

# My first L<sup>A</sup>T<sub>E</sub>X document

Tomasz Marx

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## 1 Introduction

This is some text! This is new line in my editor.  
You have to make two returns!

## 2 Formatting

This is normal text. **This is bold text.** *This is italic text.* ***This is emphatic.***  
Underlined text.

### 2.1 Subsection

”This is in quotation marks.” “This is in proper quotation marks.” ‘This is in proper quotation marks.’

## 3 Lists

1. Brad
  2. Butter
  3. Water
- Lamp
    - Red Lamp
    - Blue Lamp
  - Bed

## 4 Lorem Ipsum

So, in section 5, I will talk about labels

## 5 Labels

I mentioned bed, which is number 2 on the list.

## 6 Math

$$2x^3$$

$$2x^34$$

$$2x^{34}$$

$$2x^{3x+4}$$

$$\sqrt{x_n}$$

$$x^2+y^2=z^2$$

$$x^n+y^n=z^n$$

Albert Einstein is famous because of discovery of  $E=mv^2$  In natural units ( $c=1$ ), the formula expresses the identity

$$E=mc^2\tag{1}$$

$$\alpha\beta\gamma\Gamma\delta\Delta\epsilon\epsilon\zeta\eta\theta\vartheta\Theta~v\Upsilon\phi\varphi\Phi\chi\psi\Psi\omega\Omega~\iota\kappa\lambda\Lambda\mu\nu\xi\Xi\varnothing\O\pi\P\rho\varrho\sigma\Sigma\tau$$

$$\infty\nabla\emptyset\neg\forall\cdots\sqrt{\Delta}$$

$$\times\div\cap\cup\neq\leq\geq\in\bot\notin\subset\approx\sim\wedge\vee\oplus\otimes\equiv\cong$$

$$\int\limits_0^1 x^2+y^2~dx$$

$$a_1^2+a_2^2=a_3^2$$

$$\sum_{i=1}^\infty \frac{1}{n^s} = \prod_p \frac{1}{1-p^{-s}}$$

$$\left(\begin{array}{c} \left(\begin{array}{c} \left(\begin{array}{c} \left[\begin{array}{c} \end{array}\right] \end{array}\right) \end{array}\right) \end{array}\right)$$

]

[

Testing notation for limits

$$\lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

This operator changes when used alongside text  $\lim_{x \rightarrow h}(x - h)$ .

$$T_B = \left( \frac{1}{T_0} - \frac{R \ln \frac{P}{P_0}}{\Delta H_{vap}} \right)^{-1}$$

This is how you include source code

```
int sum(int a, int b){
    return a+b;
}

int main(){
    const char* msg = "Hello World!";
    printf("%s\n", msg);

    return 0;
}
```