

# A LaTeXML Demo

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July 16, 2022

## Abstract

This document is a test to see how things look like when combining HTML files generated with LaTeXML and Jekyll posts. This page contains a nice overview on how to use LaTeXML. Other versions of this document are available:

- HTML.
- TeX source.

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## 1 Math formulas

Unordered list

- Inline formula:  $E = mc^2$ .
- Another formula: The equation  $ax^2 + bx + c = 0$  has at most two roots.

Ordered list

1. Element 1

2. Element 2

3. Element 3

Equation

$$E = mc^2 \tag{1.1}$$

$$\sqrt[3]{x^2 + 4x + 4} = ?$$

## 2 Theorems, Lemmas, etc

**Theorem 2.1** (Basic Theorem). *We always have  $\mathcal{A} = \dots$  and  $\mathbb{N} \subseteq \mathbb{Z}$*

*Proof.* It is well-known that ...

□

**Exercise 2.2.** In this exercise, we apply Theorem 2.1 to ...

## 3 Algorithm

Here is an example of an algorithm.

---

**Algorithm 1** An example algorithm

---

**Input:** The inputs are ...

**Output:** The outputs are ...

- 1: A statement
  - 2: **if** The above statement is true **then**
  - 3:     Do something
  - 4: **else**
  - 5:     Do nothing
  - 6: **end if**
  - 7: **return** something
- 

Algorithm 1 computes ...

## 4 Cross references

As in Algorithm 1, we have ...

### 4.1 Test 1 of subsection

This is an illustration of a subsection. This is an illustration of a subsection.

This is an illustration of a subsection. This is an illustration of a subsection.

This is an illustration of a subsection.

### 4.2 Test 2 of subsection and paragraph

In this section, we will ... This is an illustration of a subsection. This is an

illustration of a subsection. This is an illustration of a subsection.

**Test paragraph** This is an illustration of a paragraph. This is an illustration of a paragraph. This is an illustration of a paragraph.

## 5 Figure

A figure

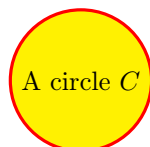


Figure 1: A figure

Another figure taken from the sample `llncs` class.

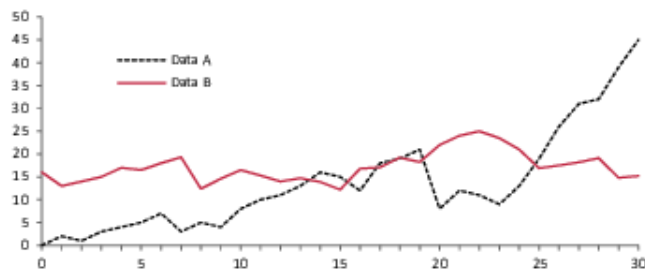


Figure 2: A figure from `llncs` included with `\includegraphics`.

## 6 Tables

Number	Description
1	One
2	Two
3	Three

Table 1: A table.

multi-row	1	2	3
	4	5	6
multi-column			7

Table 2: A table with multi-row and multi-column.

GG&A Hoofed Stock			
Year	Price		Comments
	low	high	
1971	97-245		Bad year.
72	245-245		Light trading due to a heavy winter.
73	245-2001		No gnus was very good gnus this year.

Table 3: An example from LaTeXML Examples Page.

## 7 Source Code

Using `verbatim` environment.

```
\begin{table}[!ht]
\begin{tabularx}{\textwidth}{|X|X|}
\hline
Number & Description\\
\hline
1 & One \\
2 & Two \\
3 & Three \\
\hline
\end{tabularx}
\caption{A table.}
\end{table}
```

Using `listing` package.

```
1 import numpy as np
2
3 def incmatrix(genl1, genl2):
4     m = len(genl1)
5     n = len(genl2)
6     M = None #to become the incidence matrix
7     VT = np.zeros((n*m,1), int) #dummy variable
8
9     #compute the bitwise xor matrix
10    M1 = bitxormatrix(genl1)
11    M2 = np.triu(bitxormatrix(genl2),1)
12
13    for i in range(m-1):
14        for j in range(i+1, m):
15            [r,c] = np.where(M2 == M1[i,j])
16            for k in range(len(r)):
17                VT[(i)*n + r[k]] = 1;
18                VT[(i)*n + c[k]] = 1;
19                VT[(j)*n + r[k]] = 1;
20                VT[(j)*n + c[k]] = 1;
21
22            if M is None:
23                M = np.copy(VT)
24            else:
```

```
25         M = np.concatenate((M, VT), 1)
26
27         VT = np.zeros((n*m,1), int)
28
29     return M
```

Listing 1: Python example

## 8 References and Citation

See [2], or [3], or [1].

### References

- [1] Jane Doe. Another paper. In *Proceedings of some great conferences*. Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 2018.
- [2] John Doe. An interesting article. *Journal of nice papers*, 10(1):1–20, 2018. doi: 10.1007/xxxxxxx.
- [3] John Smith and Jane Doe. A nice preprint. *arXiv preprint*, 2018.