# Towards new G4 website

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# Take-away for today

1) I know **how to contribute** to the website

2) I know **what needs to be done** and how to find it

3) **I will find and assign** tasks to myself (and work on it!)

# New website: why?

- Update the content
- Clean up missing/wrong/outdated items (links, …) and duplicated content
- Contain only necessary information
- Make it easy to navigate
- Modernize the look
- Ensure easier maintenance

# New website: migration

Move from Drupal Content Management System (CMS) to website produced by a static-site generator.

Dynamic (MySQL DB), PHP

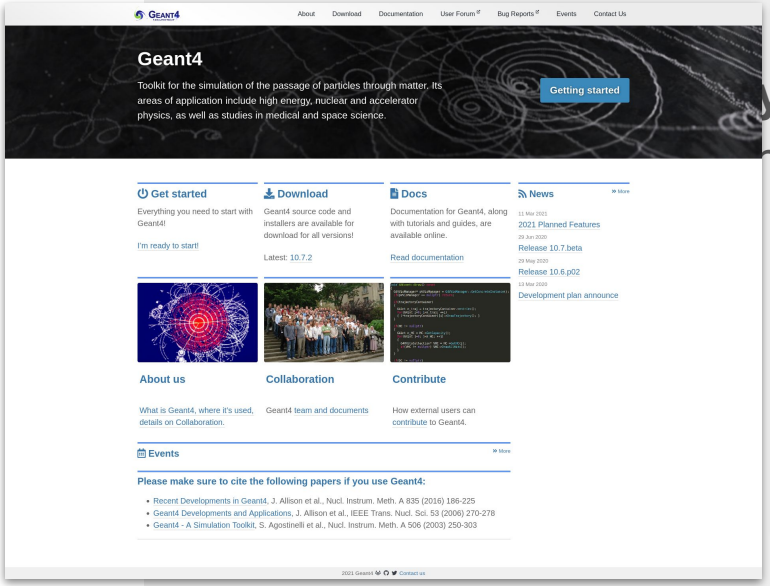
Static (No DB), content is stored in Markdown and YAML(JSON, CSV)


# Website prototype

CI builds and deploys it **automatically** on every change made in **master** branch of gitlab repository

G4 GitLab
https://geant4-dev.web.cern.ch

https://geant4-dev.web.cern.ch




**Simple, network efficient, mobile-friendly**

# New website: migration

Most important change for website users is how to work with the content


WYSIWYG*
in-browser editor


git-managed
Markdown

* What You See Is What You Get

# Website structure

Jekyll website structure and files (17M, 418 files) -

https://codimd.web.cern.ch/W0o08yi_SM6juwJw4g_BAQ?view

Drupal website structure and files (1.1G, 3392 files)-

https://codimd.web.cern.ch/n18hpyS1RjeVtfnl_fH-pA?view

Drupal web site dump will be put to G4 EOS.

# Clear and transparent structure

```
geant4-website_basic_menu/
├── about
│   ├── index.md
│   └── publications.md
├── collaboration
│   ├── contacts.md
│   ├── events.html
│   ├── index.md
│   ├── legal_documents.md
│   ├── members.md
│   ├── oversight_board
│   ├── policies
│   ├── steering_board
│   ├── technical_forum.md
│   └── working_groups
├── docs
│   ├── getting-started.md
│   └── index.md
├── download
│   ├── all.md
│   ├── index.html
│   └── license.md
├── index.md
├── news
│   ├── index.md
│   └── _posts
└── steering_minutes
    ├── index.md
    └── _posts
```

## Get started

Everything you need to start with Geant4!

I'm ready to start!

## Download

Geant4 source code and installers are available for download for all versions!

Latest: 10.7.2

## Docs

Documentation for Geant4, along with tutorials and guides, are available online.

Read documentation

## News

» More

11 Mar 2021

2021 Planned Features

29 Jun 2020

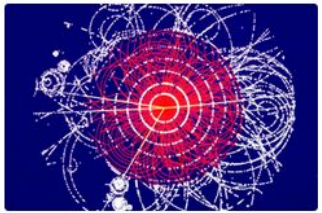
Release 10.7.beta

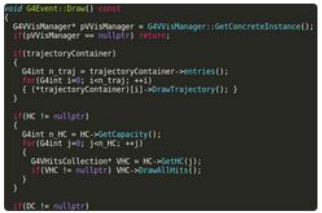
29 May 2020

Release 10.6.p02

13 Mar 2020

Development plan announce





## About us

What is Geant4, where it's used, details on Collaboration.

## Collaboration

Geant4 team and documents

## Contribute

How external users can contribute to Geant4.

## Events

» More

# Typical case: page contains Markdown only

URL: https://geant4-dev.web.cern.ch/docs/getting-started

Source: https://gitlab.cern.ch/geant4/geant4-website/-/raw/master/docs/getting-started.md

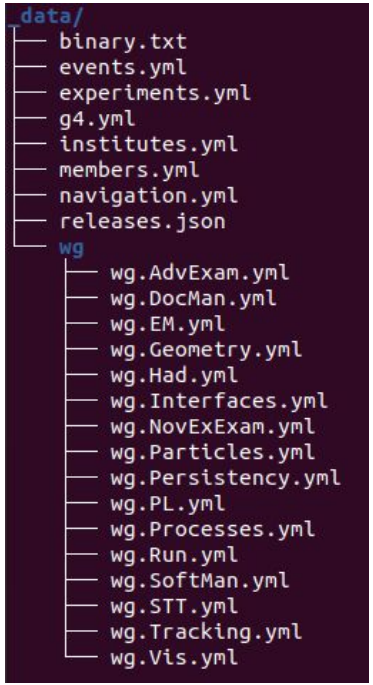
```
---
toc: true
toc_sticky: true
---
# Getting started with Geant4

Geant4 is an open-source toolkit that enables to simulate particle passage through matter.
It is written in C++ and offers a wide range of tools for users to employ in their applications.
More information on the overview of the package can be found in the [Introduction to Geant4](http://cern.ch/geant4-
c/UsersGuides/IntroductionToGeant4/html/index.html).

## Where can I find information on Geant4?

Geant4 is documented in several [**user guides**](index.html) that cover the installation, use of, and
design/implementation of the toolkit.

Numerous **example applications** are distributed with each Geant4 release (under `examples/`), offering a demonstr
of Geant4 capabilities across a broad range of use cases.
Beginner users are invited to consult them and use as a base for their applications.
More information on the examples can be found in the [Application Developers Guide](http://geant4-userdoc.web.cern.
nt4-userdoc/UsersGuides/ForApplicationDeveloper/html/Examples/examples.html).

Geant4 **tutorials** are often held in various parts of the world. Consult [events calendar](/collaboration/events)
arch for incoming events, but also to have a look at past editions, which contain the educational material.

  {: .notice .notice--warning}
  Do we want to link to most recent tutorials, e.g. G4 beginners tutorial?

## How do I install Geant4?
```


TOC is generated from Makrdown headers

Markdown tutorual for begginers

# Special cases.

Pages are using data from “data” files (YAML files).




- binary.txt - info about binary builds
- events.yml - info about G4 related events
- members.yml, experiments.yml - info about G4 members
- releases.yml - info about G4 releases in GitLab
- wg contains list of WG members and WG mandate for each WG

# “db” of Geant4 members and institutions - YAML file

data/members.yml

```yaml
p.Zaborowska:
  email_address: anna.zaborowska@cern.ch
  experiments: []
  firstname: Anna
  institute:
  - i.cern
  middlename: ''
  notes: N/A
  surname: Zaborowska
```

data/institutions.yml

```yaml
i.barc:
  name: Bhabha Atomic Research Centre (BARC)
i.cea:
  name: CEA
i.cern:
  name: CERN
i.ciemat:
  name: CIEMAT
i.cnrs_inserm:
  name: CNRS/INSERM, Toulouse
i.cnrs_paris:
  name: CNRS, Paris
i.com_swhard:
  name: SWHARD S.R.L., Genova, Italy
i.com_varian:
  name: Varian Medical Systems, Palo Alto, USA
i.esa:
  name: ESA
i.ess:
  name: European Spallation Source ERIC
i.famaf:
  name: FaMAF
```

- All board pages
- WG membership lists
- collaboration members page

are generated from the YAML files

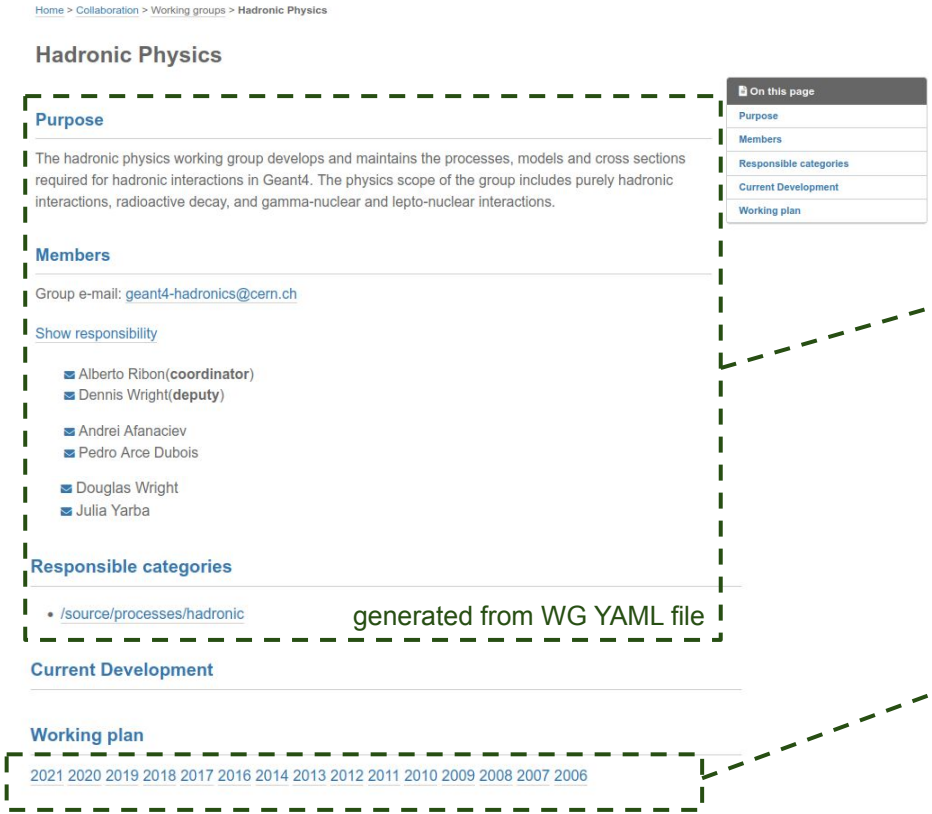
# “Working Group” description

_data/wg/wg.Had.yml

```
members:
  p.Afanaciev: []
  p.Arce Dubois: []
  p.Banerjee: []
  p.Beck: []
  p.Cai: []
  p.Cano Ott: []
  p.Cuttone: []
  p.David: []
  p.Desorgher:
  - /source/processes/hadronic/models/radioactive_decay
  p.Folger:
  - /source/processes/hadronic/models/binary_cascade
  - /source/processes/hadronic/models/im_r_matrix
.........................................
.........................................
categories:
- /source/processes/hadronic
coordinators:
- p.Ribon
deputies:
- p.Wright
email: geant4-hadronics@cern.ch
name: Hadronic Physics
purpose: >-
  The hadronic physics working group develops and maintains the processes,
  models and cross sections required for hadronic interactions in Geant4.
  The physics scope of the group includes purely hadronic interactions,
  radioactive decay, and gamma-nuclear and lepto-nuclear interactions.
```

It is easy to handle working group members and their areas of responsibility.
Key words to be taken from members.yaml.

# Standard Working Group Page's layout




```
-bash-4.2$ cat index.md
---
toc: true
toc_sticky: true
wg: wg.Had
title: Hadronic Physics
---

{% include wg.md %}

## Current Development

## Working plan

 [2021](/assets/hadronic/workplan21.pdf)
 [2020](/assets/hadronic/workplan20.pdf)
 [2019](/assets/hadronic/workplan19.pdf)
 [2018](/assets/hadronic/workplan18.pdf)
 [2017](/assets/hadronic/workplan17.pdf)
 [2016](/assets/hadronic/workplan16.pdf)
 [2014](/assets/hadronic/workplan14.pdf)
 [2013](/assets/hadronic/workplan13.pdf)
 [2012](/assets/hadronic/workplan12.pdf)
 [2011](/assets/hadronic/workplan11b.pdf)
 [2010](/assets/hadronic/workplan10a.ppt)
 [2009](/assets/hadronic/workplan09.ppt)
 [2008](/assets/hadronic/workplan08.ppt)
 [2007](/assets/hadronic/workplan07a.txt)
 [2006](/assets/hadronic/workplan06.txt)
```

Liquid Template

# Geant4 Events: YAML file with events

```yaml
- enddate: 23.11.2021
  place: CERN
  startdate: 22.11.2021
  title: 5th LPCC Detector Simulation Workshop
  url: https://indico.cern.ch/event/1087522/
  virtual: true
- enddate: 08.10.2021
  place: CERN
  startdate: 04.10.2021
  title: Geant4 Advanced Course
  url: https://indico.cern.ch/e/geant4_advanced_course_2021
  virtual: true
- enddate: 24.09.2021
  place: CERN
  startdate: 20.09.2021
  title: 26th Geant4 Collaboration Meeting
  url: https://indico.cern.ch/event/1052654/
  virtual: true
```


To add new event just modify, filling necessary information
https://gitlab.cern.ch/geant4/geant4-website/-/blob/master/_data/events.yml

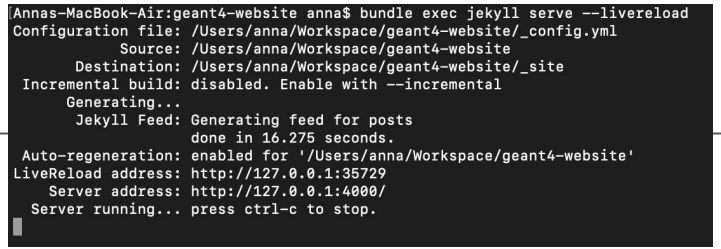
# Jekyll installation

Just follow official Installation instructions

You will need **`ruby`**, **`gem`**, **`gcc`** and **`make`**. Install them via package manager.

Jekyll is available for most linux systems: MacOS and Windows

```
$ export GEM_HOME=$(ruby -e 'puts Gem.user_dir')
$ export PATH=${GEM_HOME}/bin:$PATH
$ git clone ssh://git@gitlab.cern.ch:7999/geant4/geant4-website.git
$ cd geant4-website
$ bundle install
$ bundle exec jekyll serve --livereload
```




**Excellent! You are ready to improve Geant4 website!**

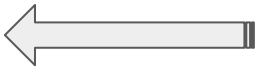
# How to manage content?

via **local copy**

```
greg@work-51a:~/geant4-website$ vim index.md
greg@work-51a:~/geant4-website$ vim collaboration/working_groups/
advExamples/       genericProcesses/  index.md           persistency/       software/          testingQA/         vis/
documentation/     geometryTransport/ novextExamples/    physicsList/       task_force_rd/     tracking/
electromagnetic/   hadronic/          particleTrack/     runEvent/          task_force_web/    ui/
greg@work-51a:~/geant4-website$ vim collaboration/working_groups/hadronic/index.md
greg@work-51a:~/geant4-website$ head collaboration/working_groups/hadronic/index.md
---
toc: true
toc_sticky: true
wg: wg.Had
title: Hadronic Physics
---

{% include wg.md %}
```

Usual git workflow:

1. git checkout -b my-awesome-changes
2. make changes
3. check changes
4. git add/commit
5. git push
6. Create merge request (git will ask you)



1. Install Jekyll (more on next slides)
2. bundle install

==========

3. bundle exec jekyll serve --livereload
4. view an entire website in browser locally

# What is to be done?

Gitlab **issues**, please discuss there (after this meeting)

**Anyone can contribute!**

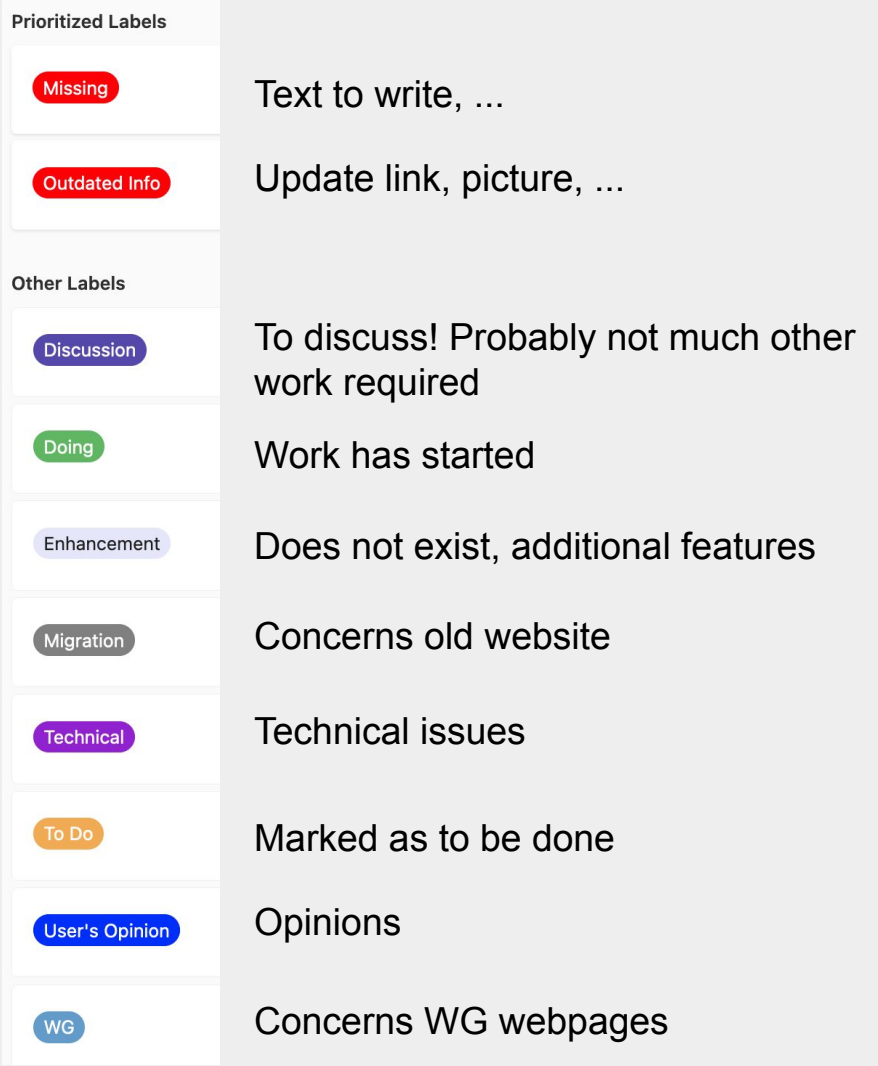
First milestone: **Feb 2022** (contains prioritised issues)

**WG coordinators** are invited to check their webpages and add 2021/2022 work plans:

+ website (check what is there now)
+ gitlab repository (open and edit your WG information)
+ gitlab WG issue (assign to yourself and use your WG issue to report status)

# Gitlab issues

Labels indicate what sort of work is required



# Gitlab milestone

Minimal production website
Aiming at: **end Feb 2022**

List of issues is probably incomplete, if you identify a missing feature, open an issue and try to assign it to a responsible person (e.g. you! :))

Missing

## General introduction to Geant4

- [ ] What is Geant4 good for and what it is not!
- [ ] General introduction to Geant4 should get updated

https://gitlab.cern.ch/geant4/geant4-website/-/issues/24

Missing

# Rewrite Getting Started

Getting started (for G4 users) is rewritten, but certainly can be improved on - it's one of the most important pages on the website

https://gitlab.cern.ch/geant4/geant4-website/-/issues/25

Enhancement Missing Outdated Info

## "User applications" page

User applications (https://geant4.web.cern.ch/applications) is terribly out-dated with many invalid links, covering applications (e.g. GRAS, GATE, TOPAS, GAMOS) and potentially also other codes which might be more suitable to certain applications (ANSYS (i.e. CFD/FE) or MCNPX (reactor simulation))

https://gitlab.cern.ch/geant4/geant4-website/-/issues/22

Enhancement Missing

## "Users's requirements" page

https://geant4.web.cern.ch/sites/geant4.web.cern.ch/files/geant4/OOAandD/URD.pdf is our last “User requirements” document, JIRA is not mentioned next to it as a replacement tool.

In general, it is not clear what users requirements are. What are requirements, time scales, progress?

https://gitlab.cern.ch/geant4/geant4-website/-/issues/23

Missing

# Missing descriptions/aims of Steering, Oversight Boards, Technical Forum

- [ ] Missing description of the Steering Board, its role, frequency of meetings, etc.
- [ ] Missing description of the Oversight Board, its role, frequency of meetings, etc. Minutes are very old, aren't there any recent public minutes?
- [ ] Missing description of the Technical Forum, its role, frequency of meetings, etc.

https://gitlab.cern.ch/geant4/geant4-website/-/issues/21

Missing

# Missing intro to download, why patches

In download section - Missing short introduction to why the latest G4 version is recommended, and what are patches. Patches should also be on top.

https://gitlab.cern.ch/geant4/geant4-website/-/issues/26

# G4 Validation page/info

Enhancement | Migration | Missing

- [ ] Validation page certainly calls for an update (https://geant4.web.cern.ch/publications_validations/testing_and_validation).
  - [ ] It is not clear geant-val is the main validation portal, also duplicated links to geant-val
  - [ ] G4-Med should be mentioned not on equal footing, but as a demonstration of geant-val application
  - [ ] "EM validation" links to EM WG instead of mentioning e.g. which tests on geant-val are relevant
  - [ ] hadronic validation broken link to http://g4validation.fnal.gov:8080/G4HadronicValidation/
  - [ ] The Geant4 testing system https://sites.google.com/site/sttshifternaive/intro should be inside Collaborators-only/mainly page, not here within physics validation (especially since it covers testing, not validation)
  - [x] HEP experiments related notes documents and notes (in collaboration with LCG Physics Validation Project) - non-existing links http://ph-dep-sft.web.cern.ch/project/physics-validation
  - [ ] Fixed link from above (https://ep-dep-sft.web.cern.ch/project/physics-validation) is listing similar links we list here (geantval etc). Do we need it here? It brings list of publications from LHC experiments, but it's 10 y old! The only new event is LPCC workshop, maybe just put a link to LPCC indico? (With a proper description what that event is)
  - [ ] https://twiki.cern.ch/twiki/bin/view/Geant4/PhysicsValidationTaskForce does this TF exist?

https://gitlab.cern.ch/geant4/geant4-website/-/issues/20

Enhancement Missing

# Missing Page for new collaboration members with most important info

Missing 'Collaboration Newcomers' page with descriptions relevant to all Collaboration members and especially important for newcomers - what are WGs, which ones are relevant for which area of work, mention other workflows, rules, regulations, rules on presentations and papers - "common knowledge" which is often missed by newcomers. Also put links important for collaborators and not users (e.g. shifter calendar)

https://gitlab.cern.ch/geant4/geant4-website/-/issues/27

Enhancement Missing

# Missing page on external contributions

Missing 'Contributing' page where non-collaborators can learn what can they do to improve/help Geant4 as external users

https://gitlab.cern.ch/geant4/geant4-website/-/issues/28

Discussion

# Publications to cite

Started in #11 (closed).

Is there a recommendation for Geant4 citation? All 3 main papers? The oldest/newest?

@bmorgan: From discussion on 19th January, suggested that we recommend citing all three papers (@mverderi, could you confirm)

https://gitlab.cern.ch/geant4/geant4-website/-/issues/18

# Take-away for today

1) I know how to contribute to the website (locally or directly editing markdown)
2) I know what needs to be done and how to find it (milestone, issues)
3) I will find and assign tasks to myself

**We need to work as Collaboration to succeed!**

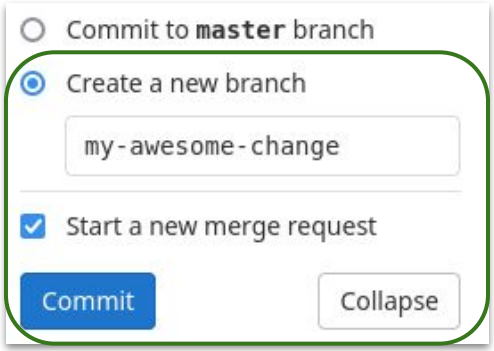
Problems? Ideas?

- Open issue if it's website related
- Mail us (geant4-wtf-members@cern.ch) if you need help
- Join Website Task Force meetings (join e-group for announcements)

# Backup slides

# How to manage content?

via **browser**


Commit to a separate branch and create a merge request at one time

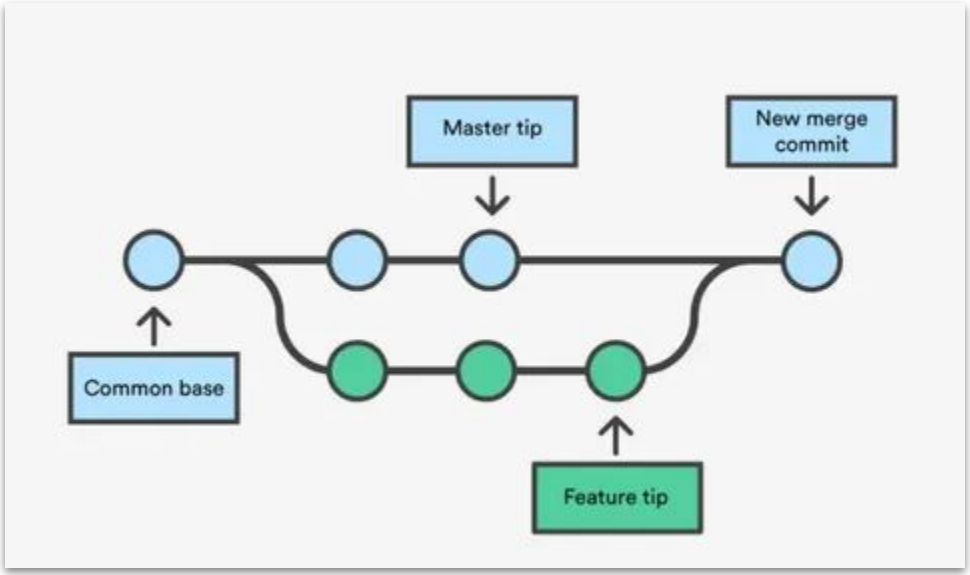
# Markdown syntax

| Element | Markdown Syntax |
| --- | --- |
| Heading | `# H1`<br>`## H2`<br>`### H3` |
| Bold | `**bold text**` |
| Italic | `*italicized text*` |
| Blockquote | `> blockquote` |
| Ordered List | `1. First item`<br>`2. Second item`<br>`3. Third item` |
| Unordered List | `- First item`<br>`- Second item`<br>`- Third item` |
| Code | `` `code` `` |
| Horizontal Rule | `---` |
| Link | `[title](https://www.example.com)` |
| Image | `![alt text](image.jpg)` |

| Element | Markdown Syntax |
| --- | --- |
| Table | `\| Syntax \| Description \|`<br>`\| ----------- \| ----------- \|`<br>`\| Header \| Title \|`<br>`\| Paragraph \| Text \|` |
| Fenced Code Block | ```` ```<br>{<br>  "firstName": "John",<br>  "lastName": "Smith",<br>  "age": 25<br>}<br>``` ```` |
| Footnote | `Here's a sentence with a footnote. [^1]`<br><br>`[^1]: This is the footnote.` |
| Heading ID | `### My Great Heading {#custom-id}` |
| Definition List | `term`<br>`: definition` |
| Strikethrough | `~~The world is flat.~~` |
| Task List | `- [x] Write the press release`<br>`- [ ] Update the website`<br>`- [ ] Contact the media` |

Try it on https://dillinger.io

# How to manage content?



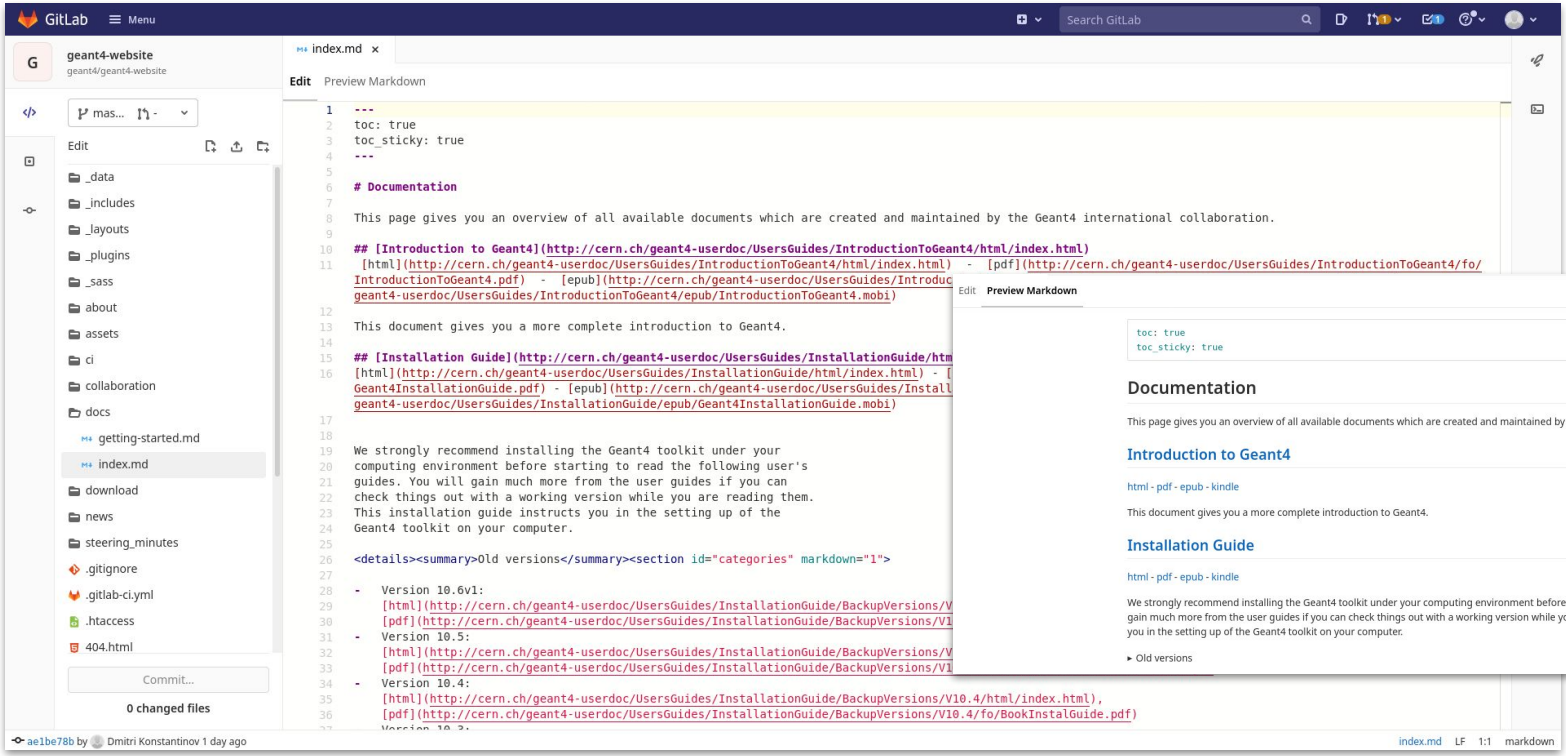

Commits in **master** are allowed only by **merge requests** (MR).

Direct push in master is not allowed

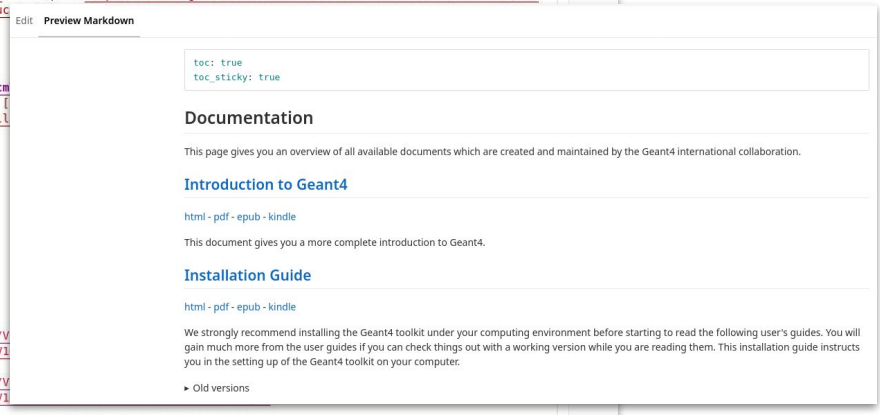
Changes in WG pages have to be approved by WG coordinator/deputy on directory basis.

# How to manage content?

via **browser**




Preview




[Web IDE]

# Website structure

```
.
├── about
├── collaboration
│   ├── oversight_board
│   ├── policies
│   ├── steering_board
│   └── working_groups
│    ├── <working group pages>
├── _data
│   └── wg
├── docs
├── download
├── news
│   └── _posts
└── steering_minutes
    └── _posts
```

Markdown pages

YAML database

News

Website’s directories are directly mapped to URLs