

# Paragraph and Environment

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## Abstract

Paragraph and Environment

## Contents

|          |                              |          |
|----------|------------------------------|----------|
| <b>1</b> | <b>Paragraph</b>             | <b>2</b> |
| 1.1      | Indent . . . . .             | 2        |
| 1.2      | Line Spacing . . . . .       | 2        |
| 1.3      | Alignment . . . . .          | 2        |
| 1.4      | Hyphenation . . . . .        | 2        |
| 1.5      | Paragraph Width . . . . .    | 2        |
| 1.6      | Paragraph Shape . . . . .    | 3        |
| <b>2</b> | <b>Text Environment</b>      | <b>3</b> |
| <b>3</b> | <b>Enumerate Environment</b> | <b>4</b> |
| 3.1      | Introduction . . . . .       | 4        |
| 3.2      | Enumerate . . . . .          | 5        |
| 3.3      | Custom Counter . . . . .     | 5        |
| 3.4      | Itemize . . . . .            | 5        |
| 3.5      | Description . . . . .        | 5        |
| 3.6      | List . . . . .               | 6        |
| <b>4</b> | <b>Theorem Environment</b>   | <b>6</b> |
| <b>5</b> | <b>Verbatim</b>              | <b>6</b> |
| <b>6</b> | <b>Code Environment</b>      | <b>6</b> |
| <b>7</b> | <b>Tabbing Environmrnt</b>   | <b>6</b> |
| <b>8</b> | <b>Box in Vertical</b>       | <b>7</b> |
| <b>9</b> | <b>Page Turning</b>          | <b>7</b> |

|                          |   |
|--------------------------|---|
| 10 Footnote <sup>1</sup> | 8 |
| 11 Margin Paragraph      | 8 |
| 12 Rule Box              | 8 |
| 13 Strut                 | 8 |
| 14 Raise Box             | 8 |

# 1 Paragraph

## 1.1 Indent

The first line.

The second line.

The third line.

The forth line.

The fifth line.

## 1.2 Line Spacing

### 1.3 Alignment

Hello!

I am at the right margin.

I am at the right margin.

Hello!

I am in the center!

Hello!

I am at the right margin.

Hello!

I am in the center.

## 1.4 Hyphenation

The is a very very very very very very very long sentence with a longlong-longlong word.

The is a very very very very very very very long sentence with a long-longlong word.

## 1.5 Paragraph Width

The leftskip is the distance to the left margin, and the rightskip is the distance to the right margin.

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<sup>1</sup>Footnote in the section

## 1.6 Paragraph Shape

Donald Knuth’s TEX, a computerized typesetting system, provides nearly everything needed for high-quality typesetting of mathematical notations as well as of ordinary text. It is particularly notable for its flexibility, its superb hyphenation, and its ability to choose aesthetically satisfying line breaks. Because of its extraordinary capabilities, TEX has become the leading typesetting system for mathematics, science, and engineering and has been adopted as a standard by the American Mathematical Society.

Over this period of one hundred years, the CPC has united and led the people in toppling the “three mountains” of imperialism, feudalism and bureaucrat-capitalism, creating the People’s Republic of China (PRC), and completing the New Democratic Revolution and the Socialist Revolution. The political and institutional foundations were thereby laid down to ensure the rights and freedoms of the people. Through successes and setbacks, China has pioneered reform and opening up, set the goal of socialist modernization, and ushered in a new era of building socialism with Chinese characteristics. The Chinese nation has stood up, become better off, and grown in strength. Now, it is embarking on a new journey to build a modern socialist country in all respects.

Green, green the  
reed, Dew and frost gleam.  
Where’s she I need? Beyond the stream.  
Upstream I go, The way is long. Downstream  
I go, She’s thereamong. White, white the  
reed, Dew not yet dried. Where’s she I need?  
On the other side. Upstream I go, Hard  
is the way. Downstream I go, She’s far  
away. Bright, bright the reed, Dew and  
frost blend. Where’s she I need? At  
river’s end. Upstream I go, The  
way does wind. Down-  
stream I go, She’s  
far behind.



## 2 Text Environment

In the film *The Shawshank Redemption*, Reid said,

Some birds are not meant to be caged; their feathers are just too bright.

There are such paragraphs in *The Communist Party of China and Human Rights Protection – A 100-Year Quest*

The year 2021 marks the centenary of the Communist Party of China (CPC). Over the past century, the CPC has invested a huge

effort in human rights protection, adding significantly to global human rights progress.

A hundred years ago, the CPC came into being – its mission to salvage the country and save the Chinese people at a perilous time of domestic upheaval and foreign aggression. This was an epoch-changing moment. Under the leadership of the CPC, the Chinese people embarked on a new journey towards prosperity, national rejuvenation, and wellbeing.

The *Where is She?* is a Chinese classical poetry in *the Book of Songs*

Green, green the reed, Dew and frost gleam. Where's she I need?  
Beyond the stream. Upstream I go, The way is long. Downstream I go, She's thereamong.

White, white the reed, Dew not yet dried. Where's she I need? On the other side. Upstream I go, Hard is the way. Downstream I go, She's far away.

Bright, bright the reed, Dew and frost blend. Where's she I need? At river's end. Upstream I go, The way does wind. Downstream I go, She's far behind.

### 3 Enumerate Environment

#### 3.1 Introduction

The first situation is:

1. The first
2. The second
  - The first
  - The second
  - 1st** One
  - 2nd** two
  - 3rd** Three
  - The third
3. The third
- 3a The A part of the third
  - † The most important part of the third

### 3.2 Enumerate

The first situation is:

1. Number 1, 1.
2. Number 2, 2.
3. Number 3, 3.

The second situation is:

1. Number 1, i, I, a, A, \*
2. Number 2, ii, II, b, B, †
3. Number 3, iii, III, c, C, ‡

The third situation is:

- i. The first
- ii. The second

This sentence is in Page 5.

### 3.3 Custom Counter

The counter's value is 1.

The counter's value is 2.

The counter's value is 4.

The counter's value is 1.

### 3.4 Itemize

- One •
- Two •
  - One –
  - Two –
    - \* One \*
    - \* Two \*
    - One ·
    - Two ·

### 3.5 Description

•*1st* One

•*2nd* Two

### 3.6 List

- One
- Two

One  
Two

## 4 Theorem Environment

**Theorem 4.1 (the Pythagorean theorem)** *The square of the hypotenuse of a right triangle is equal to the sum of the squares of the two sides.*

**Theorem 4.2** *The two sides of a triangle add up to more than the third.*

## 5 Verbatim

```
\/{ }# $ % & ~ !  
  \LaTeX \& \TeX 1_2\_\_\_3\_\_\_\_4  
  
      #!usr/bin/env perl  
      $name = "guy";  
      print "Hello, $name!\n";
```

```
# $ % ^ & * ( ) # $ % ^ & * ( )  
# $ @ $ % ^ &  
# $ @ $ \% ^ &  
verbatim \LaTeX
```

## 6 Code Environment

```
1          /* hello.c */  
2          # include <stdio.h>  
3          void main(){  
4              printf("Hello.\n");  
5          }
```

## 7 Tabbing Environmrnt

|                        |                |
|------------------------|----------------|
| Style                  | Author         |
| Plain T <sub>E</sub> X | Donald         |
| LaTeX                  | Leslie Lamport |

\*
\*
\*

Plain  $\text{\TeX}$    Donald  
 LaTeX   Leslie Lamport

Algorithm: Do a binary search for  $x$  in list[L, H].

```

integer  $L, H, M, J$ 
while  $L \leq H$  do                                 $L$  and  $H$  are left and right margins.
     $M \leftarrow \lfloor (L + H)/2 \rfloor$                      $M$  is the center dot.
    case
       $x > A[M]$ :  $H \leftarrow M - 1$ 
       $x < A[M]$ :  $H \leftarrow M + 1$ 
      else:  $j \leftarrow M$                             Find  $x$  and return its place.
    return( $j$ )
  endcase
   $j \leftarrow 0$ 
return( $j$ )

```

Example:  
 $A = \{2, 3, 5, 7, 11\}, x = 3$

| $M$  | $L$  | $H$  |                               |
|------|------|------|-------------------------------|
| None | 1    | 5    | initial value, enter the loop |
| 3    | 1    | 2    | $H$ changes                   |
| 2    | None | None | find $x$ , output place 2.    |

## 8 Box in Vertical

There is a paragraph  
                   box

There is another paragraph  
                           box

The grass  
 grows

on the edge of a  
 lonely stream,

and there is a spring tide with the A lonely boat athwart the ferry  
 sound of deep trees.

```
#!/bin/sh
cat ~/${file}$
```

When showers fall at dusk, the  
 river overflows;

floats at ease.

```
#!/bin/sh
cat ~/${file}$
```

Natural width

## 9 Page Turning

10 Footnote<sup>2</sup>

This is a footnote<sup>3</sup>.  
This is another foodnote<sup>1</sup>.  
A symbol number footnote<sup>§</sup>.  
A circled number footnote<sup>⑤</sup>.  
A more beautiful circled number footootnote<sup>⑥</sup>.  

|                      |                                 |
|----------------------|---------------------------------|
| Independent variable | Dependent variable <sup>⑦</sup> |
| $x$                  | $y$                             |

11 Margin Paragraph

The marginpar will display in the margins.  
Configure the marginpar The marginpar will display in the left side.  
Marginpar  
← Right  
Marginpar

12 Rule Box

lMiddlel  
Left————Right  
■ Prove comlete.

13 Strut



14 Raise Box

T<sub>E</sub>X T<sub>E</sub>X

---

<sup>2</sup>Footnote in the section  
<sup>3</sup>\footnote{text}  
<sup>1</sup>The footnote number is still 1  
<sup>§</sup>  
<sup>⑤</sup>  
<sup>⑥</sup>  
<sup>⑦</sup> $y = x^2$

8