Rmarkdown: Word and pdf documents

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Microsoft Word

- You can specify it when you create a new `rmarkdown` document.
- You can also specify it later in the YAML header.

```
---
title: "rmarkdown_pdf_docx"
author: "Sebastien Renaut"
date: '2018-09-06'
output: word_document
---
```

- Then, it's just a matter of kniting the document!
- Little documentation, few options & configurations are possible. (This is not the course of events that should be promoted, as it moves away from an open source environment).

Portable Document Format (.pdf)

- You need a extra step to go from LaTeX (*.tex*) format to a *.pdf*. This is handled by the `pdflatex` function in R.
- LaTeX software is a high-quality typesetting system.
- It is the *de facto* standard for the communication and publication of scientific documents.
- LaTeX is available as free software.

- Latex software is available here.
- If interested, follow this discussion: *Why LaTeX is such a bloated system?*
- So... *TinyTeX* is a custom LaTeX distribution based on TeX Live that is small in size (~150MB) but functions well in most cases, especially for `R` users .
- `tinytex` R package is a wrapper function that installs *TinyTeX*.

Exercice 1 (15min.)

- Install the `tinytex` R package from the console.

  install.packages("tinytex")
  library(tinytex)
  It takes a few minutes to download and compile tinytex (~150MB)
  install_tinytex()

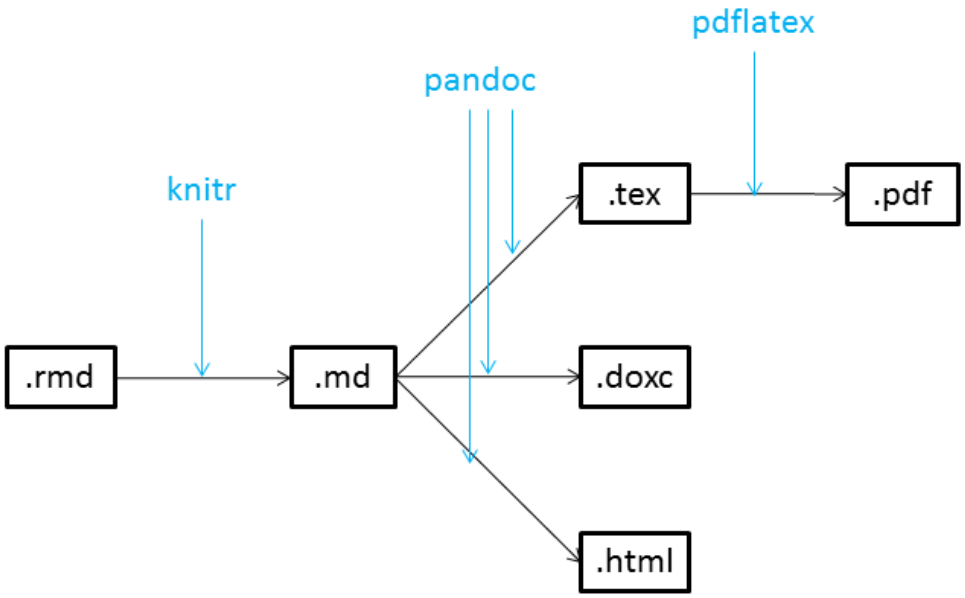


Figure 1:

- Compile your document as *.pdf*:

  —
  title: “rmarkdown_pdf_docx”
  author: “Sebastien Renaut”
  date: ‘2018-09-06’
  output: pdf_document
  —

More complex header

  —
  output
  pdf_document:
  keep_tex: true
  fig_caption: true
  latex_engine: pdflatex
  title: “**This is my first Rmarkdown manuscript**”
  date: February 06, 2019
  geometry: margin=1in
  fontfamily: mathpazo
  fontsize: 11pt
  spacing: double
  csl: ../reference_material/peerj.csl
  bibliography: ../reference_material/reference.bib
  —

- Note the indentation in the **.Rmd** document.

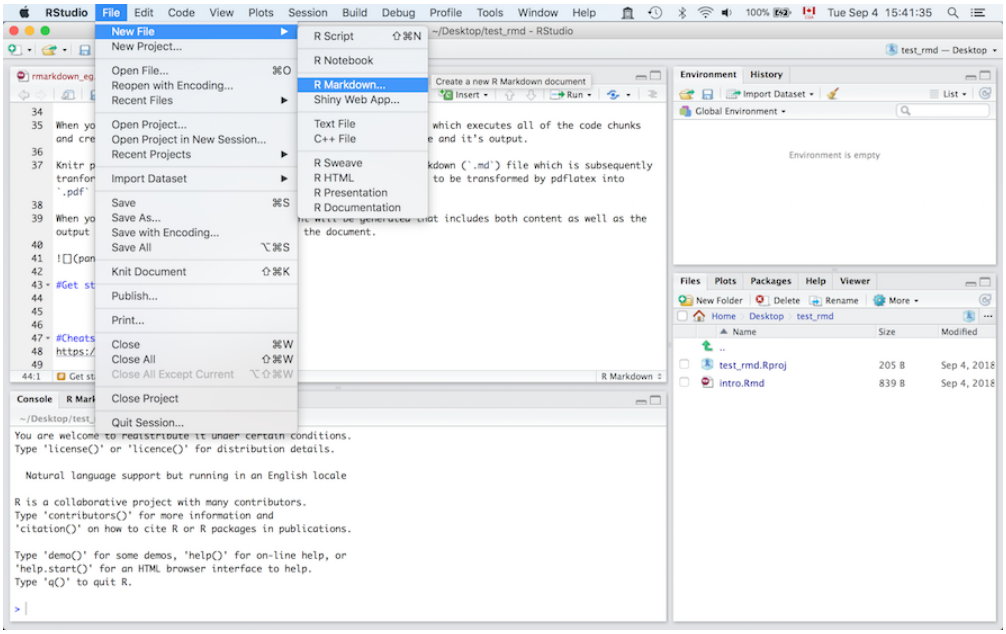
- Note the bibliography file and csl file for formatting references.

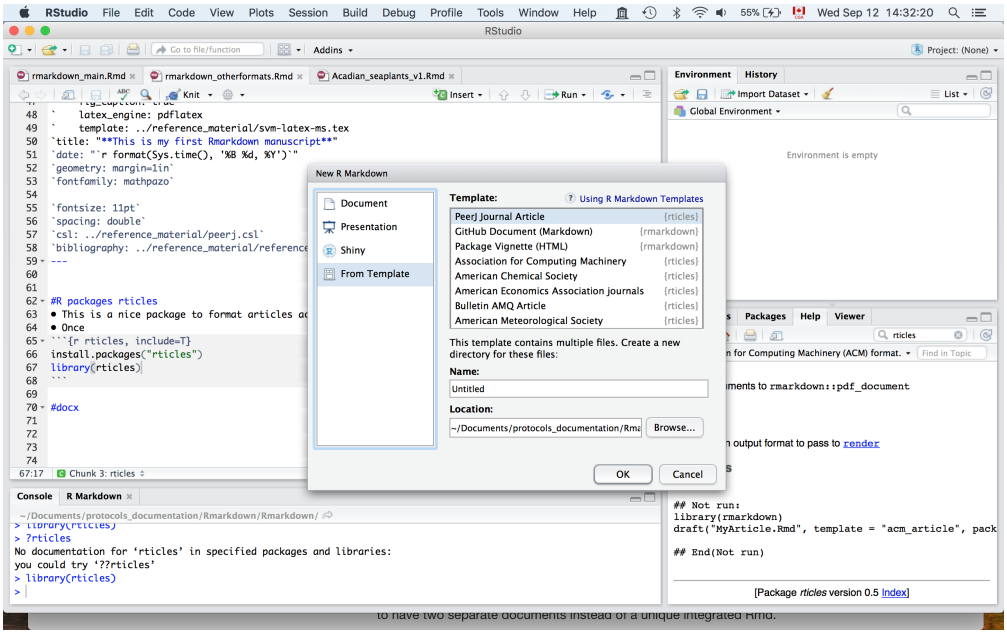
Exercice 2: R packages `rticles` (10min.)

- This is a nice package to format articles according to the specification of a journal.
- But first, you need to install it in the R console `install.packages("rticles")`.

  “‘{r rticles, include=T}
  #install.packages(“rticles”)
  library(rticles)
  “‘

- Once installed, try starting a new R markdown document according to your journal of interest.





Template (*.tex*)

- You can build your own template if you know Latex...
- There are many templates available on the web that you can use.
- Here is one I like for manuscripts (Thanks svmiller!):
- Here is one I like for CVs:
- Simply download it and add it to the YAML header like this: `template: ../reference_material/svm-latex-ms.tex`

```
---
output:
pdf_document:
keep_tex: true
fig_caption: true
latex_engine: pdflatex
template: ../reference_material/svm-latex-ms.tex
title: "**This is my first Rmarkdown manuscript**
---
```

Overleaf

- Overleaf is an online LaTeX and Rich Text collaborative writing and publishing tool that makes the whole process of writing, editing and publishing scientific documents much quicker and easier.

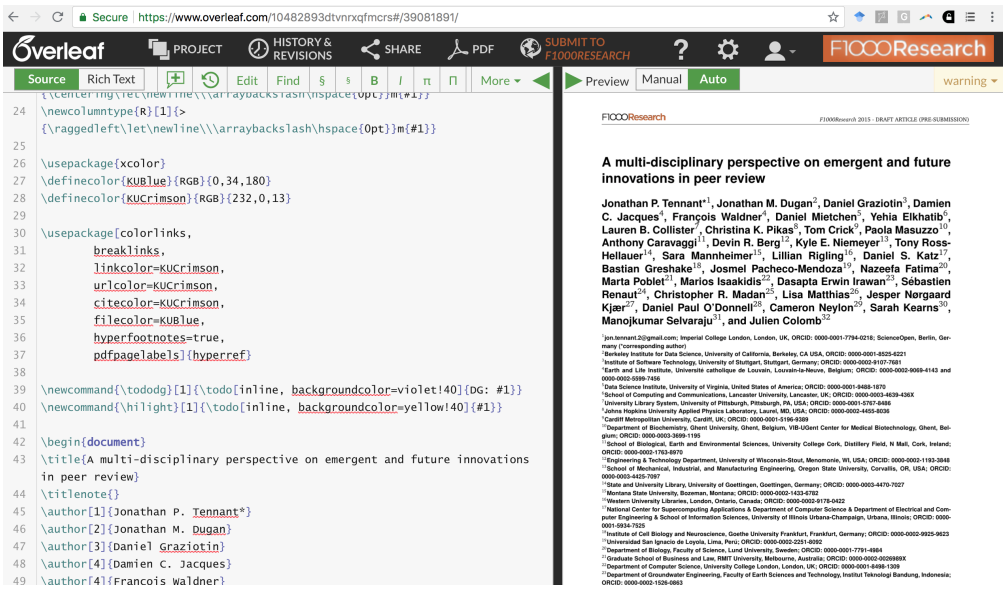
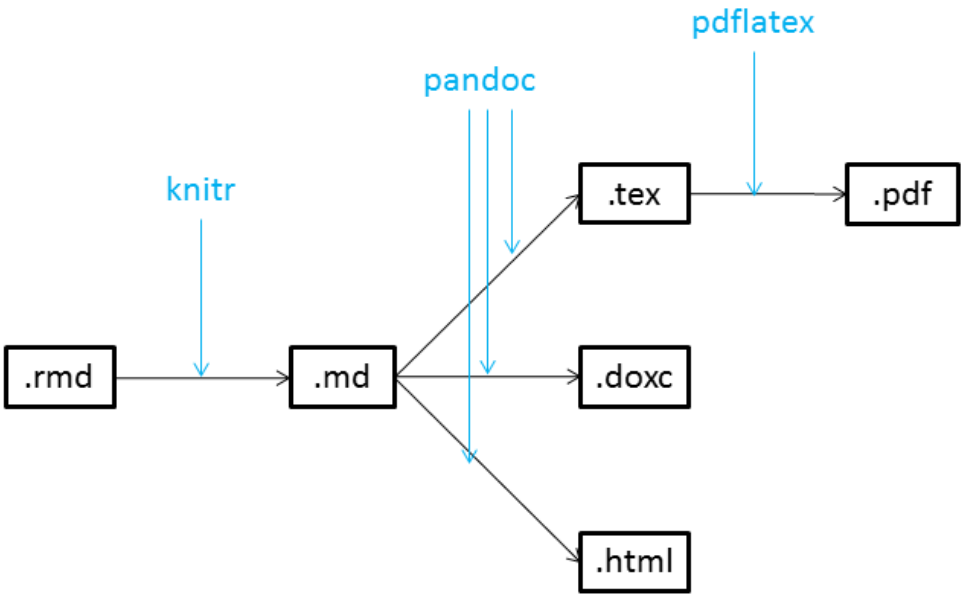


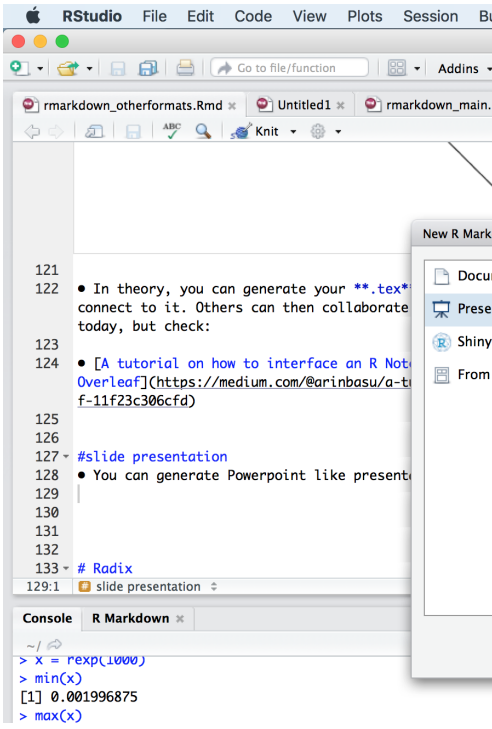
Figure 2:

- Remember this:



- So you can generate your **.tex** file, upload it to a github repo and Overleaf will connect to it. Others can then collaborate and modify the .tex file.
- Let's quickly look at overleaf.
- A tutorial on how to interface an R Notebook with Overleaf
- [How do I connect an Overleaf project with a repo on GitHub, GitLab or BitBucket?] https://www.overleaf.com/learn/how-to/How_do_I_connect_an_Overleaf_project_with_a_repo_on_GitHub,_GitLab_or_BitBucket%3F

slide presentation



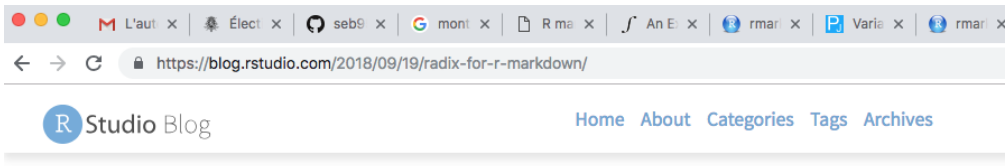
- You can generate Powerpoint like presentations. We will not learn this today:

Bookdown

https://bookdown.org/

Radix

- https://blog.rstudio.com/2018/09/19/radix-for-r-markdown/
- Stay tuned, as it might replace the 'rmarkdown' package...



Radix for R Markdown

JJ Allaire

2018-09-19

Categories: R Markdown Tags: rmarkdown

Today we're excited to announce Radix, a new R Markdown format optimized for scientific and technical communication. Features of Radix include:

- Reader-friendly typography that adapts well to mobile devices.
- Flexible figure layout options (e.g. displaying figures at a larger width than the article text).
- Tools for making articles easily citeable, as well as for generating Google Scholar compatible citation metadata.
- The ability to incorporate JavaScript and D3-based interactive visualizations.
- A variety of ways to publish articles, including support for publishing sets of articles as a Radix website.
- The ability to create a blog composed of a collection of Radix articles.