

LyX: The WYSIWYM Document Processor

Robert Thetford, Jr.

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- 1 What is LyX?
- 2 Article
 - Sections, Titles, and Lists
 - Tables
 - Figures
 - Math
- 3 Letter
 - Template
- 4 Beamer
 - Example
- 5 Conclusion

1 What is LyX?

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What Is L_YX?

L_YX is document processor that works as a front end to L^AT_EX. It allows for instant previewing of the document from the input side of the process, creating a near WYSIWYG version of L^AT_EX, coined by L_YX users as WYSIWYM.

We'll overview three of the common document classes:

- 1 Article
- 2 Letter
- 3 Beamer

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We'll overview three of the common document classes:

- 1 Article
- 2 Letter
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1 What is LyX?

2 Article

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`Article` is the default document class when `LATEX` is first opened. The structure of sections, titles, and lists within the document works the same as in `LATEX`, but are entered differently. This will be explained in the next slide. These “paragraph styles” are referred to, in `LATEX`, as environments. `Article` allows for other typical scientific document environments such as tables, figures, math expressions, etc.

Article

Sections, Titles, and Lists

Sections are very straightforward.

- Click the cursor to the desired line in the document
- Click the Environment dropbox (the leftmost element on the buttonbar)
- Select Section, Subsection, Subsubsection, Paragraph, or Subparagraph

This automatically makes the selected line into the desired environment. Using this same method, a selected line can be made into an unnumbered section (Section*), Title, Author, Enumerate list, Itemize list, etc. All these environments are selectable in the dropbox.

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The screenshot shows the LyX interface with a document titled "Using LyX for the First Time". The document content is as follows:

Using LyX for the First Time

Robert Thetford, Jr.

8 July 2010

Abstract

This is my first LyX document and I am using it to demonstrate how to perform simple LaTeX typesetting tasks with the LyX interface.

1 Introduction

This is an introduction to my first LyX document.

2 Math

How to show arithmetic and equations, or "math formulae"

Font: Default

Tables are very straightforward.

- Click the cursor to the desired line in the document
- Create a new table with Insert▷Table
- Specify how many columns and rows
- Click each and edit each individual cell
- Use the Table Toolbar (shows at bottom of screen when inserted table is left-clicked) to toggle borderlines and designate multicolumns (multirows not supported by L^AT_EX)

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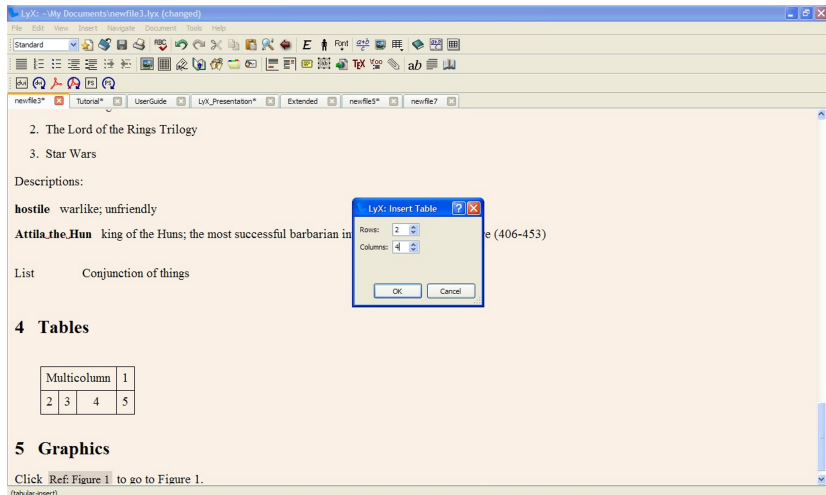
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The screenshot shows the LyX application window titled "LyX: --My Documents/newfile3.lyx (changed)". The interface includes a menu bar (File, Edit, View, Insert, Navigate, Document, Tools, Help), a toolbar with various icons, and a document window with several tabs. The document content includes:

- 2. The Lord of the Rings Trilogy
- 3. Star Wars
- Descriptions:
- hostile** warlike; unfriendly
- Attila_the_Hun** king of the Huns; the most successful barbarian in Europe (406-453)
- List Conjunction of things

A dialog box titled "LyX: Insert Table" is open, showing "Rows: 2" and "Columns: 4". Below the dialog box, there is a table:

Multicolumn	1		
2	3	4	5

Below the table, there is a section header "4 Tables" and a section header "5 Graphics". At the bottom of the document window, there is a text element: "Click [Ref: Figure 1](#) to go to Figure 1." and a small text "(tabular-insert)" below it.

Figures are very straightforward. In L^AT_EX, they are referred to as graphics.

- Click the cursor to the desired line in the document
- Create a new graphic with Insert▷Graphics
- Specify an image to insert (all known image formats will work)
- Optional: Specify a scale percentage, scale by width, or scale by height value

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Article

Figures

LyX: --My Documents\newfile3.lyx (changed)

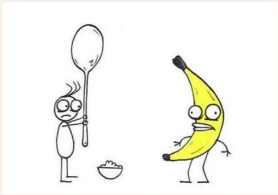
File Edit View Insert Navigate Document Tools Help

Standard

newfile3* Tutorial* UserGuide LyX_Presentation* Extended newfile3* newfile7*

While in the standard text environment, math shows up just like any other text. To enter an inline LaTeX typeset equation

1. Select where in the document you would like the equation
2. Click the Insert Math button
3. Enter LaTeX math commands or LyX shorthand commands
4. Hit Esc to end the equation



float: Figure Figure 1

Font: Default

LyX: Graphics

Graphics Clipping LaTeX and LyX options

File: [myspoonisbig.png] Browse...

Output Size

Scale Graphics (%): 100

Set width: [6] cm

Set height: [auto] cm

Maintain aspect ratio

Rotate Graphics

Angle (Degrees): [0] Origin: [Default]

Rotate after scaling

Restore OK Apply Cancel

Math is very straightforward.

1 Inline Equations

- Click the cursor to the desired line in the document
- Create a new math formula with Insert ▸ Math ▸ Inline Formula
- Enter \LaTeX math commands or LyX shorthand commands
- Hit Esc to end the equation

Displayed Equations are quite similar:

2 Displayed Equations

- Create a new math formula with Insert ▸ Math ▸ Display Formula
- Give the equation a number label with Edit ▸ Math ▸ Number Whole Formula (for a single line equation)

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① Inline Equations

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Displayed Equations are quite similar:

② Displayed Equations

- Create a new math formula with **Insert** ▸ **Math** ▸ **Display Formula**
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LyX: --My Documents\newfile3.lyx (changed)

File Edit View Insert Navigate Document Tools Help

List

newfile3* Tutorial* UserGuide* LyX_Presentation* Extended* newfile5* newfile7*

Example: $E=mc^2$ becomes $E = mc^2$
 $\|y - Ax\|^2 + \alpha \|Lx\|^2$ becomes $\|y - Ax\|^2 + \alpha \|Lx\|^2$

To enter a displayed LaTeX typeset equation

1. Select location in document with cursor
2. Click Insert Math button
3. Click Display button in the Math Toolbar
4. Enter LaTeX math commands or LyX shorthand commands
5. Hit Esc to end the equation

- Note: To number a displayed equation, select equation and click Toggle Numbering of Line under the Math menu. Similarly, to label the equation, select it, and click Label under the Insert menu.

$$1 + 1 = 2 \quad (\#)$$

2.2 Subsection description

Type: simple

- 1 What is LyX?
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L^AT_EX allows for a simple but professional looking Letter document. Letter can be written from scratch just like Article, except that there are different environments available. However, an advantage to using L^AT_EX is that there are some templates available to make creating documents even easier. One template included with L^AT_EX is a Letter template.

Letter Template

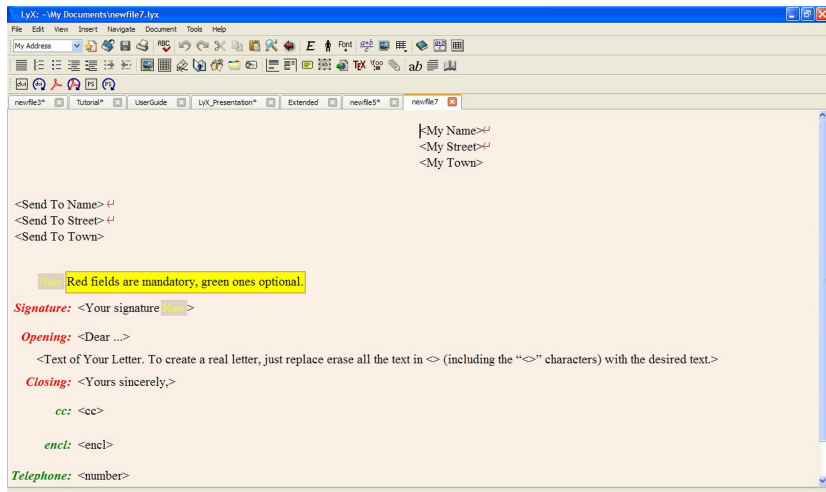


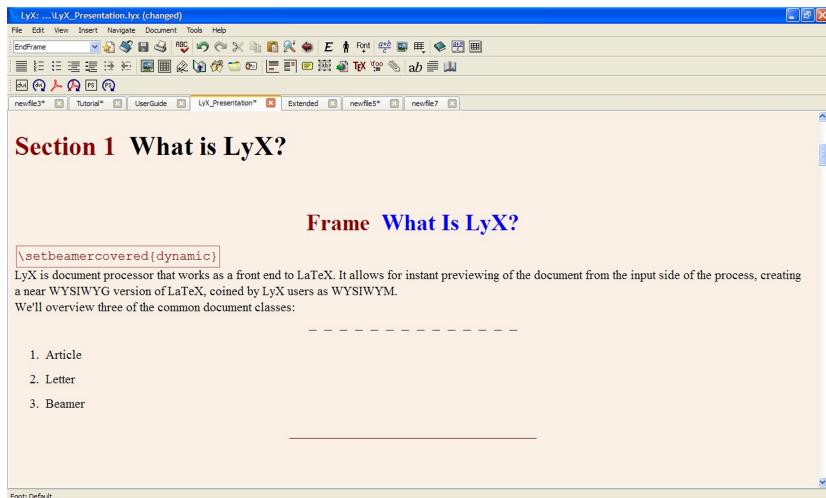
Figure: Letter Template

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Beamer is the slide presentation document class. From a \LaTeX user standpoint, the input process in \LyX for a Beamer document is a little odd at first, but simple after repeated use. Like **Article** and **Letter**, all the document class specific environments can be found in the **Environment** dropdown. The following screenshot is for the second frame of this presentation.

Beamer

Example



The screenshot shows the LyX application window titled "LyX: ...LyX_Presentation.lyx (changed)". The interface includes a menu bar (File, Edit, View, Insert, Navigate, Document, Tools, Help), a toolbar with various icons, and a tabbed workspace. The active tab is "LyX_Presentation*", which displays a Beamer presentation slide. The slide content is as follows:

Section 1 What is LyX?

Frame What Is LyX?

```
\setbeamercovered{dynamic}
```

LyX is document processor that works as a front end to LaTeX. It allows for instant previewing of the document from the input side of the process, creating a near WYSIWYG version of LaTeX, coined by LyX users as WYSIWYM.

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In conclusion, LyX is simple and hard?

- Creating documents that work within the default parameters is *very* simple.
- Creating documents that require much fine tuning or more complex elements is difficult.

Questions?