How to create slides about CMake with CMake?

`https://github.com/train-it-eu/remark-cmake`

Mateusz Pusz
September 27, 2018

CMake? Are you crazy? Why?

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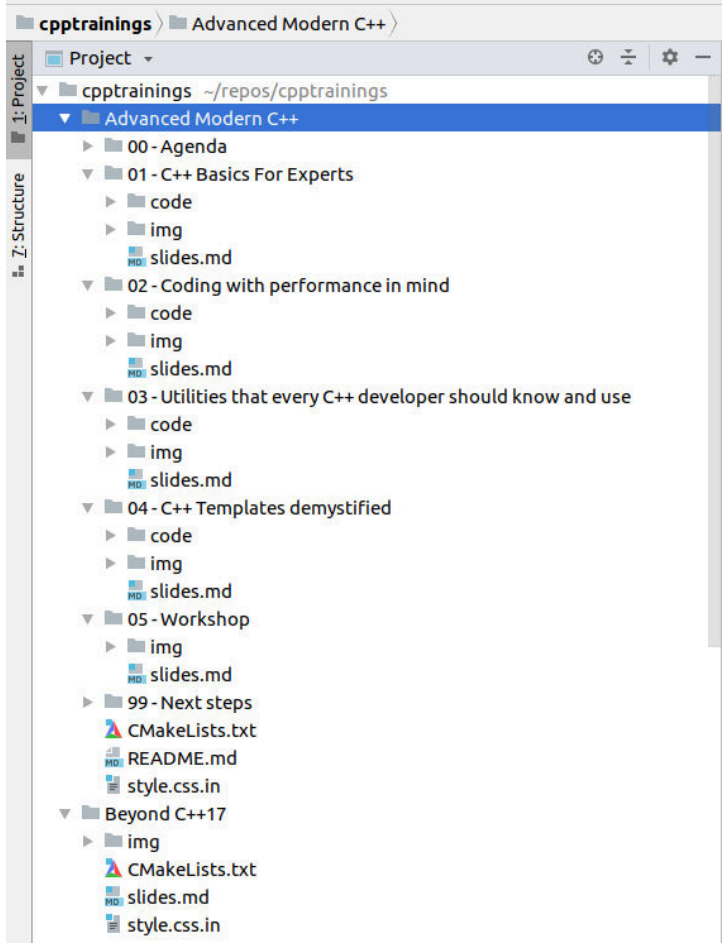
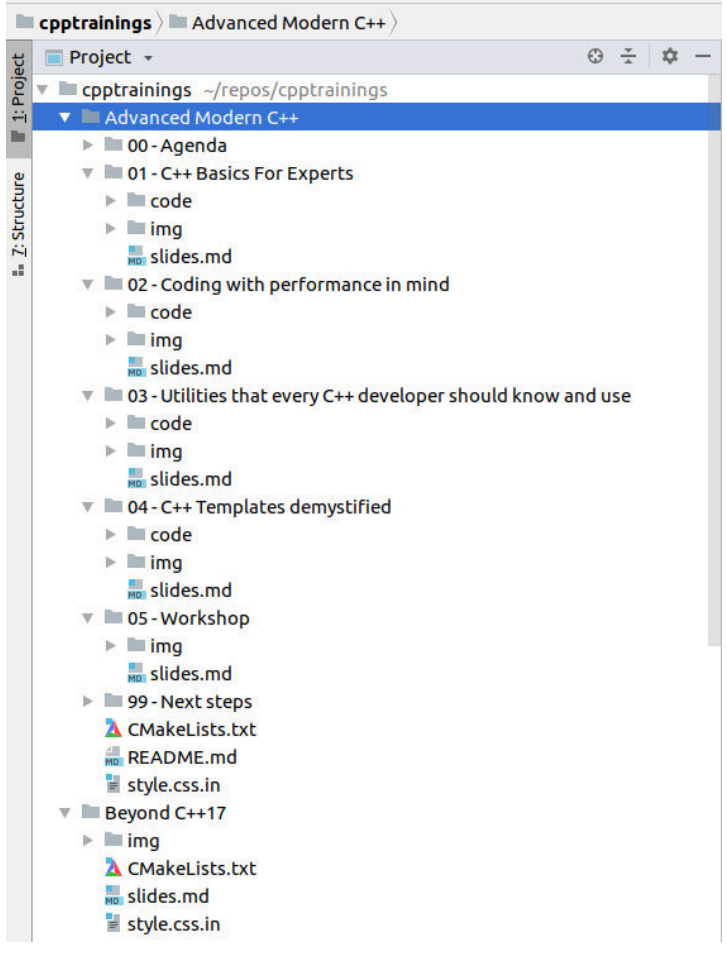


CMake? Are you crazy? Why?

- Brings ***benefits for large slide decks***
- Slides generation and C++ sample code compilation in ***one CMake project***
- Slides ***content is orthogonal to presentation layout and style***
  - easy to switch different styles for the same content
- ***Easy reuse*** of slides and whole chapters
- ***Handouts*** generation engine
- Easier to write Markdown in **`*.md`** file (instead of **`*.html`**)



Well, I lied a bit ;-) Slides are generated by Remark.js

```
class: title-slide

# How to create slides about CMake with CMake?

## https://github.com/mpusz/remark-cmake

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# CMake? Are you crazy? Why?

.left-column[
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]

.right-column[
.right[![Train IT trainings](img/train-it.png)]
]
```

How do I start?

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4. Prepare presentation content as a ***Markdown file***

How do I start?

1. *Download `remark.cmake`* script from **https://github.com/train-it-eu/remark-cmake**
2. Define your favorite ***presentation style and layout***
3. If needed fix or add custom language highlighting
4. Prepare presentation content as a ***Markdown file***
5. Aggregate all above in one ***CMake project***

CMake project with presentations

```
cmake_minimum_required(VERSION 3.3)
project(remark-cmake)

# path to custom cmake modules
list(APPEND CMAKE_MODULE_PATH "${CMAKE_CURRENT_SOURCE_DIR}/cmake")
include(remark)

# engine definition
add_subdirectory(remark.js)

# presentation definitions
add_subdirectory("API Reference")
add_subdirectory("Example")
```

- Just copy **`remark.cmake`** to your **`./cmake`** subdirectory and include it in a project
- More than one presentation possible in one CMake project

Example presentation definition

```
add_remark_slides(example_presentation ALL
    NAME "Slides_about_CMake_with_CMake"
    TITLE "How to create slides about CMake with CMake?"
    STYLE remark-style-default
    STYLE_TEMPLATE style.css.in
    MARKDOWN_SLIDES slides.md
    LANGUAGES
        remark-language-cmake
    RESOURCES
        img/questions.jpg
        img/train-it.png
        img/warning.png
)
```

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add_remark_slides(example_presentation ALL
    NAME "Slides_about_CMake_with_CMake"
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Styles are defined by CSS files and thanks to that can be easily replaced.

EXAMPLE PRESENTATION DEFINITION

```
add_remark_slides(example_presentation ALL
    NAME "Slides_about_CMake_with_CMake"
    TITLE "How to create slides about CMake with CMake?"
    STYLE remark-style-trainIT
    STYLE_TEMPLATE style.css.in
    MARKDOWN_SLIDES slides.md
    LANGUAGES
        remark-language-cmake
    RESOURCES
        img/questions.jpg
        img/train-it.png
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)
```

Styles are defined by CSS files and thanks to that can be easily replaced.

Engine definition

```
add_remark_engine(default_engine
    ENGINE scripts/remark-latest.min.js
    HTML_TEMPLATE template.html.in
    RESOURCES
        favicon.ico
        scripts/jquery.min.js
        scripts/laser_ptr.js
)
```

Styles definition

```
add_remark_style(remark-style-base
    DEPENDS default_engine
    SOURCES
        css/base.css
)
```

- Hierarchical approach

```
add_remark_style(remark-style-default
    DEPENDS remark-style-base
    SOURCES
        css/default.css
        css/default_colors.css
)
```

Custom highlighting

```
add_remark_language(remark-language-cmake
    SOURCES
        scripts/cmake.language.js
)
```

Big presentations can be divided into chapters

```
set(TRAINING_NAME "api_reference")

add_remark_chapter(${TRAINING_NAME}_chapter_title
    BASE_DIR "1 - Title"
    MARKDOWN_SLIDES
        slides.md
)

add_remark_chapter(${TRAINING_NAME}_chapter_api
    BASE_DIR "2 - API Reference"
    MARKDOWN_SLIDES
        slides.md
)

add_remark_chapter(${TRAINING_NAME}_chapter_end
    BASE_DIR "3 - End"
    MARKDOWN_SLIDES
        slides.md
    RESOURCES
        img/warning.png
)
```

Big presentations can be divided into chapters

```
set(TRAINING_NAME "api_reference")

add_remark_chapter(${TRAINING_NAME}_chapter_title
    BASE_DIR "1 - Title"
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    MARKDOWN_SLIDES
        slides.md
)

add_remark_chapter(${TRAINING_NAME}_chapter_end
    BASE_DIR "3 - End"
    MARKDOWN_SLIDES
        slides.md
    RESOURCES
        img/warning.png
)
```

```
add_remark_slides(${TRAINING_NAME} ALL HANDOUTS
    NAME ${TRAINING_NAME}
    TITLE "cmake.remark API Reference"
    STYLE remark-style-default
    STYLE_TEMPLATE style.css.in
    LANGUAGES
        remark-language-cmake
    CHAPTERS
        ${TRAINING_NAME}_chapter_title
        ${TRAINING_NAME}_chapter_api
        ${TRAINING_NAME}_chapter_end
)
```

Handouts generation

Original

```
# Slide with animation

This part

--

and this part

--

will not generate separate slides in handouts

---

exclude: handouts

# Slide that should not be included in handouts

This slide wil not be included in handouts

---

# Next slide
```

Handouts generation

Original

```
# Slide with animation

This part

--

and this part

--

will not generate separate slides in handouts

---

exclude: handouts

# Slide that should not be included in handouts

This slide wil not be included in handouts

---

# Next slide
```

Handouts

```
# Slide with animation

This part

and this part

will not generate separate slides in handouts

---

# Next slide
```

- Handouts generator removes
  - all `--` animation breaks
  - whole slides with `exclude: handouts`
- Useful for PDF files generation

More info?

https://github.com/train-it-eu/remark-cmake

- `remark.cmake` script
- Source of *that presentation*
- Presentation with *API Reference*
- Example *style and layout*
- Simple JavaScript scripts (i.e. *laser*)
- Custom *highlighting for CMake* language

More info?

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- `remark.cmake` script
- Source of *that presentation*
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- Example *style and layout*
- Simple JavaScript scripts (i.e. *laser*)
- Custom *highlighting for CMake* language

You are welcomed to contribute :-)

CAUTION
Programming
is addictive
(and too much fun)