

Installing \LaTeX on Windows using MiKTeX, TeXnicCenter Adobe, Sumatra Readers

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- ▶ This spoken tutorial explains how to install L^AT_EX on the Microsoft Windows operating system
- ▶ L^AT_EX can be used to produce outstanding documents
- ▶ If you are going to create many documents in the rest of your life, it is time you started using L^AT_EX
- ▶ If you are going to include a lot of mathematics, there is no substitute for L^AT_EX at all
- ▶ L^AT_EX documents created in one operating system, say Windows, can be reused, without ANY changes, in other systems, such as Linux and Mac - and conversely
- ▶ L^AT_EX is free and open source
- ▶ Above all, it has excellent user communities to help you with doubts - for example, visit <http://tug.org/mailman/listinfo/tugindia>



- ▶ The following spoken tutorials on L^AT_EX are available at <http://moudgalya.org>:
 - ▶ What is compilation?
 - ▶ Letter writing
 - ▶ Report writing
 - ▶ Mathematical typesetting
 - ▶ Equations
 - ▶ Tables and figures
 - ▶ How to create bibliography?
 - ▶ Inside story of bibliography
- ▶ Please go through the first on the above list, namely, **What is compilation?** before continuing with the current tutorial
- ▶ Finally, web search could be the **best** source of information!



- ▶ Expect future support for \LaTeX from <http://fossee.in> - note two s's and two e's
- ▶ FOSSEE stands for free and open source software in science and engineering education



- ▶ I will now explain how to use L^AT_EX in the windows operating system
- ▶ I will begin with the installation of MiKTeX, a free distribution of L^AT_EX
- ▶ Then TeXnicCenter, a free front end to MiKTeX
- ▶ I will show how to compile using TeXnicCenter and view through Adobe Reader
- ▶ I will conclude with an optional pdf reader, called Sumatra



Introducing MiKTeX for Windows

- ▶ MiKTeX is a popular installation of \LaTeX for windows
- ▶ Locate version 2.7 in <http://miktex.org>
- ▶ Scroll down, locate the download button of the **basic** version
- ▶ Save it, as you may want to use it a few times, if you are a beginner
- ▶ The name of this file is `basic-miktex-2.7.3248.exe`
- ▶ It is a large file, about 83MB
- ▶ Complete version of MiKTeX is larger - of the order of 900MB - so do not recommend it
- ▶ If you do not have good connectivity, use a CD - to be available from <http://fossee.in> in the future



Installing MiKTeX in Windows

- ▶ I have saved this installation file in my downloads directory
- ▶ Begin installation by double clicking the icon
- ▶ Give all default answers - takes about 20 minutes
- ▶ In my system, it is installed in
`C:\Program Files\MiKTeX 2.7\`



Installing Adobe Reader

- ▶ **Adobe reader is a free reader that can be used to display pdf files**
- ▶ **Your system may already have this**
- ▶ **If so, you may skip the rest of this slide**
- ▶ **If you do not have it, go to <http://adobe.com>**
- ▶ **Download the free Adobe Reader**
- ▶ **I have it downloaded in my Downloads directory**
- ▶ **Double click it and install it - default answers are acceptable**



Installing TeXnicCenter in Windows

- ▶ Go to <http://texniccenter.org>, notice two c's in texniccenter
- ▶ Click the Download button
- ▶ It will take you to the list of downloads
- ▶ You need the **TeXnicCenter Installer**, which is first on this list
- ▶ Click this, you may need to choose a mirror for download
- ▶ Download, save for future use, as you may want to install it a few times
- ▶ I have it in my Downloads folder
- ▶ Let us NOW install it by double clicking and giving default answers
- ▶ TeXnicCenter gets installed, with a shortcut on the Desktop



Configuring TeXnicCenter

- ▶ Double click the TeXnicCenter icon from the Desktop and launch it
- ▶ It will give a tip - close it
- ▶ It will open a configuration menu and ask you to install a \LaTeX distribution and will also recommend MiKTeX
- ▶ As we have already installed MiKTeX, we can move on, by clicking the Next button
- ▶ You will be asked to provide the folder address where the binary files of MiKTeX are stored
- ▶ You can browse and locate it - in my PC, it is at `C:\Program Files\MiKTeX 2.7\miktex\bin`
- ▶ No need to enter anything in the next page
- ▶ For the PDF reader, enter Adobe Reader's path; you can browse and locate it, if necessary; on my system, it is at `C:\Program Files\Adobe\Reader 9.0\Reader\AcroRd32.exe`



- ▶ We are now ready to use the TeXnicCenter
- ▶ Please go through **What is compilation?**, a spoken tutorial available at <http://moudgalya.org>, in case you have not done so already
- ▶ Let us click the File menu in TeXnicCenter
- ▶ If you want to **CREATE** a file, click New, type and save
- ▶ I already have the file `hello.tex`, load it



- ▶ The best help for TeXnicCenter comes WITH it
- ▶ Another excellent source is <http://texniccenter.org>
- ▶ For now, go to Help - click Contents - can get help on TeXnicCenter and LaTeX
- ▶ Help on TeXnicCenter
 - ▶ Gives help on font, look and feel OF TeXnicCenter
 - ▶ Helps you how to configure TeXnicCenter
 - ▶ Some times, there could be discrepancies between the manual and actual implementation - if so, do a web search and find answers
 - ▶ This is the standard approach in most open source software systems
- ▶ LaTeX related help
 - ▶ How to structure your report?
 - ▶ How to include mathematics?
 - ▶ How to include list environment? and so on
 - ▶ Of course, a web search is an excellent option too



Let us Compile and View the Output

- ▶ Let me first make the font of the text slightly larger
- ▶ Click Tools - Options - Text Format - Choose font - 12 point
- ▶ You may include line numbers in the editor, if you like
- ▶ Let us now proceed to compile our document
- ▶ Choose the option of LaTeX => PDF
- ▶ Enter Ctrl, Shift and F5 keys simultaneously
- ▶ It will compile and the resulting pdf file is displayed
- ▶ This pdf file has only one line, as expected
- ▶ You may modify this file, compile and see the results
- ▶ Let me now close `hello.tex` and also `hello.pdf`



Pointing out a Difficulty with Adobe Reader

- ▶ We will now explain a shortcoming that the Adobe Reader has
- ▶ To explain this, let us load the file `report.tex`, used to create the spoken tutorial **Report Writing**, available at <http://moudgalya.org>
- ▶ Let us first check that this compiles in windows by pressing **Ctrl, Shift and F5** keys simultaneously
- ▶ Let us change the class of this document to `report`
- ▶ On compilation, it goes to two pages
- ▶ Let us view the second page
- ▶ If we once again press **Ctrl+Shift+F5**, the pdf file opens again, but in the first page
- ▶ We were viewing the second page; on compilation, it goes to the first page
- ▶ A problem: does not remember the page being viewed
- ▶ This could be a bigger problem for large documents



Installing a New PDF Reader: Sumatra

- ▶ If you use Adobe reader, after every compilation, the file always opens in the first page
- ▶ This is a problem with large documents
- ▶ The pdf reader Sumatra solves this problem
- ▶ Sumatra automatically REFRESHES the pdf file
- ▶ In addition, it REMEMBERS the page that was viewed last
- ▶ Sumatra is free and open source
- ▶ A search for this reader takes you to this page
- ▶ The installer is less than 1.5MB - already downloaded
- ▶ Let us NOW double click the icon and install it, by giving default answers
- ▶ In my system, it gets installed at
`C:\Program Files\SumatraPDF\`



Switching the PDF Reader to Sumatra in TeXnicCenter

- ▶ **First you have to tell TeXnicCenter that it should use Sumatra**
- ▶ **Go to Build**
- ▶ **Then to Define Output Profile**
- ▶ **Then to Viewer**
- ▶ **In the Path of the executable, enter**
`C:\Program Files\SumatraPDF\SumatraPDF.exe`
- ▶ **You can also locate this file by browsing**
- ▶ **We are now ready to use Sumatra**



Using Sumatra with TeXnicCenter

- ▶ Let us close the Adobe Reader
- ▶ Let us compile the file `report.tex` by pressing **Ctrl** and **F7** keys simultaneously - do **NOT** press **Ctrl+Shift+F5**, as we did for Adobe Reader
- ▶ Locate the file `report.pdf`
- ▶ Open it using Sumatra
- ▶ Let us go to the second page
- ▶ Let us add a line to the text
- ▶ Re-compile it by pressing **Ctrl+F7**
- ▶ Note that the pdf file changes **AUTOMATICALLY**
- ▶ More importantly, it shows the **SAME PAGE!**
- ▶ Add an appendix; compile it using **Ctrl+F7**; has three pages
- ▶ The page does not change, still at 2; go to page 3
- ▶ If we modify page 3 and compile, can see changes immediately, as page does not change



What next?

- ▶ **As we installed only the basic version of MiKTeX, only a basic version of \LaTeX is available**
- ▶ **Several packages, for example,**
 - ▶ **cclicenses, graphicx and harvard, that we used in other spoken tutorials,****and also other useful packages,**
 - ▶ **such as beamer,****are not available in this basic installation**
- ▶ **The way to include missing packages is explained in the next slide**



How to Install Missing Packages in MiKTeX?

1. **As soon as installing the basic MiKTeX, Update it**
 - ▶ Click the `start` button, at the taskbar, which is at the bottom left hand corner of the windows screen
 - ▶ Click Programs and then MiKTeX 2.7
 - ▶ Click Update, choose mirror, proxy, etc., as required
2. **Then, proceed with the use of TeXnicCenter, as explained in this tutorial**
3. **When a package is missing, Package Installation of MiKTeX will prompt you for installing it**
4. **You can install it from the internet**
5. **Or from a CD based distribution - first copy the ENTIRE content to the hard disk and then install from there**
 - ▶ This calls for hard disk space of about 1GB



- ▶ If you have questions, feel free to contact user communities
- ▶ For example, contact TUG India through <http://tug.org/mailman/listinfo/tugindia>
- ▶ We expect to provide some help also through <http://fossee.in>
- ▶ We also hope to create some more spoken tutorials for \LaTeX in the future



Thank you

- ▶ Please send your feedback at kannan@iitb.ac.in
- ▶ This is Kannan Moudgalya from IIT Bombay signing off
- ▶ Thanks for joining
- ▶ Goodbye

