# T<sub>E</sub>X Summary & Best Practice

Yujie HE

April 2021

# Contents

# 1 *listings* package

2020-05-01: first update

## 1.1 Package settings

```
\lstset{
  basicstyle=\ttfamily,
  columns=fullflexible,
  frame=single,
  breaklines=true,
  postbreak=\mbox{\textcolor{red}{$\hookrightarrow$}\space},
}
```

## 1.2 Examples

```
\begin{enumerate}
    \item \href{https://mirror.foobar.to/CTAN/macros/latex/contrib
        ↪ /listings/listings.pdf}{The Listings Package mamual}
\end{enumerate}
```

## 1.3 Useful links

1. The Listings Package

   2020/03/24 Version 1.8d

2. LaTeX/Source Code Listings - Wikibooks

3. lstlisting line wrapping - stackexchange

   adding line break for *listings* package
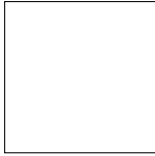
# 2 Ti*k*Z package

2020-05-01: first update
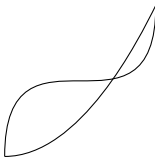
## 2.1 Examples

1. drawing a square

```
\begin{tikzpicture}
    \draw (0,0) -- (0,2) -- (2,2) -- (2,0) -- (0,0);
    % end in the start to form a cycle
    \draw (0,0) -- (0,2) -- (2,2) -- (2,0) -- cycle;
    % use the rectangle keyword to simplify
```

```
    \draw (0,0) rectangle (4,4);
\end{tikzpicture}
```
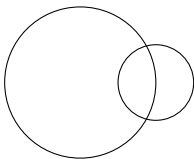
2. drawing a parabola

```
\begin{tikzpicture}
    \draw (0,0) parabola (2,2);
    % add control points
    \draw (0,0) .. controls (0,2) and (2,0) .. (2,2);
\end{tikzpicture}
```

3. draw a circle

```
\begin{tikzpicture}
    % center and radius
    \draw (1,1) circle (1cm);
    \draw (2,1) circle (0.5cm);
\end{tikzpicture}
```

## 2.2 Useful links

1. The TikZ and PGF Packages

   Manual for version 3.1.8b, December 27, 2020

# 3 *graphicx* package

2020-05-01: first update

## 3.1 Examples

## 3.2 Specical case

1. Splitting subfigure across multiple pages

```
\begin{figure}[b]
    \begin{subfigure}[t]{0.45\hsize}
        \includegraphics[width=0.95\linewidth]{example-image}
        \caption{}
    \end{subfigure}
    \begin{subfigure}[t]{0.45\hsize}
        \includegraphics[width=0.95\linewidth]{example-image}
        \caption{}
    \end{subfigure}
    \caption{first part of my figure}
\end{figure}
\clearpage
\begin{figure}[tb]\ContinuedFloat
    \begin{subfigure}[t]{0.45\hsize}
        \includegraphics[width=0.95\linewidth]{example-image}
        \caption{}
    \end{subfigure}
    \begin{subfigure}[t]{0.45\hsize}
        \includegraphics[width=0.95\linewidth]{example-image}
        \caption{}
    \end{subfigure}
    \caption{second part of my figure}
\end{figure}
```
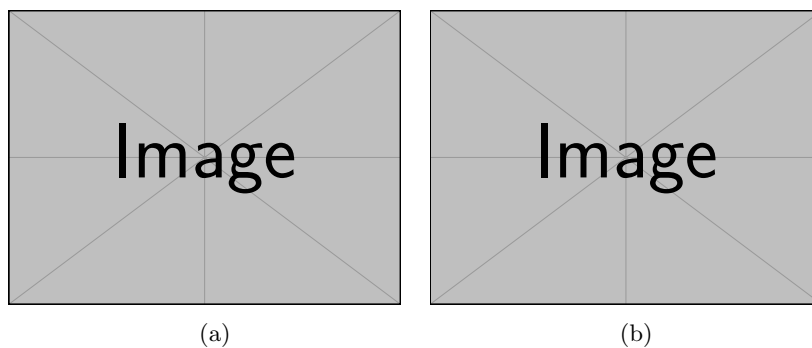


(a)      (b)

Figure 1: first part of my figure

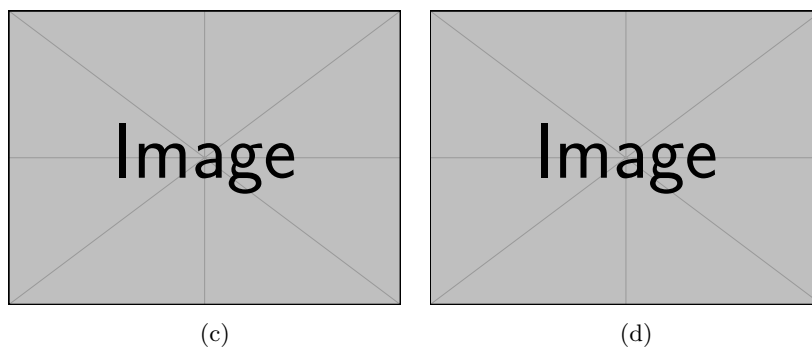<div align="center">(c)　　　　　　　(d)</div>

<div align="center">Figure 1: second part of my figure</div>

## 3.3   Useful links

1. The graphicx package mamual
   Version: 2020/09/09

2. Splitting Subfigure across multiple pages - stackexchange

# 4    Misc.

1. version control with `.gitignore`

   - https://github.com/github/gitignore/blob/master/TeX.gitignore
   - Yujie's customization: https://github.com/hibetterheyj/yujiehe-gitignore/blob/master/TeX.gitignore

# 5 To-do lists

1. difference between *xcolor* and *color* package

2. difference between *subfig* and *subfigure* package and best practice to use sub-figures

3. best practice for href and url package

4. adding bibiligrahy in the LaTeX

5. adding emoji in LaTeX

6. propose a `.sty` for personal use

7. add reference section