

A Demonstration of L^AT_EX Capabilities

Your Name

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Contents

1 Introduction

L^AT_EX is not just about math. It's about beautiful documents. Let's tour the features.

2 Mathematics

An inline equation: $E = mc^2$, and a displayed one:

$$\int_{-\infty}^{\infty} e^{-x^2} dx = \sqrt{\pi}$$

Numbered equations with labels:

$$a^n + b^n \neq c^n \quad \text{for } n > 2 \tag{1}$$

We refer to Equation ?? later.

3 Theorems and Proofs

Theorem 3.1 (Pythagoras). *In a right-angled triangle:*

$$a^2 + b^2 = c^2$$

Proof. Apply Euclidean geometry. □

4 Tables

Table 1: An Example Table

Left	Center	Right
1	2	3
4	5	6

5 Figures

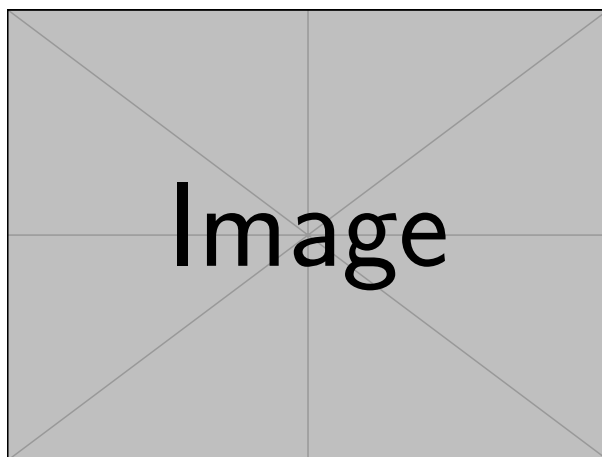


Figure 1: A sample image (placeholder)

6 Code Listings

Listing 1: Hello World in C

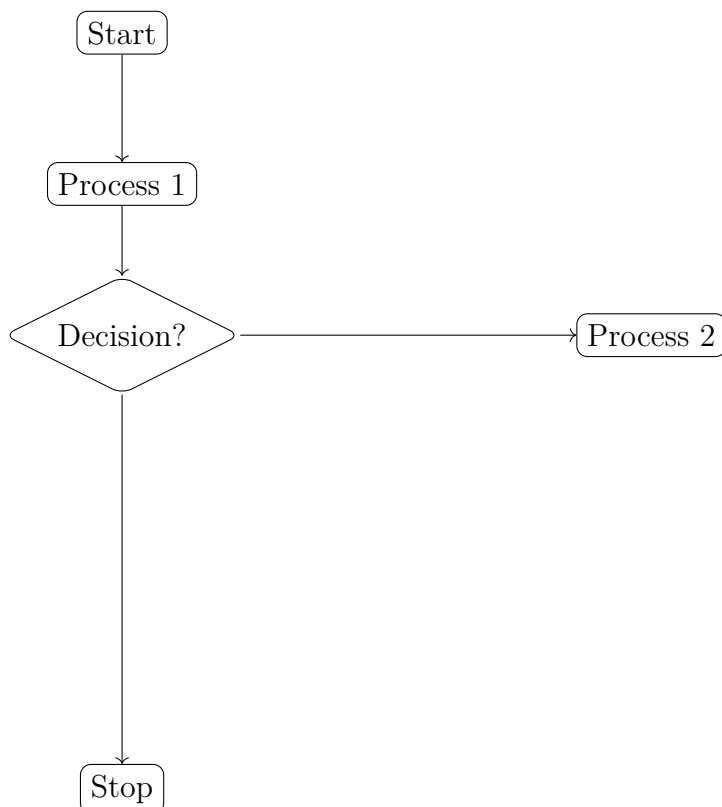
```
1 #include <stdio.h>
2 int main(void) {
3     printf("Hello, \uworld!\n");
4     return 0;
5 }
```

7 Algorithms

Algorithm 1 Euclidean GCD Algorithm

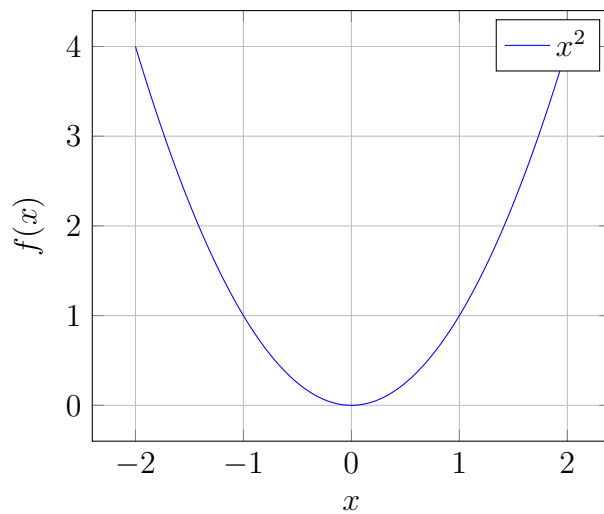
```
1: function GCD(a,b)
2:   while  $b \neq 0$  do
3:     temp  $\leftarrow$  b
4:     b  $\leftarrow$  a % b
5:     a  $\leftarrow$  temp
6:   end while
7:   return a
8: end function
```

8 TikZ Diagram



9 PGFPlots Example

A Sample Plot



10 Citations

Referencing \LaTeX [?].

11 Conclusion

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References

- [1] Leslie Lamport. *\LaTeX : A Document Preparation System*. Addison-Wesley, 2nd edition, 1994.