Quick Tips for **LyX** 2.0.x from Wat
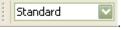
The following are some useful tips in using LyX (version 2.0 or above).

(Remark: It would be beneficial to you if you open LyX to view this lyx file in addition to the pdf file.)

1. To compile the file, press [Ctrl + R] or click ◯◯ to view the pdf file, and then "Save As...".
   If you don't want to save the file additionally, click [File] → Export → PDF (pdflatex).

2. If you like to obtain the tex file (but not necessary if you use LyX), click [File] → Export →
   LaTeX (plain).

3. Some easy setting you might wish to know is: [Document] → Settings → (or press [Alt + D S])

   (a) Document Class → article, presentation (beamer), etc.

   (b) Page Layout → Paper Format and Headings

   (c) Page Margins

   (d) LaTeX Preamble → (use LaTeX codes to include other packages or some customized settings,
   e.g., theme and style for beamer)

4. Some well-prepared templates can be found from [File] → New from Template (e.g., beamer-
   conference-ornate-20min.lyx, elsarticle.lyx).

5. For a detailed manual, refer to [Help] → Tutorial or User's Guide.

6. Make good use of the pull-down box on the top left, i.e. `Standard ▼` .

   (a) In article class, there are Section, Subsection, etc.

   (b) In beamer class, there are also Beginframe, Block, etc.

7. Convenient enviroments such as numbered list `1≡2≡`, itemized list `●≡●≡` can be set by clicking the
   buttons.

   (a) Press [Tab] to indent the enviroment.

   (b) Press [Shift + Tab] to outdent the enviroment.

   (c) Press `≡` or [Alt + P S] to get back to the default environment.

8. To start a new page, click [Insert] → Formatting → New Page, or press [Alt + I O N]

9. If you wish to type LaTeX codes directly in some cases, press [Ctrl + L] or click TeX .

   - If you are a LaTeX user, to view the full LaTeX source codes, click [View] → View Source, or press [Ctrl + V S].

10. To change Text style ![ab] [Alt + E S C] and Paragraph settings ![¶] [Alt + E P], click the corresponding buttons.

11. Some other fine details:

    (a) Typing math symbols and Greek letters
        - Greek alphabet [Alt+M G (character)]
            – For example, pressing [Alt+M G A] can type the Greek letter alpha (α)
            – Or inside any math mode, type the code directly, e.g., \alpha
            – α (type with the help of [Tab] while the computer gives suggestions)
        - Subscript: _ (e.g., `x_5` becomes x_5)
        - Superscript: ^ (e.g., `y^6` becomes y^6)
        - Common symbols
            – `\sum_a ^b` becomes $\sum_a^b$ (compare: `\sum_a^b` becomes $\sum_{a^b}$)
            – `\prod_1 ^2` becomes $\prod_1^2$ (compare: `\prod_1^2` becomes $\prod_{1^2}$)
            – `\cdot` becomes $\cdot$
            – `\cdots` becomes $\cdots$
            – others dots like $\ldots$ (`\ldots`), $\vdots$ (`\vdots`), $\ddots$ (`\ddots`)
            – `\rightarrow` or `\to` becomes $\rightarrow$
            – `\longrightarrow` becomes $\longrightarrow$
            – `\Longrightarrow` becomes $\Longrightarrow$
            – `\frac` becomes   [Alt + M F] (Remark: See the effect in the lyx file.)
        - Parenthesis
            – Pair-up [Alt + M (or [or {] (e.g., $\left(\frac{f}{\ell}\right), \left[\frac{f}{\ell}\right], \left\{\frac{f}{\ell}\right\}$ vs $(\frac{f}{\ell}), [\frac{f}{\ell}], \{\frac{f}{\ell}\}$)
            – Different (e.g., $\left\{\frac{f}{\ell}\right]$)
                * Application: $f(x) = \begin{cases} x+1, & \text{if } x < 1; \\ x, & \text{if } 1 \le x < 4; \\ 1-x, & \text{if } x \ge 4. \end{cases}$ (but this should be typed with the \case environment in math mode)
        - Text in math mode
            i. Press [Ctrl + M] inside math mode to create mbox (but Wat tells you that this is NOT a good method.)
            ii. Type \text inside math mode
            – abc is the product of a, b and c
            – $abc\,is\,the\,product\,of\,a, b\,and\,c$
        - Different fonts in math
            – \mathbb $\mathbb{R}$
            – \mathbf $\mathbf{R}$ [Ctrl + B]
            – \mathcal $\mathcal{R}$

- Matrix and vector
  - $\mathbf{a} = \begin{pmatrix} a_1 \\ a_2 \\ a_3 \end{pmatrix}$
  - $\boldsymbol{\Sigma} = \begin{pmatrix} \sigma_1^2 & \sigma_{12} & \sigma_{13} \\ \sigma_{21} & \sigma_2^2 & \sigma_{23} \\ \sigma_{31} & \sigma_{32} & \sigma_3^2 \end{pmatrix}$
  - $\begin{pmatrix} aaaaa & bbbbb & ccccc \\ aaa & bbb & ccc \\ a & b & c \end{pmatrix}$ different alignments within a matrix

(b) Math modes

  i. Inline Math Mode [Ctrl + M] (or click Σ)
     $\alpha + \beta = \gamma$
     $\sum_{i=3}^{n} \frac{a_i}{b} = c$
  ii. Display Math Mode [Alt + M D] or [Ctrl + Shift + M]

  $$\sum_{i=3}^{n} \frac{a_i}{b} = c$$

  iii. Equation Array (in any math mode, press [Ctrl + Enter])

  $$\begin{aligned} x & = 2 + 4 \\ & = 6 \end{aligned} \tag{1}$$

(c) Environment
  i. Part, Section [Alt + P 2], Subsection [Alt + P 3], Subsubsection [Alt + P 4]

  ii. Enumerated environment [Alt + P E] (or click ▦)

  iii. List environment [Alt + P B] (or click ▦)

  iv. Standard [Alt + P S] (or click ▦)
  v. Use of [Tab] and [Shift + Tab]

  vi. LaTeX code [Ctrl + L] (or click TeX)
     - α
     - α

  (Remark: See the difference in the lyx file.)
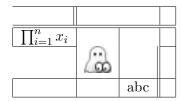
(d) Graphics (click ▦)

(e) Formatting (click and)

- Font can be Large or Small.
- Text can be **boldface** or *Italic* or *slant* or *emphasized* or <u>underlined</u>.
- Alignments in the default environments can be set by pressing [Alt + A L or C or R] for left, centre and right.

<div align="right">Alignments can be made like this. [Alt + A R]</div>

(f) Tables (click)

<div align="center">A table is aligned centred below:</div>

$\prod_{i=1}^{n} x_i$			
		abc	

- You can show/hide the border lines.
- You can place text, equations, graphics inside any cell.
- You can paste the copied cells from Microsoft Excel to LyX table matching cells, click [Edit] → Paste Special → Plain Text, or press [Ctrl + Shift + V].
  - This technique is also useful when copying codes including the end-of-line characters.

12. Some other features (may be less-frequently used)

    (a) Boxes

One Example

Another Example

The Other Example

    (b) Hyperlinks

    (c) Cross-Reference

    (d) Captions

    (e) Footnote[1]

    (f) LyX Notes [Alt + I N N]

    (g) Click [Tools] → Spellchecker, or press [F7] for Spellchecker.

    (h) Click [Tools] → Statistics, or press [Alt + T A] for word counts.

Hope you enjoy typesetting with LyX!

You are welcome to let me know your problems in using LyX.

Let us share what we have found.

<div align="right">Wat</div>

<div align="right">23/6/2013</div>

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[1]This is an example of footnote.