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# LATEX Tutorial to Myself

#### November 28, 2017

Hi there. This is the .tex file I use to log down what I can do with LATEXso far. This will demonstrate the usage in case I forget the keywords and syntaxes. The following contains

- Page layout(passage structure, font size...)
- Math expressions
- Figure and other materials insertion
- Some tips in detail to avoid errors

# 1 Page Layout

#### 1.1 Overall Font Size

"documentclass" includes default layouts like "article". You can add attributes like [10pt] to customize overall default font size as long as the layout supports that size. The line of code is like this:

```
\documentclass[10pt]{ article}
```

For "article" specification, 10pt(default), 11pt, 12pt are available. In addition, you can install and use package 'extsize' to make font size from 8pt to 20pt adjustable.

# 1.2 Localized font size: large, small

How to make only a section of words larger than other words in the sentence?

Hi there, is this larger than other text? Is this larger? and what about now? If you don't enclose the font size keyword, it will affect all the sentence

and its following sentences.

Even I start a newline, the effect still exists. I currently don't know how to stop this.

- can this item stop the effect?
- it seems can't

so, what will limit the area under control of size keywords. The answer is "curly brackets". Note that the lower half of the bracket should be outside enumerate and itemize sections.

## 1.3 Headings numbering: Use Alphabet to number subsections

Put the following line of code under you document class declaration:  $\label{linear} $$ \operatorname{line} \left( \operatorname{line} \left( \operatorname{line} \right) \right) = \operatorname{line} \left( \operatorname{line} \left( \operatorname{line} \right) \right) . $$$ 

# 2 Math Expressions

This is the part about writing formulas and tweaking format.

## 2.1 Superscript and Subscript

The dollar sign \$ used in pairs represents the content is in the form of mathematical formula. For instance,  $Y(x, z) = x^2 + z^3$ . Double dollar sign pair will be presented slightly different

$$Y(x,z) = x^2 + z^3$$

Double dollar pair will give a complete line for the formula. The superscript(exponential number) is using the conventional representation among programing languages, while subscripts are represented by  $x_1$ , an under dash. When more than one characters are used at a position in the formula (object or the subscriptions or so on), curly brackets are always helpful.  $Hello_{hi} \frac{1}{x} + x^2$ 

# 3 Material Insertion

## 3.1 Insert .jpeg file

# 4 Tips

#### 4.1 Newline after items

There will be automatically triggered newline after "item", so double backslash to create a new line is not required and shouldn't be used after items. For instance:

```
\begin{itemize}
\item Hello There
\\Nice to see you
\end{itemize}
\\Oops
```

There will be an error report at "Oops".

## 4.2 Quotation marks

In LATEX, quotation marks are typed as "this". The mark before quoted words should be the key to the left of number key 1 on a ordinary keyboard area. The backward half quote is as the convention" or ".