

# **FEniCS** developer guidelines

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[www.fenics.org](http://www.fenics.org)

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## 1 About this document

The purpose of this document is to make life easier for **FENiCS** developers. It contains some general guidelines for the development of **FENiCS**, including practical things such as accessing accounts, files and web pages.

This is just a first iteration of this document. Let's try to keep it updated as we go along and discover things that we need to change.

## 2 Requirements on sub projects

A number of things are needed for each **FENiCS** sub project: a name, a license, a (list of) main author(s), a (list of) maintainer(s), a list of contributors, version numbers, a CVS repository, a web page, a mailing address, a mailing list.

### 2.1 Name

Each sub project should have a simple name, by which the sub project can be identified. If necessary, the sub project should also have a *short name* in lowercase letters (*dolphin*, *fiat* etc). The short name will be used for web pages, email addresses, CVS etc.

### 2.2 License

**FENiCS** is free software. The preferred license is the GNU GPL, although in some cases it might be necessary to use the GNU LGPL.

## 2.3 Main authors

Each sub project should have one or more main authors.

## 2.4 Maintainers

Each sub project should have one or more maintainers (which could be the same as the main authors). Maintainers have write-access to the CVS repository of the sub project and can accept patches.

## 2.5 Contributors

Additionally, each sub project should list the contributors of the sub project (if other than the main authors/maintainers).

## 2.6 Version numbers

Each sub project should adapt a strategy for version numbers, for example of the form  $x.y.z$ .

## 2.7 CVS repository

The source code of each sub project should be placed under a version control system. **FENiCS** currently uses CVS for version control. See the section on CVS below for details.

## 2.8 Web page

Each sub project should have a web page at

`http://www.fenics.org/subproject/`.

See the section on web pages below for details.

## 2.9 Mailing address

Each sub project has a mailing address of the form `subproject@fenics.org`. Email to this address is forwarded to the maintainers of the project.

## 2.10 Mailing list

Each sub project has a mailing list with address `subproject-dev@fenics.org`. This is the place to discuss development of the sub project.

Note that there is also a mailing list at `fenics-dev@fenics.org`, discussing the development of **FENICS**.

## 3 Accounts

Each maintainer is given an account at `fenics.org`. Use `ssh` to login to your account. Note that data at `fenics.org` is not backed up, except for the **FENICS** home directory `/home/fenics/`.

Access to CVS and web pages is controlled by which groups you belong to. Use the command `groups` to display your list of groups. Relevant groups are `fenicsdev`, `dolphin`, `fiat` etc.

To receive an account, send an email to `fenics@fenics.org`.

## 4 CVS

The CVS repository is located in the directory `/home/fenics/cvs/`. To access the CVS repository, set `CVSROOT` to

```
:ext:user@fenics.org:/home/fenics/cvs.
```

Also remember to set `CVS_RSH` to `ssh`.

There is also an anonymous CVS repository, which can be accessed (read-only) by non-maintainers. To access the anonymous CVS repository, set `CVSROOT` to `:pserver:anonymous@fenics.org:/cvs` and do `cvs login` with empty password. The anonymous CVS repository is updated each hour.

## 5 Editing web pages

Web pages for the **FENICS** project are located in the directory

```
/home/fenics/www.fenics.org/.
```

Web pages are generated using `make` and the C preprocessor `cpp`. Each `.html` file is generated from a `.cpp` file (a simple form code generation :-).

To create a new web page, simply make a copy of one of the existing web pages and add the new page to the top-level `Makefile`. Then type `make` to compile the web page.