# this is a title

pl and 0x00-pl

the date is today

# Contents

# 1 section 0 哈哈 LaTeX

LaTeX

# 2 compile

## 2.1 MakeFile

latex hello-latex.text

dvipdfm hello-latex.dvi

## 2.2 sections

\section
\subsection
\subsubsection
\paragraph
\subparagraph

### 2.2.1 set section counter

\setcounter{section}{3}

# 3 contents 你好 LaTeX

**first contents** 你好 LaTeX
   You can mix latin letters and chinese.

# 4 strings

this is some text of content of "this" subsection.
this is another line of content.

# 5 formulas

$$B^2 = \mathbf{B} \times B$$

$$A[3] \text{ is } A_3$$

# 6 left and right

\raggedright{text on left}

\begin{flushleft}
flushleft
\end{flushleft}

\raggedleft{text on right}

\begin{flushright}
flushright
\end{flushright}

\centering{centering}

\begin{center}
center
\end{center}

# 7 something verbatim

```
some thing verbatim, which without escape \\ /23454234$&%^&^(*^\z@%@#$%
```

# 8 colors



Figure 1: title of image

# 9   images




Figure 2: 2 images

# 10   size and fount

## 10.1   size

tiny

footnotesize

small

normalsize

large

Large

LARGE

huge

## 10.2   fount

testnormal normalfont

`texttt ttfamily`

**textbf bfseries**

*testit itshape*

# 11   lists

- item 1

- item 2

# 12   turn and rotate

see the difference:

prev line

turn  $30$  deg

and rotate 30 deg
nextline

# 13    tables

## 13.1    tabular

this is a tabular:

| 3×3 matrix | | | ex | | |
|---|---|---|---|---|---|
| 11 | 12 | 13 | | | |
| 21 | 22 | 23 | 1111 | 1111 | 1111 |
| 31 | 32 | 33 | 34 | 35 | 36 |

# 14    vector image: gnuplot

## 14.1    set format

set term postscript eps enhanced color font 'Times. 24' set output 'sin.eps'

## 14.2    plot sin

plot sin(x)

## 14.3    save file

set term x11 set output

### 14.3.1    import

use graphicx package and includegraphics command

# 15    notation and referance

## 15.1    structure

```
\lable{marker}  % define marker
...
\ref{marker}  % ref marker
...
\pageref{marker}  % page of marker
```

we can ref the (figure:2img): 9
at page: 5

## 15.2   more on figure

on

`\begin{figure}[!t]`

the [*!t*] notation means force the image shows on the top of the page.
ps:
[*!h*] means put it here.
[*!t*] means put it on top.
[*!b*] means put it on bottom.
[*!p*] means put it into another page.

## 15.3   footnote

this is the footnote [1]

## 15.4   hyper link

use the package 'hyperref'
$\url\{http://the.url.is.here\}$
$\href\{http://there.is.another.url\}$ {the link title or some discription}

# 16   common errors – part 4 of the lecture

## 16.1   errors and warings

{} miss match: Too many }'s
letter wrong like $\dtae\{Mar.2014\}$: Undefined control sequence
not in math mode: Not in Mathematics Mode.
image or box are too large: Bad Boxes!
missing packages: Missing Packages

## 16.2   lengths

normally don't override textlength setting or something like that.

## 16.3   counters

not normally used

## 16.4   boxes

add box on the text or ‚s„omething
use \framebox

---

[1]the footnote text is here

## 16.5 rules and struts

make some area black or something like that
using \rule command

# 17 mathematics and computers – part 5 of the lecture

## 17.1 methmatics packages and useage

\usepackage{amsmath}
\usepackage{amssymb}
\usepackage{amsthm}
inline math:
$a + a$ & $b + b$
multi line:

$$c + c$$

&

$$d + d$$

*Proof.* proof of something.
proof detail. □

## 17.2 computers heigh light

\uspackage{listings}
\uspackage{color}

\definecolor{myred}{rgb}{0.5, 0, 0}
\definecolor{mygreen}{rgb}{0, 0.5, 0}
\definecolor{myblue}{rgb}{0, 0, 0.5}

```
public class Factorial
{
  public static void main(String[] args)
  { ... }
  public static int factorial(int n)
  { ... }
}
```

# 18 chem and language – part 6

## 18.1 chem

\uspackage[version=3]{mhchem}
\uspackage{chemfig}

```
  \chemfig{
    *6(=([:270]-\ce {NO2})-=([:45]-\ce {NO2})-(-)=([:135]-\ce {NO2})-)
  }
```

## 18.2 language

```
      \usepackage{qtree}
      \Tree [.S
        [.NP Kurisu]
        [.VP [.V is]
           [.NP beauty]]
      ]
```

gb4e package for translation.
tipa package for sound notation.

# 19 special pages & documents – part 7

## 19.1 index term and reference

usepackage {makeidx}
example index
use \makeindex before \begin{document}
use \printindex at document end.
reference file use Bib file format.

## 19.2 letter ppt homework and pr

### 19.2.1 letter

change \docmentclass{ ... } to {letter}. and it will give some special command as usable.

### 19.2.2 ppt

use documentclass {beamer} for ppt
\begin{frame} ... \end{frame}
for each page.

### 19.2.3   homework

homework use documentclass {exam} with
\begin{questions}
\question Is this a question.
\begin{solution}
Yes
\end{solution}
\end{questions}