

Template MystMD book



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1. Content

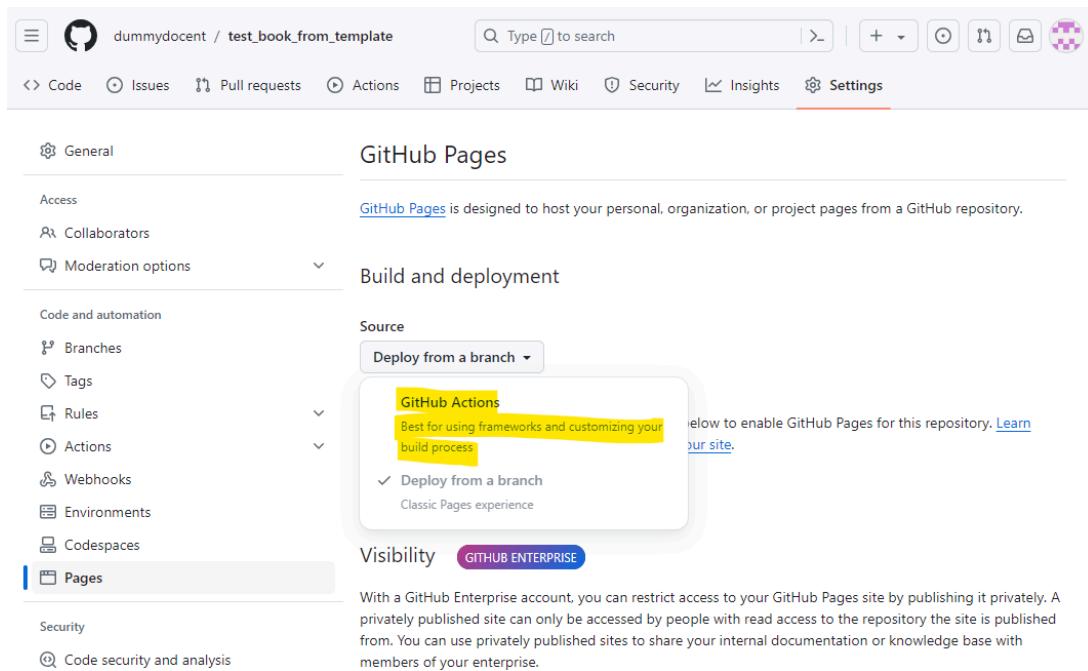
1.1 Introduction

This is the TUD JB2 template to produce your own online interactive textbook.

1.1.1 Set up your own repository

Follow these instruction to use this template for your own book.

1. Go to this repository
2. Click the green button `use this template` and click `create a new repository`.
3. Choose a proper name of your repository (this will be also part of your URL!) and choose the option `public`.
4. In your repository, click on `settings` and in the left menu on `Pages` and choose `Github actions``



5. Click on `code` and click on the gear-icon (near **About**) at the right site of the page.
6. Check the box **Use your GitHub Pages website**.
7. Go to `actions` in the topmenu, click on the (red) initial `commit` and click `re-run all jobs`

The book will now be deployed again - where now it can actually load GitHub pages.



Figure 1.2: Once the book has been deploy, all cirkels will be green.

8. Use the book link (`code` → below **About**) to your Github page where the book is hosted.
9. The output resembles Figuur 3.



repo

Template

Content ▾

[Introduction](#)

Freek Pols

Markdown (Cheatsheet)

admonitions

JB 2 Template

Introduction

This is the TUD JB2 template to produce your own online interactive textbook.

Set up your own repository

Follow these instruction to use this template for your own book.

1. Go to this [repository](#)
2. Click the green button [use this template](#) and click [create a new repository](#).
3. Choose a proper name of your repository (this will be also part of your URL) and choose the option [public](#).
4. In your repository, click on [settings](#) and in the left menu on Pages and [choose GitHub actions](#)*

Figure 1.3: The output of the template book is the same as your book.

Figure 1.4: a great movie

Exercise 1.1: Testing

test 123

1.2 Jupyter Notebook

- something about jupyter notebook
- add cell tags
- execute cells
- code in md file need kernel specification
- interactivity with ipywidgets

1.3 Markdown (Cheatsheet)

Markdown is a simple markup language: plain text that is *formatted* with small pieces of ‘code’. This text can then be quickly exported to various other formats such as PDF, Word, HTML, etc.

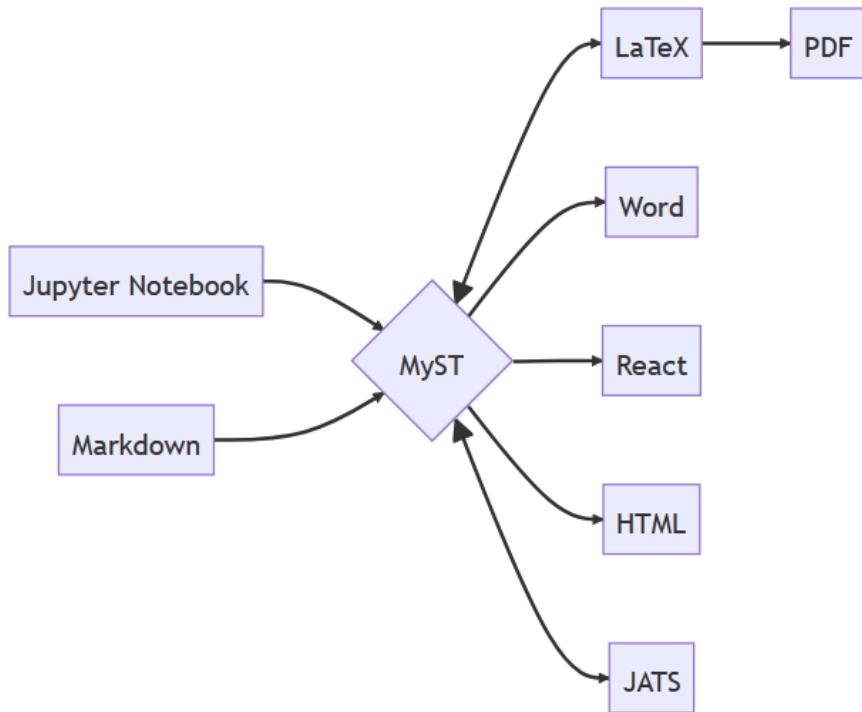


Figure 1.5: Some caption

list

- This is a reference to a figure like Figure 2
- This is a reference to a table like Table 1
- This is a reference to equation (1)
- This is a hyperlink

syntax

```
* This is a reference to a figure like {numref}`Figure {number} <fig_sunset>`  
* This is a reference to a table like {numref}`Table {number} <tl_sanctions>`  
* This is a reference to equation {eq}`eq:Newton`  
* This is a [hyperlink](https://nos.nl)
```

A Jupyter Book made with MyST requires a collection of markdown and Jupyter notebooks, which can then be exported to PDF, HTML, and even Word.

1.3.1 Structure

We can distinguish between two structures: that of the book’s content (a collection of different documents), and the (internal) structure of the chapters.

1.3.1.1 Table of Contents

The software we use automatically builds a table of contents (ToC) in alphabetical order. But you can also specify the ToC yourself. This is best done offline (`myst init --toc`), see the MyST documentation.

1.3.1.2 Chapters

To distinguish between chapter, section, and subsection (and further), use a number of # symbols, as shown below.

```
# H1 chapter
## H1.1 section
### H1.1.3 subsection
```

Tip

Do not number your chapters and sections! This happens automatically.

You can create a new line by either a hard enter and a blank line, a \ at the end of the line and enter, or two spaces at the end of the line.

1.3.1.3 New Line

list

A new line with double space.

A new line with a \\.

No new line with just a hard enter and blank line.

End of exercise. And an example if the previous line does not end with the above.

syntax

A new line with double space.

A new line with a ``.\`

A new line with a hard enter and blank line.

End of exercise.

And an example if the previous line does not end with the above.

1.3.2 Basic Formatting

Markdown is a markup language where text formatting is done with small pieces of code (just like HTML).

Element	Syntax	Example
Bold	**bold text**	Bold
Italic	<i>*italics*</i>	<i>Italics</i>
Emphasis	***emphasis***	emphasis
Inline Formula	$F = m \cdot a$	$F = m \cdot a$
Super and subscript	$\{sub\}^2^0$, and $\{sup\}^{th}$ of July	H ₂ O, and 4 th of July

Element	Syntax	Example
Footnote	<ul style="list-style-type: none"> - A footnote reference[^myref] \ [^myref]: This is an auto-numbered footnote definition. 	<ul style="list-style-type: none"> • A footnote reference[^myref] \ [^myref]: This is an auto-numbered footnote definition.

1.3.2.1 Lists Option 1

list

1. item 1
2. item 2.
3. item 3.

syntax

1. item 1
1. item 2.
1. item 3.

1.3.2.2 Lists Option 2

list

1. item 1
2. item 2.
3. item 3.

syntax

1. item 1
2. item 2.
3. item 3.

1.3.2.3 Tabs

```
:::::{tab-set}
:::{tab-item} Tab 1
Text in tab 1
:::
```

```
:::{tab-item} Tab 2
Text in tab 2
:::
::::
```

1.3.2.4 Checklists

list

- Create a markdown cheat sheet
- Publish online
- [] Let others test

syntax

- [x] Create a markdown cheat sheet
- [x] Publish online
- [] Let others test

1.3.3 Formulas

For STEM subjects, mathematical equations are essential. You can also include equations in JB's.

What is possible in LaTeX is also possible in JB, for example:

$$F_{res} = m \cdot a \quad (1.1)$$

Where labeled equations, such as (1), can be referenced.

`$$ Equation $$`

But you can also include inline equations like this: $s = v_{avg}t$. Use a single dollar sign before and after: `$ Equation $`

Name	Script	Symbols
root	<code>\sqrt{4}</code>	$\sqrt{4}$
power	<code>^{2x}</code>	2x
fraction	<code>\frac{2}{3}</code>	$\frac{2}{3}$
subscript	<code>_avg</code>	$_{avg}$
superscript	<code>^N</code>	N
multiply	<code>\cdot</code>	\cdot

Some examples:

Name	Script	Output
Derivative	<code>\frac{\Delta f}{\Delta t}</code>	$\frac{\Delta f}{\Delta t}$
Integral	<code>\int_a^b dx</code>	$\int_a^b dx$
sine	<code>sin(x)</code>	$sin(x)$

More: <https://en.wikibooks.org/wiki/LaTeX/Mathematics>

1.3.4 Admonitions

You can add special blocks that are highlighted in the text. See, for example, the warning below.

Warning

Here is a warning

There are different variants such as:

- tip
- admonition
- warning
- note
- objective
- see also ...

The golden...

Exercise 1.2: Exercise 1

Calculate $4 + 2$

Solution 1.1: Solution to Exercise 1

6

Exercises are a special kind of admonition.

1.3.4.1 Exercises

1.3.5 Figures

A site/book naturally needs figures. There are roughly two ways to add a figure:

Quick figure, without formatting options

| Quick figure |) |

Better way with more control:

Figures



Figure 1.6: With a nice caption

MyST Syntax

```
```{figure} https://github.com/rowanc1/pics/blob/main/sunset.png
:label: fig1
:width: 70%
:align: center
```

With a nice caption

Here we used figures hosted online, but you can also add figures to a folder (e.g., called *Figures*), and then use a relative path.

### 1.3.6 Tables

Tables are created with the separator |

#### Tables

```
|Header 1|Header 2|Header 3|
|---|---|---|
|text 1|text 2|text 3|
|text 4|text 5|text 6|
```

### MyST Syntax

```
```
Header 1	Header 2	Header 3
text 1	text 2	text 3
text 4	text 5	text 6
```
```

Or via ...

### Tables

Behavior
<ul style="list-style-type: none"> <li>• Sanction for 1st time</li> <li>• Sanction for 2nd time</li> </ul>
Not (timely or with a valid reason) deregistered
<ul style="list-style-type: none"> <li>• A penalty</li> <li>• exclusion</li> </ul>

Table 1.1: Overview of sanctions for certain behavior

### MyST Syntax

```
```{list-table} Overview of sanctions for certain behavior
:header-rows: 1
:name: tl_sanctions
* - Behavior
  - Sanction for 1st time
  - Sanction for 2nd time
* - Not (timely or with a valid reason) deregistered
  - A penalty
  - exclusion
```
```

Method 2 has the advantage of allowing references to Table 1

### 1.3.7 YouTube

To embed YouTube videos on the site, you need the embed YT link. The code is then:

### YouTube

Figure 1.7: A super fun video from the project Show the Physics

### syntax

```

```{iframe} https://www.youtube.com/embed/YDBr1Lof_mI?si=thWYK9MFi5QJv-tW
:width: 80%
:align: center

A super fun video from the project [Show the Physics](https://interactivetextbooks.tudelft.nl/showthephysics)
```

```

## YT in pdf

Embedded YT videos are not included in the PDF. A solution could be to include a QR code, for example.

### 1.3.8 References

#### list

- This is a hyperlink
- This is a reference to equation (1)
- This is a reference to a table like Table 1
- This is a reference to a figure like Figure 2

#### syntax

```

* This is a [hyperlink](https://nos.nl)
* This is a reference to equation {eq}`eq:Newton`
* This is a reference to a table like {numref}`Table {number} <tl_sanctions>`
* This is a reference to a figure like {numref}`Figure {number} <fig_sunset>`

```

## 1.4 JB 2 Template

- description of template
- run workflow
- see output

### 1.4.1 PDF met Latex of Typst

Om aan te geven welk type PDF je wilt bouwen, zet je dit in je `myst.yml` bestand onder `exports`.

Bijvoorbeeld:

```
exports:
 - format: pdf # Voor LaTeX export
 output: exports/book.pdf
 - format: typst # Voor Typst export
 output: exports/book.pdf
```

Ga naar Actions > klik op “Myst PDF Builder [LaTeX]” of “Myst PDF Builder [Typst]” > klik op “Run workflow” > klik op “Run workflow” in dropdown.

Een eventuele error voor de Typst action komt in de summary te staan.