## 04-PDF

Ottavia M. Epifania University of Trento ottavia.epifania@unitn.it

ARCA Summer School

Beamer

Preliminarities

## **Preliminarities**



Beamer

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Install the PDF engine

Install the PDF engine



Figures 0000000

Install the PDF engine

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

#### Easy mode

TinyTex
It's convenient beca

It's convenient because it is easy to use, but it does not offer all the functionalities of LATEX

#### Pro mode

MikTex

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



Install the PDF engine

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### Easy mode

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It's convenient because it is easy to use, but it does not offer all the functionalities of  $\mbox{LT}_{\mbox{\sc FX}}$ 

#### Pro mode

MikTex

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

For this course, we can use TinyTex



Basics commands of  $\triangle T_E X$  might work in quarto as well (when compiled in PDF)

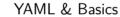
Quarto allows for using LATEX without knowing how it works (i.e., by using the same tags used for html files)

 $\ensuremath{\mathsf{PDFs}}$  do not offer interactivity, but they do look professional

Importantly, PDFs are stable

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0000●00 YAML & Basics Beamer





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Figures

Tables

Reamer

Code

title: "I can use LaTeX"

author: "Jane Doe"

format: beamer

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## 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



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## Beamer



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Themes

#### Themes



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Themes

```
format:
  beamer:
    slide-level: 3
    theme: Montpellier
    colortheme: dove
Gallery of beamer themes & colortheme
```



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header-includes:

header-includes:



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header-includes:

## Further customization through pure 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.

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Layout & font

Layout & font



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## 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 script \scriptsize script very tiny \tiny very tiny



Code ●○○○○

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## Code



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Code ○●○○○

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Code Chunk

## Code Chunk



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same as before! Of course it cannot be interactive.

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

[1] 6

Tables

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## Code annotation

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Do something
 Do something else

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3 And else4 Whatever

geom smooth(method = "lm")

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

geom point() +

In the YAML

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Code annotation

[...]
code-annotations: below



Tables

Figures

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## **Tables**



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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!

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



Tables

# **Figures**



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External Figures

# External Figures



Figures

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There's a peacock in Figure 1

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





Figures

#### External Figures

. . .

## 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")
```



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Plots



Figures ○○○○●○○ Plots

#### A kickass plot in Figure 2

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```
```{r}
#| out-width: 70%
#| fig-align: center
#| fig-cap: "What a plot"
# | label: fig-plot
#1
ggplot(mtcars, aes(hp, mpg, color = factor(am))) +
  geom point() +
  geom smooth(formula = y ~ x, method = "loess") +
  theme(legend.position = 'bottom')
```

Plots

### A kickass plot in @fig-plot1

```
```{r}
#1 eval: false
#| out-width: 70%
#| fig-align: center
# | fig-cap: "What a plot"
#| label: fig-plot1
#1
ggplot(mtcars, aes(hp, mpg, color = factor(am))) +
  geom point() +
  geom smooth(formula = y ~ x, method = "loess") +
  theme(legend.position = 'bottom')
. . .
```