

# 04-PDF

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# Preliminaries

Install the PDF engine

To compile PDF files (presentations or documents), you need an installation of  $\text{\LaTeX}$

### Easy mode

#### TinyTex

It's convenient because it is easy to use, but it does not offer all the functionalities of  $\text{\LaTeX}$

### Pro mode

#### MikTex

It's a pain in the neck but it's convenient in the long run

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For this course, we can use TinyTex

Basics commands of  $\text{\LaTeX}$  might work in quarto as well (when compiled in PDF)

Quarto allows for using  $\text{\LaTeX}$  without knowing how it works (i.e., by using the same tags used for html files)

PDFs do not offer interactivity, but they do look professional

Importantly, PDFs are stable

# YAML & Basics

```
---
```

```
title: "I can use LaTeX"
```

```
author: "Jane Doe"
```

```
format: beamer
```

```
---
```

```
## New Slide
```

- First element
- Second element

```
## Another slide
```

```
Some text in my slide! Yay!
```



```
---
```

```
[...]
```

```
format:
```

```
  beamer:
```

```
    slide-level: 2
```

```
---
```

```
# This create a section page
```

```
## This create a slide
```

- First element
- Second element

```
# New section
```



## Themes

```
[...]
```

```
format:
```

```
  beamer:
```

```
    slide-level: 3
```

```
    theme: Montpelier
```

```
    colortheme: dove
```

Gallery of beamer themes & colortheme

header-includes:

header-includes:

header-includes:

Further customization through pure  $\text{\LaTeX}$ :

[...]

header-includes:

- `\usepackage{graphicx}`
- `\usepackage[english]{babel}`
- `\usepackage{xcolor}`
- `\AtBeginDocument{\author[Ottavia M. Epifania]{Ottavia M. Epifania \\\ Univ`
- `\AtBeginDocument{\institute[]{}{ARCA Summer School} }`
- `\setbeamertemplate{logo}{\includegraphics[width=0.7cm]{img/freepalestine.`

## Layout & font

# Columns

The same code seen so far:

```
:::: {.columns}
```

```
::: {.column width="40%"}  
contents...
```

```
:::
```

```
::: {.column width="60%"}  
contents...
```

```
:::
```

```
::::
```



# Text size

`\Large` Large

Large

`\large` large

large

`\normalsize` normal

normal

`\small` small

small

`\footnotesize` footnotesize

footnotesize

`\scriptsize` script

script

`\tiny` very tiny

very tiny

# Code

## Code Chunk

same as before! Of course it cannot be interactive.

```
```{r}
#| eval: true
3*2
```
```

```
[1] 6
```



```
library(tidyverse)
mtcars %>%
  ggplot( aes(mpg, hp, size = gear)) +
  geom_point() +
  geom_smooth(method = "lm")
```

①

②

③

④

- ① Do something
- ② Do something else
- ③ And else
- ④ Whatever

In the code: # <1>, # <2> etc

In the YAML

```
[...]
code-annotations: below
```

# Tables

Table 1 is a table

Table 1: This is a table!

|               | mpg  | cyl | disp |
|---------------|------|-----|------|
| Mazda RX4     | 21.0 | 6   | 160  |
| Mazda RX4 Wag | 21.0 | 6   | 160  |
| Datsun 710    | 22.8 | 4   | 108  |



@tbl-mtcars1 is a table

Table 2: This is a table!

```
1  ```{r}
2  #| eval: false
3  #| label: tbl-mtcars1
4  #| tbl-cap: "This is a table!"
5  #| code-line-numbers: "|3|4|"
6
7  library(kableExtra)
8  kable(mtcars[1:3,1:3], booktabs = TRUE)    %>%
9    kable_styling(latex_options = "hold_position")
10  ```
```



## External Figures

There's a peacock in Figure 1

```
```${r}  
#| out-width: 70%  
#| fig-align: center  
#| fig-cap: "A peacock"  
#| label: fig-pea  
  
knitr::include_graphics("img/peacock.png")  
```
```



There's a peacock in @fig-pea1

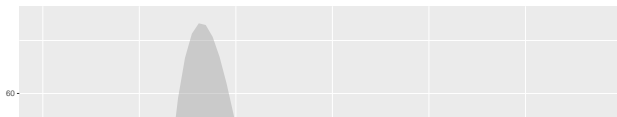
```
```{r}
#| eval: false
#| out-width: 70%
#| fig-align: center
#| fig-cap: "A peacock"
#| label: fig-pea1

knitr::include_graphics("img/peacock.png")
```
```



## A kickass plot in Figure 2

```
```${r}  
#| out-width: 70%  
#| fig-align: center  
#| fig-cap: "What a plot"  
#| label: fig-plot  
#|  
ggplot(mtcars, aes(hp, mpg, color = factor(am))) +  
  geom_point() +  
  geom_smooth(formula = y ~ x, method = "loess") +  
  theme(legend.position = 'bottom')  
```
```



A kickass plot in @fig-plot1

```
` `{r}
#| eval: false
#| out-width: 70%
#| fig-align: center
#| fig-cap: "What a plot"
#| label: fig-plot1
#|
ggplot(mtcars, aes(hp, mpg, color = factor(am))) +
  geom_point() +
  geom_smooth(formula = y ~ x, method = "loess") +
  theme(legend.position = 'bottom')
` }
```