## Notes of Learning LATEX $2\varepsilon$

 $\mathrm{Smile^1}$  and  $\mathrm{Sob^2}$ 

December 6, 2018

Abstract
This report is introducing some random knowledge which is mostly useless for

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# PREAMBLE

The only purpose of this "Preamble" chapter appearing here is to test  $\addcontentsline$ 

## CHAPTER 1

## 8TH NOVEMBER

"Live life to the fullest, and focus on the positive."

— Matt Cameron

#### I – Basic Introduction of TeX and LATeX

TEX is a typesetting software program which was created by It is able to generate high-quality printable documents. The core philosophy of TEX is "What You See Is What You Mean (WYSIWYM)", which makes writers more focus on contents. The way of using TEX to make a document is somewhat similar to programming, writing files which consist of commands and texts under specific grammar rules and then compiling these files to a printable document.

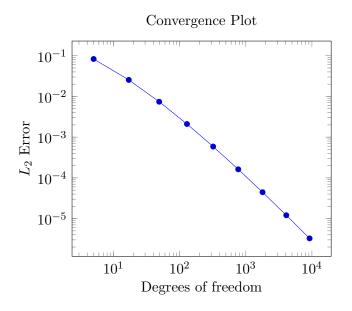


Figure 1.1: An example picture produced by pgfplot

In order to make  $T_EX$  easisier to use, developed an extendable macro library based on the original  $T_EX$ , which is the  $I + T_EX$ .

### II – Grammar Structure of I⁴TEX

#### III – FILES ORGANIZATION OF LATEX

IV - Encoding

V - Chinese Support

#### VI – Brief Introduction of Symbols

VII - Miscs

VII. 1 – Text Emphasis

This is an example of  $\backslash$  underline. This is an example of  $\backslash$  emph

VII. 2 - SPACE, LINE, PARAGRAPH AND PAGE CONTROL

VII. 2 A – Spaces

 $\tilde{}$ : LATEX does not break a line from the position of  $\tilde{}$ . See the difference between Prof. X and Prof. X.

VII. 2 B – LINES

**\newline** and  $\setminus \setminus$  are used for breaking lines.

VII. 2 C - PARAGRAPHS

**\par** and a empty line are used for starting a new paragraph.

BTW, multiple successive empty lines are considered as one.

VII. 2 D – PAGES

Now, use \newpage or \clearpage to open a new page.

#### VIII - XXX

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Ut purus elit, vestibulum ut, placerat ac, adipiscing vitae, felis. Curabitur dictum gravida mauris. Nam arcu libero, nonummy eget, consectetuer id, vulputate a, magna. Donec vehicula augue eu neque. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Mauris ut leo. Cras viverra metus rhoncus sem. Nulla et lectus vestibulum urna fringilla ultrices. Phasellus eu tellus sit amet tortor gravida placerat. Integer sapien est, iaculis in, pretium quis, viverra ac, nunc. Praesent eget sem vel leo ultrices bibendum. Aenean faucibus. Morbi dolor nulla, malesuada eu, pulvinar at, mollis ac, nulla. Curabitur auctor semper nulla. Donec varius orci eget risus. Duis nibh mi, congue eu, accumsan eleifend, sagittis quis, diam. Duis eget orci sit amet orci dignissim rutrum.

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Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

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Sed commodo posuere pede. Mauris ut est. Ut quis purus. Sed ac odio. Sed vehicula hendrerit sem. Duis non odio. Morbi ut dui. Sed accumsan risus eget odio. In hac habitasse platea dictumst. Pellentesque non elit. Fusce sed justo eu urna porta tincidunt. Mauris felis odio, sollicitudin sed, volutpat a, ornare ac, erat. Morbi quis dolor. Donec pellentesque, erat ac sagittis semper, nunc dui lobortis purus, quis congue purus metus ultricies tellus. Proin et quam. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos hymenaeos. Praesent sapien turpis, fermentum vel, eleifend faucibus, vehicula eu, lacus.

# 15th November

What is the difference about appearance between tabular and array

 $1\quad 2\quad 3\quad \quad 1\quad \quad 2\quad \quad 3$ 

2 3 4 2 3 4

# Heading on Level 0 (chapter)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### I – Heading on Level 1 (section)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### I. 1 – Heading on Level 2 (subsection)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### I. 1 A – HEADING ON LEVEL 3 (SUBSUBSECTION)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

I. 1 A.1 – HEADING ON LEVEL 4 (PARAGRAPH) Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### II - Lists

#### II. 1 – Example for list (Itemize)

- First item in a list
- Second item in a list
- Third item in a list
- Fourth item in a list
- Fifth item in a list

#### II. 1 A – EXAMPLE FOR LIST (4\*ITEMIZE)

- First item in a list
  - First item in a list
    - \* First item in a list
      - · First item in a list
      - $\cdot$  Second item in a list
    - \* Second item in a list
  - Second item in a list
- Second item in a list

#### II. 2 – Example for list (enumerate)

- 1. First item in a list
- 2. Second item in a list
- 3. Third item in a list
- 4. Fourth item in a list
- 5. Fifth item in a list

#### II. 2 A – Example for list (4\*enumerate)

- 1. First item in a list
  - (a) First item in a list
    - i. First item in a list
      - A. First item in a list
      - B. Second item in a list
    - ii. Second item in a list
  - (b) Second item in a list
- 2. Second item in a list

#### II. 3 – Example for list (description)

First item in a list

Second item in a list

Third item in a list

Fourth item in a list

Fifth item in a list

II. 3 A – EXAMPLE FOR LIST (4\*DESCRIPTION)

First item in a list

Second item in a list

# Heading on Level 0 (chapter)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### I – HEADING ON LEVEL 1 (SECTION)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### I. 1 – Heading on Level 2 (subsection)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### I. 1 A – HEADING ON LEVEL 3 (SUBSUBSECTION)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

I. 1 A.1 – HEADING ON LEVEL 4 (PARAGRAPH) Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

HEADING ON LEVEL 5 (SUBPARAGRAPH) Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### II - Lists

#### II. 1 – Example for list (Itemize)

- First;
- Second;
- Third;
- Fourth.

#### Example for List (4\*itemize)

- First in the first level;
  - First in the second level;
    - \* First in the 3rd Level;
      - · First in the 4th level;
      - · Second in the 4th level;
    - \* Second in the 3rd level:
  - Second in the second level.
- Second in the first level.

#### II. 2 – Example for list (enumerate)

- 1. do I have to generate that many items???
- 2. Two;
- 3. Three in French is "Toi". :)

#### EXAMPLE FOR LIST (4\*ENUMERATE)

## 22ND NOVEMBER

#### I – Labels and Cross-References

In section I, page 17 (22nd November), we are going to learn how to use labels and cross-references.

The name of this section is Labels and cross-references.

A url link to google (https://www.google.com).

A hyperlink to Google.

Alisa [1, page 11] said ....

This is another time of citation to Alisa [1].

This is another time of citation to Alisa [1].

This is another time of citation to Alisa [1].

# Chapter 6 29th November

## Heading on Level 0 (chapter)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### I – HEADING ON LEVEL 1 (SECTION)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### I. 1 – Heading on Level 2 (subsection)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

#### I. 1 A – HEADING ON LEVEL 3 (SUBSUBSECTION)

Hello, here is some text without a meaning. This text should show what a printed text will look like at this place. If you read this text, you will get no information. Really? Is there no information? Is there a difference between this text and some nonsense like "Huardest gefburn"? Kjift – not at all! A blind text like this gives you information about the selected font, how the letters are written and an impression of the look. This text should contain all letters of the alphabet and it should be written in of the original language. There is no need for special content, but the length of words should match the language.

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#### II - Lists

#### II. 1 – Example for list (Itemize)

- First item in a list
- Second item in a list
- Third item in a list
- Fourth item in a list
- Fifth item in a list

#### II. 1 A – EXAMPLE FOR LIST (4\*ITEMIZE)

- First item in a list
  - First item in a list
    - \* First item in a list
      - · First item in a list
      - $\cdot$  Second item in a list
    - \* Second item in a list
  - Second item in a list
- Second item in a list

#### II. 2 – Example for list (enumerate)

- 1. First item in a list
- 2. Second item in a list
- 3. Third item in a list
- 4. Fourth item in a list
- 5. Fifth item in a list

#### II. 2 A – Example for list (4\*enumerate)

- 1. First item in a list
  - (a) First item in a list
    - i. First item in a list
      - A. First item in a list
      - B. Second item in a list
    - ii. Second item in a list
  - (b) Second item in a list
- 2. Second item in a list

#### II. 3 – Example for list (description)

First item in a list

Second item in a list

Third item in a list

Fourth item in a list

Fifth item in a list

II. 3 A – EXAMPLE FOR LIST (4\*DESCRIPTION)

First item in a list

Second item in a list

# Chapter 8 6th December

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- [2] M. Alisa; "Game theory application"; IXE, 9999, p. 123-124 (0000); It is very inconvenient to edit bibitems by myself.
- [3] M. Alisa; "Game theory application"; IXE, 9999, p. 123-124 (0000); It is very inconvenient to edit bibitems by myself.
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# APPENDIX A RANDOM THOUGHTS

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