# Advanced R

## Unit 2

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# Course Content - Advanced R (Unit 2)

- Splitting Rmd files
  - knit_child()

# Splitting Rmd files

# Why split Rmd files?

- If R markdown document is too long
  - split it into shorter documents, and include them as child documents

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- If you want to use the same R markdown document again
  - include this R markdown document as a child document

# What is knit_child()?

It is a function which knits a child document and returns a character string to input the result into the main document.

# How to use knit_child()?

- It is designed to be used in the chunk option *child*
  - link (https://bookdown.org/yihui/rmarkdown-cookbook/child-document.html)

# How to use knit_child()?

- It is designed to be used in the chunk option *child*
  - link (https://bookdown.org/yihui/rmarkdown-cookbook/child-document.html)
- It can be used in combination with chunk option *results* and function *cat()*

# knit_child() with cat()

- within header of chunk: *{r, results = 'asis'}*

```
cat(knit_child("0_subRmds/subRmd_example.Rmd"), sep = '\n')
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- Suggestions
  - in folder Rmarkdown have folder '0_subRmds'
  - start filenames of these subroutine Rmds with *subRmd_**XXX**_v**YYYYMMDD**.Rmd*

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- Suggestions
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  - start filenames of these subroutine Rmds with *subRmd_**XXX**_v**YYYYMMDD**.Rmd*
- Important
  - if you reuse a 'subRmd' several times → use no chunk name

# Example - *UNIT2_ex0_exampleA.Rmd*

```
dt_analysis <- iris
var_int <- "Sepal.Length"
```

```
cat(knit_child("0_subRmds/subRmd_exampleA.Rmd"), sep = '\n')
```

- within header of chunk with 'knit_child': *{r, results = 'asis'}*

# Example - *subRmd_exampleA.Rmd*

```
ggplot(data = dt_analysis,
       aes(x = get(var_int))) +
  geom_histogram(fill = "grey80", color = "black") +
  theme_bw()
```

- important - subRmd has no header
  - open new Rmd file
    - File/new File/R Markdown ...
    - delete the suggested content

# Example - *UNIT2_ex0_exampleB.Rmd*

```
for(i in 1:lenght(parameters)){
  var_int <- parameters[i]
  cat(knit_child("0_subRmds/subRmd_exampleB.Rmd"), sep = '\n')
}
```

# Example - *subRmd_exampleB.Rmd*

````
## Parameter `r i`: `r var_int`

```{r}
l <- sum(!is.na(dt %>%  pull(var_int)))
```

* has class: `r class(dt %>%  pull(var_int))`
* has `r l ` valid observations

```{r}
rm(l)
```
````

# Let's run exampleA and exampleB

- We work through
  - example A
  - example B

# Exercise subRmd

- Work through ‘Unit 2 - Exercise 1’

# Links

# Links (I)

- Introduction to R
  - R for Data Science (https://r4ds.hadley.nz/)
- Plots using ggplot
  - Overview with further links to course material: https://ggplot2.tidyverse.org/
- Display tables using flextable
  - flextable bool https://ardata-fr.github.io/flextable-book/
  - Function references https://davidgohel.github.io/flextable/reference/index.html
- knit_child()
  - link (https://bookdown.org/yihui/rmarkdown-cookbook/child-document.html)

# Links (II)

- Download R
  - CRAN (https://cran.r-project.org/)
- Download RStudio
  - RStudio Desktop (https://posit.co/download/rstudio-desktop/)