

# Variants

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## Introduction

The variants feature of Daisy allows to have multiple alternatives of a document stored in one logical document, thus identified by one unique ID.

Daisy allows to have variants among two axes:

- branches
- languages

For example, if there would not be a variants feature, and you had the same content in different languages, for each of these languages you would need to create a different document, thus with a different ID.

Language variants are quite obvious, but you may wonder what branches are. The purpose of branches is to have multiple parallel editable versions of the same content. As an example, take the Daisy documentation. Between major Daisy releases there might be quite some changes to the documentation. However, while creating the documentation of e.g. Daisy 1.3, we still want the ability to update the documentation of Daisy 1.2. Sure, this could be solved by duplicating all documentation documents for each new release, but then the identity of these documents would be lost since they get new IDs assigned, and the relationship between the documents in different releases would be lost.

## Defining variants

By default, Daisy predefines one branch and one language variant: the branch *main* and the language *default*.

You can yourself define other ones, in the Daisy Wiki you can do this via the administration screens.

The definition of a branch or language consists of a numeric ID (assigned by the repository server), a name and optionally a description. Internally, the ID is used, but towards the user mostly the name is shown.

The built-in *main* branch and *default* language each have as ID 1.

Once a branch and/or language is defined, you can create new document variants using them.

Defining the branches and languages is something that can only be done by users who have the Administrator role, but adding variants to documents (which is almost the same as creating documents) can of course be done by any user, as far as the ACL allows the user to do so.

Deleting a branch or language definition is only possible when there are no more document variants for that branch or language. You can easily delete all document variants for a certain branch or language using the Document Task Manager, similarly to what is described further on for creating a variant across a set of documents.

## Creating a variant on a document

When adding a new variant to a document, this can be done in two ways:

1. from scratch
2. based on the content of (a certain version of) an existing variant

When you opt for the second option (which is mostly done when creating branch-variants) then the (branch,language,version)-triple from which the content is taken will be stored as part of the new variant, so

that later on you can see from where this variant "branched" (in the Daisy Wiki, this information is shown on the version list page).

In the Daisy Wiki, there is an "Add Variant" action that allows to add a new variant to a document.

## Searching for non-existing variants

When translating a site, it can be useful to search which documents are not yet translated in a certain language. Similarly, it can be useful to see which documents exist on one branch but not on another. For this purpose, the query language provides a function called `DoesNotHaveVariant` (`branch`, `language`).

For example, to search on the Daisy site for all documents that have been added in the documentation of version 1.3 compared to 1.2, you can use the following query:

```
select id, name
where
  InCollection('daisydocs')
  and branch = 'daisydocs-1_3' and language = 'en'
  and DoesNotHaveVariant('daisydocs-1_2', 'en')
```

## Queries embedded in documents

When using queries embedded in documents together with variants, usually you will want to limit the query results to variants with the same branch and language as the one containing the query. You could specify these explicitly, as in:

```
select id, name where <conditions> and branch='my_branch' and language='my_lang'
```

However, this means that you will need to adjust these queries when adding new variants to the document. Especially if you are adding a certain branch to a set of documents, this is not something you want to do. Therefore, it should be possible to refer to the branch and language of the containing document. This feature is not yet available in Daisy 1.3, but will be added in a future release.

## Creating a variant across a set of documents

When using branches, you will often want to add a variant for that branch to a set of documents (in other words: create a branch across a set of documents). To avoid the need to do this one-by-one for each document, Daisy has a "Document Task Manager" which allows the execution of a certain task on a set of documents. And that task could for example be "adding a new variant".

The Document Task Manager is also covered by a [separate document](#)<sup>1</sup>, here we will just focus on how to use it to create a new variant.

Before using the Document Task Manager, be sure you have defined the new branch (or language) using the administration screens.

In the Daisy Wiki, the Document Task Manager is accessed via the drop-down User-menu (in the main navigation bar). Select the option to create a new task. You are then first presented with a screen where you need to specify the documents (document variants actually) with which you want to do something. As you

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1. daisy:157-cd (Document Task Manager)

can see, it is possible to add documents using queries. For example, for the Daisy site, when we want to create a branch starting from the Daisy 1.2 documentation, we would use a query like:

```
select id, name where InCollection('daisydocs') and branch = 'daisydocs-1_2' and language = 'en'
```

Once you selected the documents, press *Next* to go to the next page where the action to be performed on the documents is specified. For *Type of task* choose *Simple Actions*. Then press the *Add* button to add a new action. Change the type of the action to *Create Variant* (if necessary), and specify the branch and language you want to create. Finally press start to start the task. You can then follow up on the progress of this operation, and check if it finished successfully for all documents.