing 'Page', 'Discussion', 'Read', 'Edit', 'View history', a star icon, 'More', and a search box. Below the navigation bar is the heading 'Books'. Underneath the heading is the text 'This table shows the books I have stored here:'. Below this text is a table with five columns: 'title', 'author', 'year', 'ISBN', and 'rating'. The table contains three rows of data and a final row with a link to '... more books'.

title ↕	author ↕	year ↕	ISBN ↕	rating ↕
Das Glasperlenspiel	Hermann Hesse	2015	978-3518463574	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3
... more books				

Shouldn't the columns "title" and "author" be wider and of the same width?

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{{#ask:
  [[Category:Book]]
  [[Has book title::+]]
  |?=title|+width=20em
  |?Has book author=author|+width=20em
  |?Has book publishing year=year|+align=center
  |?Has book ISBN=ISBN
  |?Has book rating=rating|+align=center
  |intro=<b>This table shows the books I have stored here:</b>
  |mainlabel=-
  |searchlabel=... more books
  |headers=plain
  |sort=Has book publishing year,Has book author
  |order=descending,ascending
  |limit=3
}}
```

Note: SMW 3.0.0 or later only!

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask` query (result)



The screenshot shows a Semantic MediaWiki page with a navigation bar at the top containing 'Page', 'Discussion', 'Read', 'Edit', 'View history', 'Annotate', and 'More'. A search box is on the right. The main content is titled 'Books' and includes a caption: 'This table shows the books I have stored here:'. Below this is a table with five columns: 'title', 'author', 'year', 'ISBN', and 'rating'. The table contains three rows of data and a link to '... more books'.

title	author	year	ISBN	rating
Das Glasperlenspiel	Hermann Hesse	2015	978-3518463574	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3

[... more books](#)

Isn't there a cool new predefined class (view) around?

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

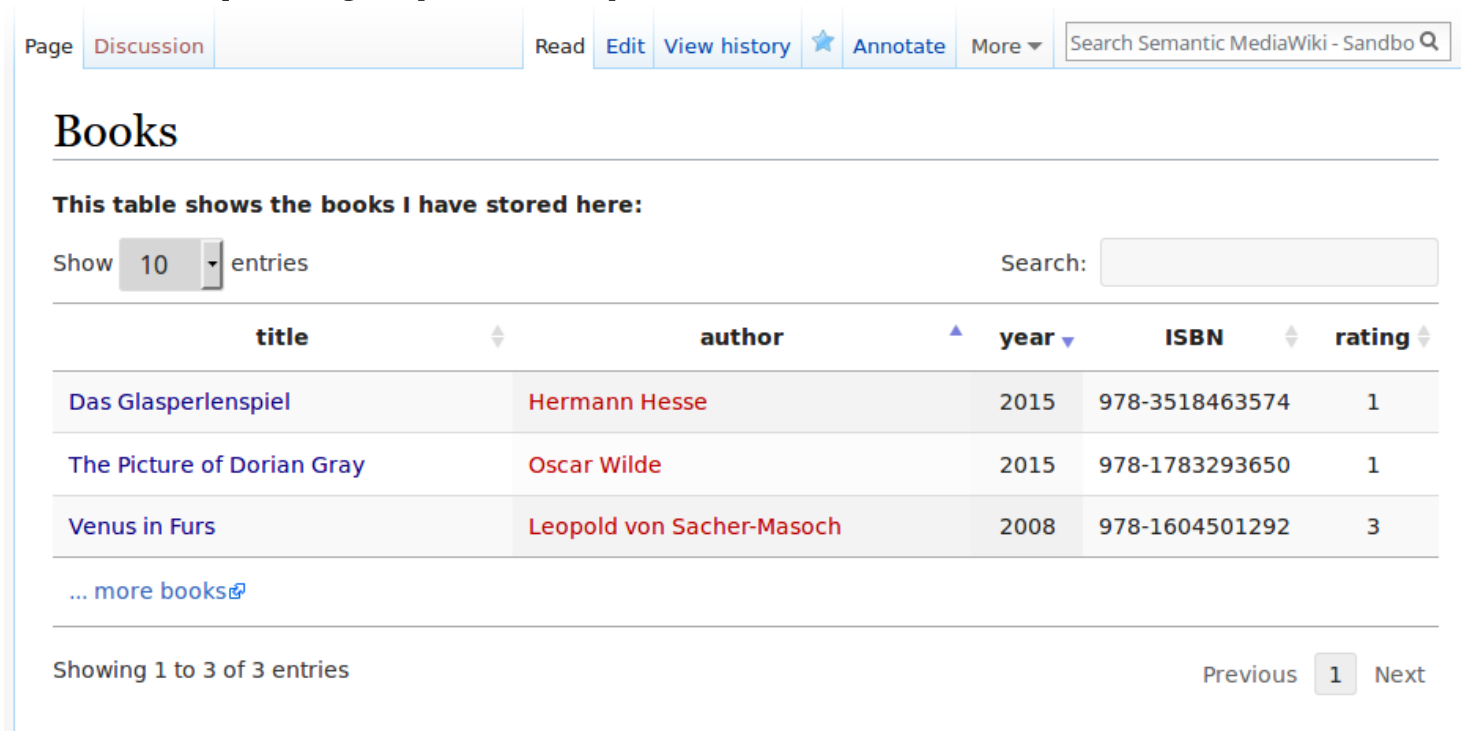
```
{{#ask:
  [[Category:Book]]
  [[Has book title::+]]
  |?=title|+width=40%
  |?Has book author=author|+width=40%
  |?Has book publishing year=year|+align=center|+width=5%
  |?Has book ISBN=ISBN|+align=center|+width=10%
  |?Has book rating=rating|+align=center|+width=5%
  |intro=<b>This table shows the books I have stored here:</b>
  |mainlabel=-
  |searchlabel=... more books
  |headers=plain
  |sort=Has book publishing year,Has book author
  |order=descending,ascending
  |limit=3
  |class=datatable <!-- comes with width=100% -->
}}
```

Note: SMW 3.0.0 or later only!

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask` query (result)



The screenshot shows a Semantic MediaWiki page titled "Books". The page has a navigation bar with "Page Discussion", "Read", "Edit", "View history", "Annotate", and "More" buttons. A search box is present with the text "Search Semantic MediaWiki - Sandbo". Below the navigation bar, the title "Books" is displayed. A subtitle reads "This table shows the books I have stored here:". There is a "Show 10 entries" dropdown menu and a "Search:" input field. The main content is a table with columns: "title", "author", "year", "ISBN", and "rating". The table contains three rows of book data. Below the table, there is a link "... more books". At the bottom, it says "Showing 1 to 3 of 3 entries" and "Previous 1 Next".

title	author	year	ISBN	rating
Das Glasperlenspiel	Hermann Hesse	2015	978-3518463574	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3

Can I also provide a link to download this information?

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{{#ask:
  [[Category:Book]]
  [[Has book title::+]]
  |?=title|+width=20em
  ...
  |intro=<b>This table shows the books I have stored here:</b>
  |mainlabel=-
  |searchlabel=... more books
  |headers=plain
  |sort=Has book publishing year,Has book author
  |order=descending,ascending
  |limit=3
  |class=datatable
  |outro=> {{#ask: ... }} <!-- Add #ask query no. 2 here -->
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

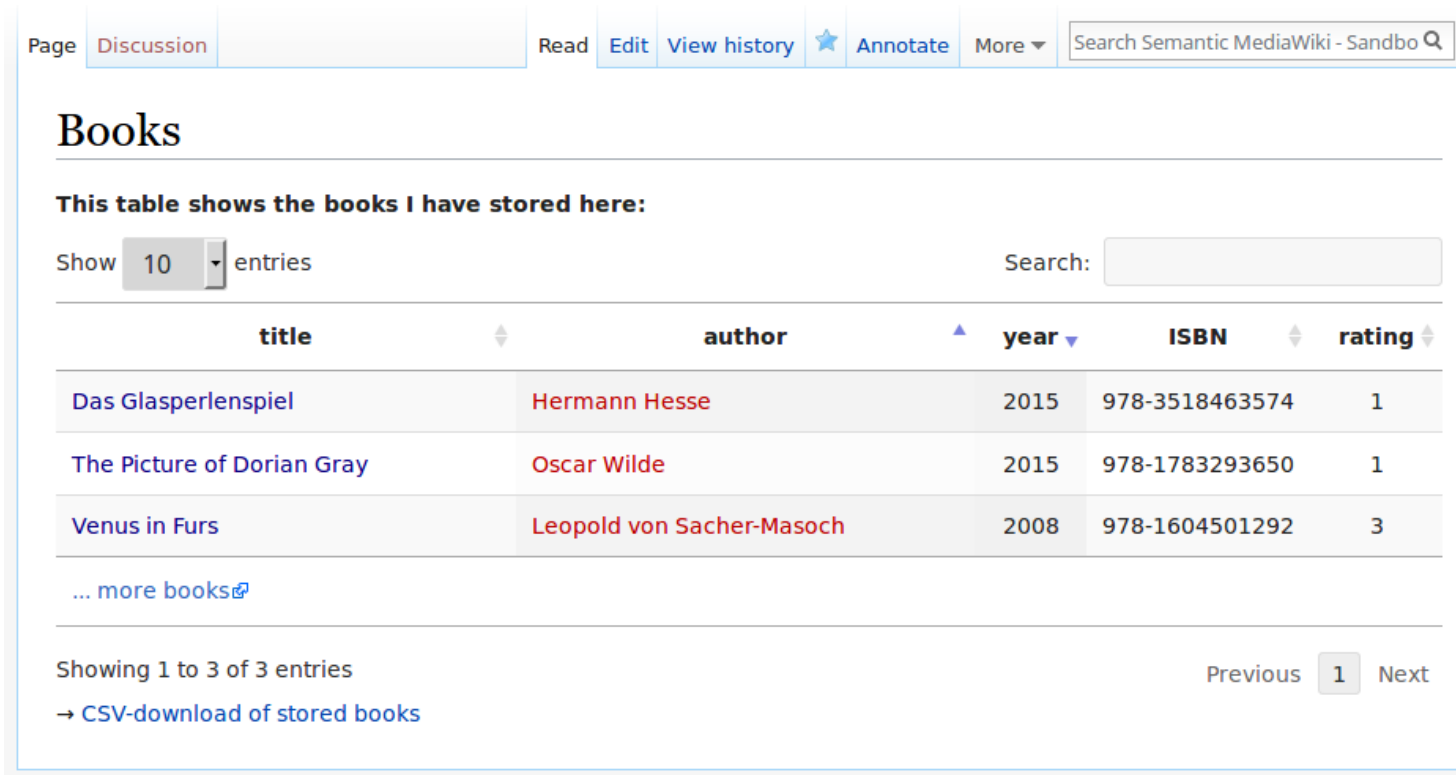
- #ask query no. 2

```
{{#ask:
  [[Category:Book]]
  [[Has book title::+]]
  |?Has book author=author
  |?Has book publishing year=year
  |?Has book ISBN=ISBN
  |?Has book rating=rating
  |mainlabel=title
  |searchlabel=CSV-download of stored books
  |sort=Has book publishing year,Has book author
  |order=descending,ascending
  |format=csv
}}
```

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How-tos and examples galore! Querying pages.

- Querying pages:
 - `#ask` query (result)



The screenshot shows a Semantic MediaWiki page titled "Books". At the top, there are navigation tabs for "Page", "Discussion", "Read", "Edit", "View history", "Annotate", and "More". A search bar is located in the top right corner. Below the navigation, the heading "Books" is displayed. A sub-heading reads "This table shows the books I have stored here:". Below this, there is a "Show 10 entries" dropdown menu and a "Search:" input field. The main content is a table with the following columns: "title", "author", "year", "ISBN", and "rating". The table contains three rows of data:

title	author	year	ISBN	rating
Das Glasperlenspiel	Hermann Hesse	2015	978-3518463574	1
The Picture of Dorian Gray	Oscar Wilde	2015	978-1783293650	1
Venus in Furs	Leopold von Sacher-Masoch	2008	978-1604501292	3

Below the table, there is a link "... more books". At the bottom of the page, it says "Showing 1 to 3 of 3 entries" and "Previous 1 Next". A link for "→ CSV-download of stored books" is also present.

Theoretically: What happens if there are no results?

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How-tos and examples galore! Querying pages.

- Querying pages (syntax):

- #ask query

```
{{#ask:
  [[Category:Book]]
  [[Has book title::+]]
  |?=title|+width=20em
  ...
  |intro=<b>This table shows the books I have stored here:</b>
  |mainlabel=-
  |searchlabel=... more books
  |default=<b>No books have been stored yet.</b>
  |headers=plain
  |sort=Has book publishing year,Has book author
  |order=descending,ascending
  |limit=3
  |class=datatable
  |outro=> {{#ask: ... }}
}}
```

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How-tos and examples galore! Querying pages.

- Relevant documentation:
 - [Selecting pages](#)
 - [Displaying information](#)
 - [Inline queries](#)

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Thank you!