Automated generation of training materials from markdown documents

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Introduction

Goals

Make the creation and maintenance of training material faster and easier

Automatic generation of Content

A hands-on HTML page

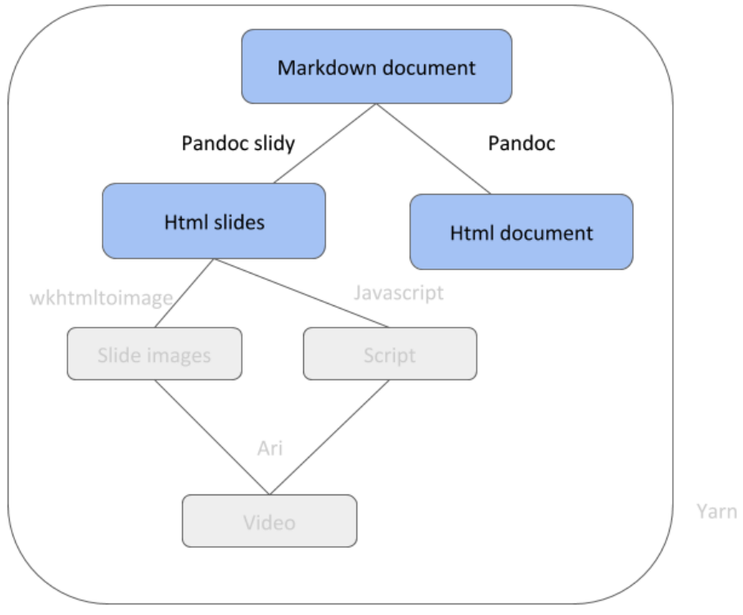
An HTML Slide-show

A lecture Video

1. How it works
    1. *Workflow*
2. Create your base material
    1. *Markdown*
    2. *Pandoc Markdown*
    3. *Document Structure*
3. Formatting with css
4. Usage
    1. *Slides*
    2. *Web page*
    3. *Video*

How it works

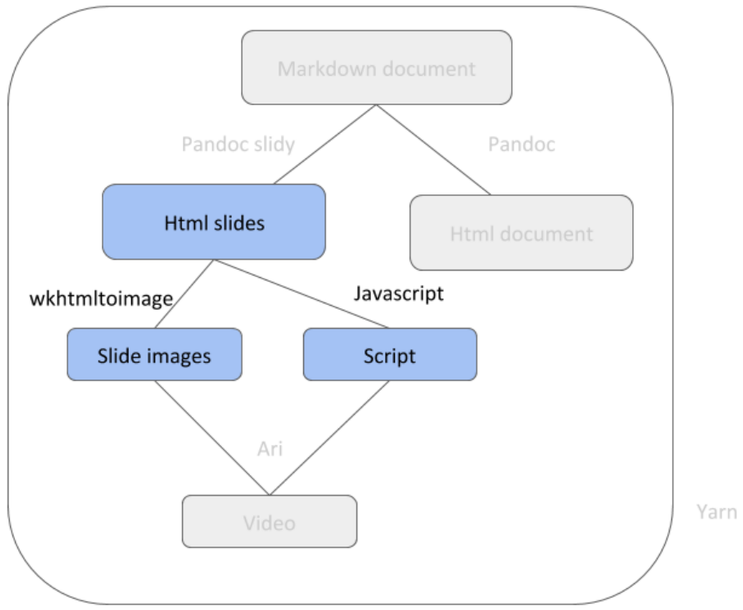
Workflow



Pandoc

- Universal document converter
- Highly configurable
- Allows the creation of self contained html with different css files
- We use a different css file for the Main document and the slides

Workflow

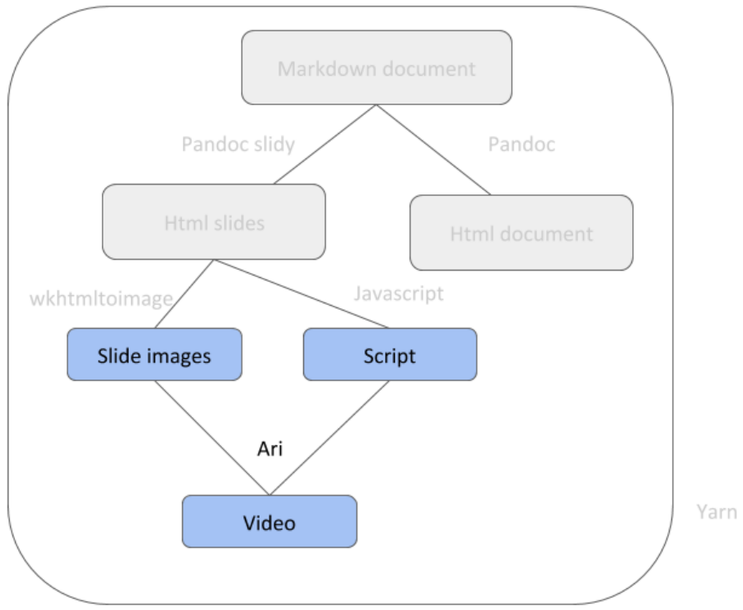


wkhtmltoimage

Extract one image per HTML slide

Independant of how we build the HTML

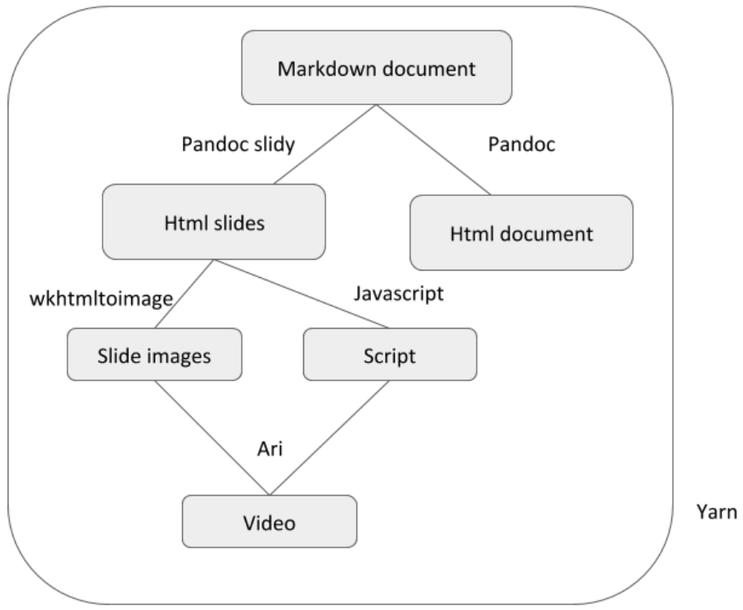
Workflow



Ari R package

From a html and a a text file, producte a video with voice over

Workflow


Markdown document
Pandoc slidy
Pandoc
Html slides
Html document
wkhtmltoimage
Javascript
Slide images
Script
Ari
Video
Yarn

Create your base material

The document contains :

- Content common to all supports
- Content displayed in the Slides
- Content displayed in the Document
- Content destined to text-to speech

```
### Section Title

#### Sub Section Title

This is a text where we include a list:
-   First non numbered item
    1.  First numbered item
    4.  Second numbered Item
*   Second non numbered item
```

Title

Sub Title

This is a text where we can include a list:

- First non numbered item
    1. *First numbered item*
    2. *Second numbered Item*
- Second non numbered item

YAFIYGI format : you asked for it you got it. Form is encoded with tags in the document.

Special styles

```
:::::{ .class}
For a special block of Text.
::::::::

[For a special line]{ .class}
```

For a special block of text.

For a special word or line.

Class

{ .name_class}

Id

{ #name_id }

Header

```
---
title: "How to build a wonderful presentation"
author: "Miss Bumblebee"
---
```

Slides structure

A new slide is created for each level 1 header `# Header`.

To avoid the repetition of titles in the Main Document, use the `.onslides` class.

```
# [Document Structure ]{ .onslides}
```

If you wish to hide a whole slide, use the `.onslides` as such :

```
# Document Structure { .onslides}
```

Sets marking

Class tags

- `.document` : in the hand-on document and not in the slide show
- `.onslides` : in the slide show and not in the hand-on document
- `.spoken` : is read by the text-to-speech in the video

````
:::::{ .document}
This table is useful, but impossible to present in a talk.

| Movie | Note |
|:-----:|:----:|
| The exorcist  | 8/10 |
| Scream  | 7/10 |
::::::::

![](src/Images/table_doc.png){ .onslides}
````

Formatting with css

Two separate css :

One for the slides

One for the Hands-on document

The .document class :

- In the slide css

```
.document {

        display:
        none;
}
```

- In the document css

```
.document {

        display:
        block;

        padding:
        0.5rem;
  justify-
        content:
        center;
}
```

The .onslides class :

- In the slide css

```
.onslides {

        visibility:
        visible ;
}
```

- In the document css

```
.onslides {

        display:
        none !
        important;

        visibility:
        hidden  !
        important;

        position:
        static;
}
```

Usage

Generate files

Note: The files will not be generated if files with the same name exist, be sure to remove previous runs from the destination folder.

To generate the files from an original document `How-to.md`

- Document

```
yarn jake dist/How-to-document.html
```

- Slides

```
yarn jake dist/How-to-slides.html
```

Generate files

- Video

```
yarn jake dist/How-to-slides.mp4
```

Important for the generation of the video :

Need of AWS access ID

Modify the script run_ari_spin.R to use it

```
Sys.setenv("AWS_ACCESS_KEY_ID" = " ","AWS_SECRET_ACCESS_KEY" = " ","AWS_DEFAULT_REGION" = "us-east-2")
```

Thank You

Futur of the project:

Adapt the workflow to Jekyll and GTN CSS

Wrap the workflow in Galaxy

Create a unique Parameter file

References :

Ari : https://github.com/jhudsl/ari

Pandoc : https://pandoc.org/

wkhtmltoimage : https://wkhtmltopdf.org/

Github repository https://github.com/galaxyproject/video-lectures/

Slides : https://github.com/galaxyproject/video-lectures/blob/master/dist/BCC2020/How-to-slides.pdf

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