

Create beautiful and localized documentations and websites using MkDocs + Github

Bonjour!



Alexys Jacob

CTO at numberly

Open Source community service

Open Source author & contributor

- Author of py3status, uhashring, mkdocs-static-i18n
- MkDocs contributor & maintainer
- PSF contributing member

Gentoo Linux developer

- Clustering related packages
- Gentoo Docker containers

Tech speaker & writer

- Tech conferences, webinars, blog posts
- https://ultrabug.fr

@ultrabug





MkDocs is a **fast, simple** and downright gorgeous **static site generator** that's geared towards building project documentation.

Documentation source files are **written in Markdown**, and configured with a single YAML configuration file.

MkDocs core is written in **Python**, its source code is easy to understand and we are open to contributions!

https://mkdocs.org

https://www.markdownguide.org/

https://www.markdowntutorial.com/



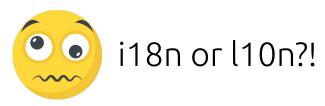
mkdocs-material is a **Material Design theme for MkDocs** that allows you to create a branded static site from a set of Markdown files to host the documentation of your Open Source or commercial project.

It is customizable, searchable, mobile-friendly and supports 40+ languages.

https://squidfunk.github.io/mkdocs-material/

https://material.io/











Defining i18n vs l10n is controversial so this is the rationale we adopted at MkDocs.

A benevolent debate on i18n vs l10n took place on mkdocs #774 where we settled that internationalization (i18n) will refer to the MkDocs core feature used to allow users to localize (l10n) their documentation.

Therefore **MkDocs use the** i18n term to refer to the fact that it supports theme text and dialogs localization (just like Jinja).

X mkdocs-static-i18n

The mkdocs-static-i18n plugin allows you to support multiple languages of your documentation by adding localized versions of your files to your existing documentation pages.

It also allows you to **build and serve localized versions of any file extension** and automatically display localized images, medias and assets from your Markdown sources.

Who's using it?

- spaceship-prompt / spaceship-prompt
- aws / copilot-cli
- mastercomfig / mastercomfig
- ManticoreGamesInc / platform-documentation
- index-py / index.py
- ..





Websites for you and your projects **hosted directly from your GitHub repository**. Just edit, push, and your changes are live.

You get one site per GitHub account and organization, and unlimited project sites.

Free **HTTPS** with support for **custom domain names**.

Soft limitations:

- 1GB website
- 100GB traffic bandwidth per month
- 10 builds (deploy) per hour

GitHub Pages is not intended for or allowed to be used as a free web hosting service to run your online business, e-commerce site, or any other website that is primarily directed at either facilitating commercial transactions or providing commercial software as a service (SaaS).





Enough introductions, let's see some code YAML!

What we need:

A fork of https://github.com/ultrabug/ep2021



A Python3 virtual environment

```
~/ep2021 $ python3 -m venv ep2021_venv
~/ep2021 $ source ep2021_venv/bin/activate
(ep2021_venv) ~/ep2021 $ python --version
Python 3.9.5
```



This will stay visible 🐯 for those who want to do it live with me

requirements.txt

~/ep2021 \$ python3 -m venv ep2021_venv
~/ep2021 \$ source ep2021_venv/bin/activate
(ep2021_venv) ~/ep2021 \$ pip install -r requirements.txt

What's required and why?

mkdocs >= 1.2.2

We do not need mkdocs[i18n] which adds support for built-in themes localization since mkdocs-material supports localization on its own.

mkdocs-material >= 7.1.11

We want a modern looking, responsive and highly customizable theme with built-in support for a language switcher.

mkdocs-static-i18n >= 0.18

Allows to localize our content pages by creating a ...localize it automatically.



Workflow:

1. Initialize our project

mkdocs new .

2. Build and serve locally, open in browser

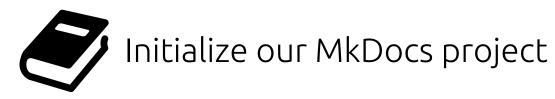
mkdocs serve

- 3. Modify content, add assets and localize (translate) our website
- 4. Local website is auto-refreshed on browser, we preview every modification we make live
- 5. When done, commit and push changes
- 6. Deploy to Github Pages

mkdocs gh-deploy

7. It's online!

```
~/ep2021 $ python3 -m venv ep2021 venv
~/ep2021 $ source ep2021 venv/bin/activate
(ep2021 venv) ~/ep2021 $ pip install -r requirements.txt
(ep2021 venv) ~/ep2021 $ mkdocs --help
Usage: mkdocs [OPTIONS] COMMAND [ARGS]...
 MkDocs - Project documentation with Markdown.
Options:
  -V, --version Show the version and exit.
  -q, --quiet Silence warnings
  -v, --verbose Enable verbose output
  -h, --help Show this message and exit.
Commands:
 build
            Build the MkDocs documentation
  gh-deploy Deploy your documentation to GitHub Pages
             Create a new MkDocs project
            Run the builtin development server
```



mkdocs new .

Will create:

- an initial mkdocs.yml configuration file
- a docs/index.md documentation home page

```
-/ep2021 $ python3 -m venv ep2021_venv
-/ep2021 $ source ep2021_venv/bin/activate
(ep2021_venv) -/ep2021 $ pip install -r requirements.txt

(ep2021_venv) -/ep2021 $ mkdocs new .

INFO - Writing config file: ./mkdocs.yml
INFO - Writing initial docs: ./docs/index.md

(ep2021_venv) -/ep2021 $ tree -I ep2021_venv .

- docs
- index.md
- mkdocs.yml
- mkdocs.yml
- README.md
- requirements.txt
```



mkdocs serve

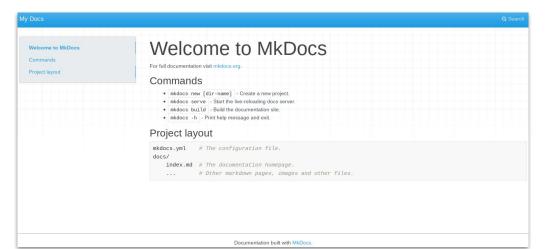
Will **build** our website and **run a local web server** so we can **preview** it directly on our browser.

-/ep2021 \$ python3 -m venv ep2021_venv
-/ep2021 \$ source ep2021_venv/bin/activate
(ep2021_venv) -/ep2021 \$ pip install -r requirements.txt

(ep2021_venv) -/ep2021 \$ git checkout new
Switched to branch 'new'

(ep2021_venv) -/ep2021 \$ mkdocs serve
INFO - Building documentation...
INFO - Cleaning site directory
INFO - Documentation built in 0.06 seconds
INFO - [14:45:28] Serving on http://127.0.0.1:8000/
INFO - [14:45:29] Browser connected: http://127.0.0.1:8000/

Open this URL on your browser: http://127.0.0.1:8000/





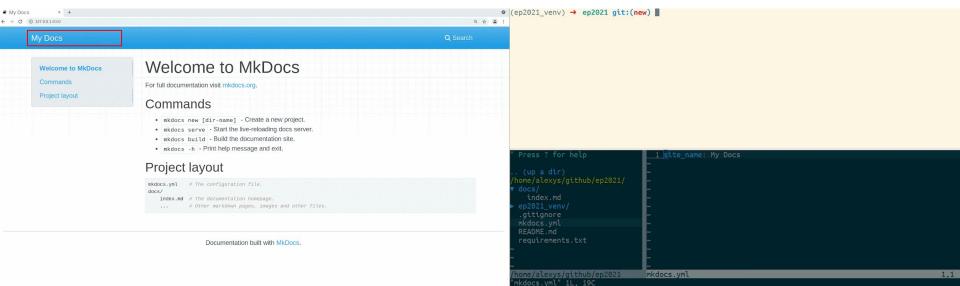
mkdocs serve

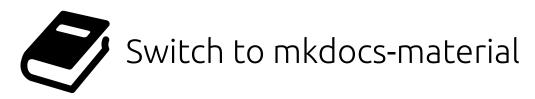
Any change we make will trigger a rebuild and refresh our page in our browser!

```
~/ep2021 $ python3 -m venv ep2021_venv
~/ep2021 $ source ep2021_venv/bin/activate
(ep2021_venv) ~/ep2021 $ pip install -r requirements.txt

(ep2021_venv) ~/ep2021 $ git checkout change
Switched to branch 'change'

(ep2021_venv) ~/ep2021 $ mkdocs serve
INFO - Building documentation...
INFO - Cleaning site directory
INFO - Documentation built in 0.06 seconds
INFO - [14:45:28] Serving on http://127.0.0.1:8000/
INFO - [14:45:29] Browser connected: http://127.0.0.1:8000/
```





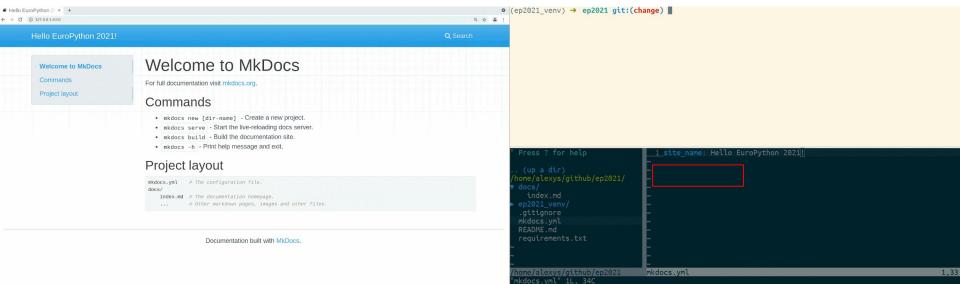
theme.name = material

Instantaneous switch from the default mkdocs theme to the beautiful and feature rich material theme.

~/ep2021 \$ python3 -m venv ep2021_venv
~/ep2021 \$ source ep2021_venv/bin/activate
(ep2021_venv) ~/ep2021 \$ pip install -r requirements.txt

(ep2021_venv) ~/ep2021 \$ git checkout material
Switched to branch 'material'

(ep2021_venv) ~/ep2021 \$ mkdocs serve
INFO - Building documentation...
INFO - Cleaning site directory
INFO - Documentation built in 0.06 seconds
INFO - [14:45:28] Serving on http://127.0.0.1:8000/
INFO - [14:45:29] Browser connected: http://127.0.0.1:8000/





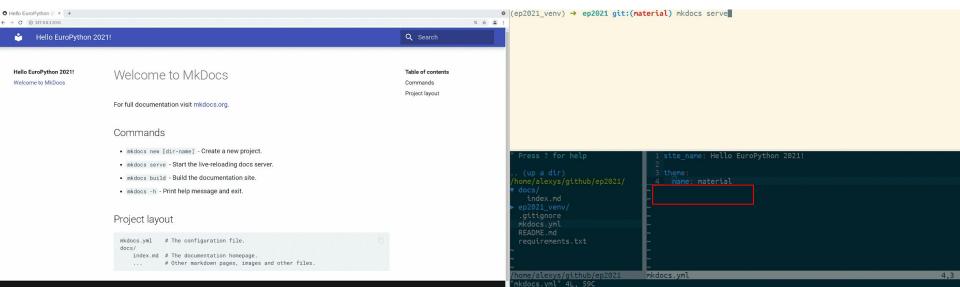
theme.palette.primary = green

The material theme is **highly customizable**, let's use EuroPython's green color palette.

```
~/ep2021 $ python3 -m venv ep2021_venv
~/ep2021 $ source ep2021_venv/bin/activate
(ep2021_venv) ~/ep2021 $ pip install -r requirements.txt

(ep2021_venv) ~/ep2021 $ git checkout palette
Switched to branch 'palette'

(ep2021_venv) ~/ep2021 $ mkdocs serve
INFO - Building documentation...
INFO - Cleaning site directory
INFO - Documentation built in 0.06 seconds
INFO - [14:45:28] Serving on http://127.0.0.1:8000/
INFO - [14:45:29] Browser connected: http://127.0.0.1:8000/
```





The docs/ folder is where we organize our **content pages** and assets.

Let's modify the home page and add the EuroPython logo.



X mkdocs-static-i18n

Will create /<language>/ versions of our website!

Automatically configures:

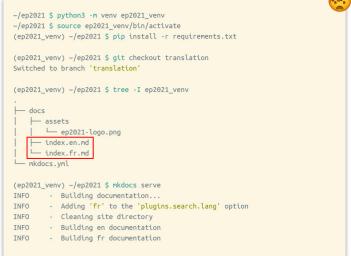
- search plugin language and localized content indexation
- material theme language
- material theme language switcher in the header



Localizing our content

Let's translate and localize our website!

We localize the versions of our pages and assets by suffixing them with .<language>.<extension>







create French version



Localizing our content

index.en.md

```
# EuroPython 2021 Home Page
![europython 2021 logo](assets/ep2021-logo.png)

## Commands

* `mkdocs new [dir-name]` - Create a new project.

* `mkdocs serve` - Start the live-reloading docs server.

* `mkdocs build` - Build the documentation site.

* `mkdocs -h` - Print help message and exit.

## Project layout

mkdocs.yml  # The configuration file.
docs/
   index.en.md  # The documentation homepage in English.
   index.fr.md  # The documentation homepage in French.
   ...  # Other markdown pages, images and other files.
```

index.fr.md

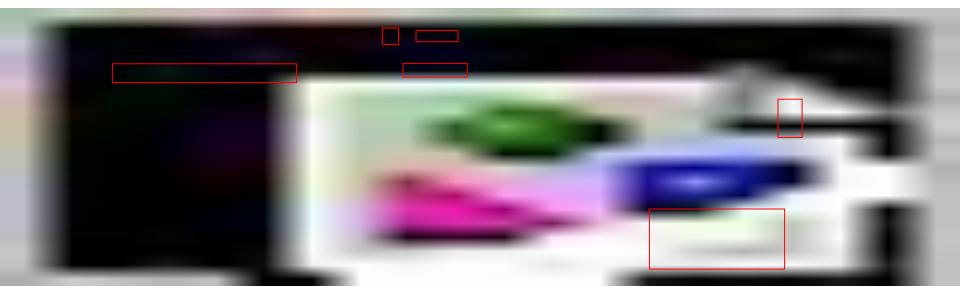
```
# EuroPython 2021 Page d'accueil
![europython 2021 logo](assets/ep2021-logo.png)
## Commandes

* `mkdocs new [dir-name]` - Créer un nouveau projet.
* `mkdocs serve` - Démarrer un serveur avec rafraîchissement automatique.
* `mkdocs build` - Générer le site de documentation.
* `mkdocs -h` - Afficher l'aide et s'arrêter.

## Arborescence du projet

mkdocs.yml # Le fichier de configuration.
docs/
    index.en.md # La page d'accueil en Anglais.
    index.fr.md # La page d'accueil en Français.
    ... # Other markdown pages, images and other files.
```







Automatic MD localization

Focus on translating, not referencing localized versions of your pages and assets!

Both index.en.md and index.fr.md refer to ep2021-logo.png in their Markdown source:

![europython 2021 logo](assets/ep2021-logo.png)

ep202 go<mark>.png</mark>



English version (default language is "en")

```
~/ep2021 $ python3 -m venv ep2021 venv
~/ep2021 $ source ep2021 venv/bin/activate
(ep2021 venv) ~/ep2021 $ pip install -r requirements.txt
(ep2021 venv) ~/ep2021 $ git checkout localized
Switched to branch 'localized'
(ep2021_venv) ~/ep2021 $ tree -I ep2021_venv
        ep2021-logo.en.png
           ep2021-logo.fr.png
    index.fr.md
- mkdocs.vml
(ep2021 venv) ~/ep2021 $ mkdocs serve
        - Building documentation...
        - Adding 'fr' to the 'plugins.search.lang' option
        - Cleaning site directory
        - Building en documentation
        - Building fr documentation
```

ep2021-logo<mark>.fr.png</mark>

French version



Automatic MD localization

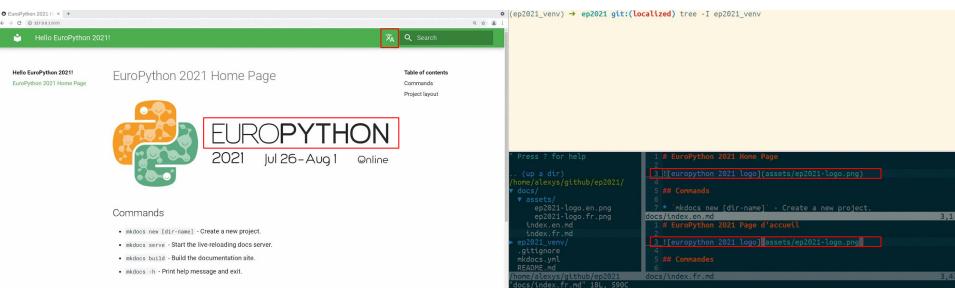
index.en.md

index.fr.md

```
# EuroPython 2021 Page d'accueil
# EuroPython 2021 Home Page
                                                       Will be localized automatically!
                                                                                                  ![europython 2021 logo](assets/ep2021-logo.png)
![europython 2021 logo](assets/ep2021-logo.png)
## Commands
                                                                                                  ## Commandes
* `mkdocs new [dir-name]` - Create a new project.
                                                                                                  * 'mkdocs new [dir-name]' - Créer un nouveau projet.
                                                                                                  * 'mkdocs serve' - Démarrer un serveur avec rafraîchissement automatique.
* 'mkdocs serve' - Start the live-reloading docs server.
* 'mkdocs build' - Build the documentation site.
                                                                                                  * `mkdocs build` - Générer le site de documentation.
                                                                                                  * 'mkdocs -h' - Afficher l'aide et s'arrêter.
* `mkdocs -h` - Print help message and exit.
                                                                                                  ## Arborescence du projet
## Project layout
                                                                                                                    # Le fichier de configuration.
   mkdocs.yml
                 # The configuration file.
                                                                                                      mkdocs.yml
                                                                                                      docs/
    docs/
        index.en.md # The documentation homepage in English.
                                                                                                          index.en.md # La page d'accueil en Anglais.
                                                                                                          index.fr.md # La page d'accueil en Français.
        index.fr.md # The documentation homepage in French.
                                                                                                                    # Other markdown pages, images and other files.
                 # Other markdown pages, images and other files.
```



mkdocs-static-i18n automatic MD localization demo





git add git commit git push

We're done, let's commit and push our content to our Github repository.

```
(ep2021_venv) ~/ep2021 $ git add .
(ep2021_venv) ~/ep2021 $ git commit -m "mkdocs localized website"
(ep2021_venv) ~/ep2021 $ git push --set-upstream origin main
```



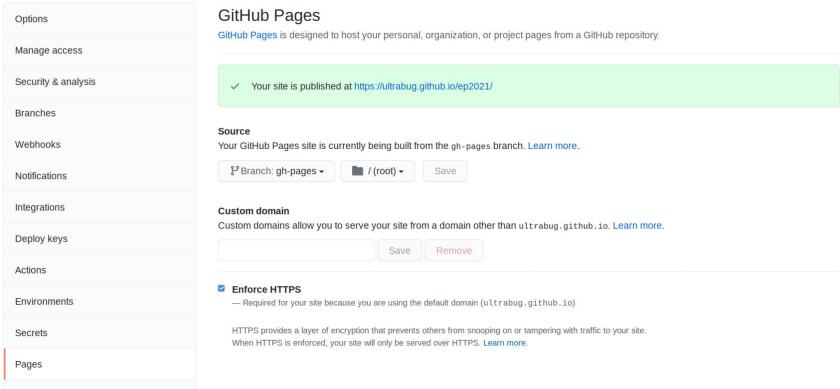
Build and deploy to Github

mkdocs gh-deploy	<pre>~/ep2021 \$ python3 -m venv ep2021_venv ~/ep2021 \$ source ep2021_venv/bin/activate (ep2021_venv) ~/ep2021 \$ pip install -r requirements.txt (ep2021_venv) ~/ep2021 \$ git checkout localized Switched to branch 'localized' (ep2021_venv) ~/ep2021 \$ mkdocs gh-deploy</pre>
Build our multi-language website	INFO - Adding 'fr' to the 'plugins.search.lang' option INFO - Cleaning site directory INFO - Building documentation to directory: /home/alexys/github
Copy site/dir to the gh-pages branch Push the gh-pages branch to Github	/ep2021/site INFO - Building en documentation INFO - Building fr documentation INFO - Documentation built in 0.76 seconds INFO - Copying '/home/alexys/github/ep2021/site' to 'gh-pages' branch and pushing to GitHub. To github.com:ultrabug/ep2021.git * [new branch] gh-pages -> gh-pages INFO - Your documentation should shortly be available at: https://ultrabug.github.io/ep2021/



Moderation settings

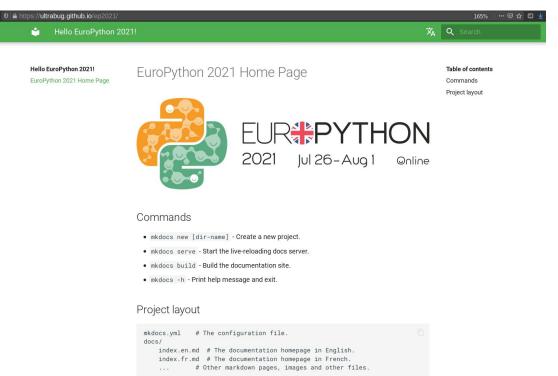
Github Pages is automatically configured





WoW our multi-language MkDocs website is online!

https://ultrabug.github.io/ep2021/





Automatic mkdocs gh-deploy

```
~/ep2021 $ python3 -m venv ep2021_venv
~/ep2021 $ source ep2021_venv/bin/activate
(ep2021_venv) ~/ep2021 $ pip install -r requirements.txt

(ep2021_venv) ~/ep2021 $ git checkout actions
Switched to branch 'actions'
```

Let's use Github Actions to run mkdocs gh-deploy for us automatically when we push new commits!

.github/workflows/gh-deploy.yml

```
name: gh-deploy
  push:
   branches:
     - main
jobs:
  build:
    name: MkDocs Github Pages automatic deployment
    runs-on: ubuntu-latest
     - name: Checkout main
       uses: actions/checkout@v2
     - name: Set up Python 3.9
        uses: actions/setup-python@v2
          python-version: '3.9'
      - name: Install requirements
         python -m pip install --upgrade pip
         pip install -r requirements.txt
     - name: MkDocs gh-deploy
        run:
         git pull
          mkdocs gh-deploy
```



Some useful and awesome MkDocs plugins

MkDocs Wiki's Plugins list (community based)

https://github.com/mkdocs/mkdocs/wiki/MkDocs-Plugins

Plugin to handle **URL redirections**

https://github.com/datarobot/mkdocs-redirects

Plugin to handle navigation pages ordering in a very flexible way

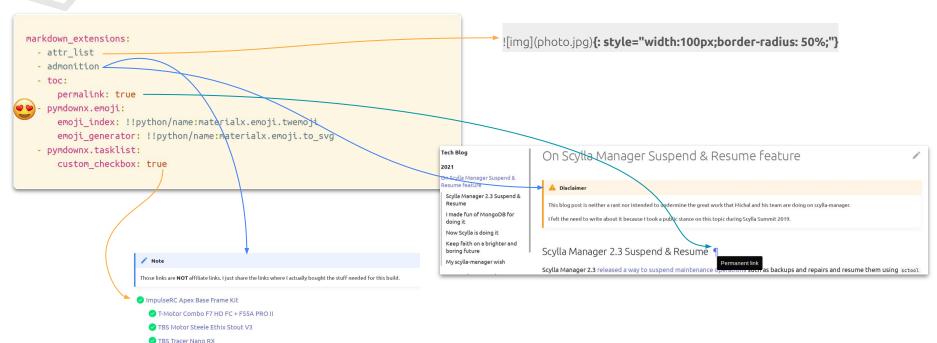
https://github.com/lukasgeiter/mkdocs-awesome-pages-plugin

Plugin to hook your own functions without having to create a MkDocs plugin

https://github.com/aklajnert/mkdocs-simple-hooks



Some useful and awesome Markdown extensions





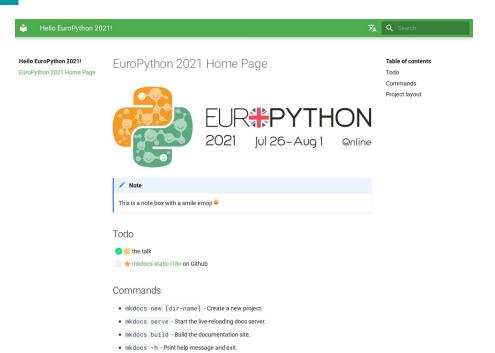
git checkout extensions

~/ep2021 \$ python3 -m venv ep2021_venv
~/ep2021 \$ source ep2021_venv/bin/activate
(ep2021_venv) ~/ep2021 \$ pip install -r requirements.txt

(ep2021_venv) ~/ep2021 \$ git checkout extensions
Switched to branch 'extensions'

(ep2021 venv) ~/ep2021 \$ mkdocs serve

Check out the sample mkdocs.yml available on the "extensions" branch!







Thank you for attending!

@ultrabug (twitter, github, gitlab, IRC OFTC/Libera.chat...)

Repository: https://github.com/ultrabug/ep2021

Web version of this presentation: https://ultrabug.fr/ep2021

Special thanks to:

mkdocs: @waylan @oprypin