

QUICK SOFTWARE GUIDE FOR CSC135

What software am I going to need?

We will use two pieces of software that cooperate in order to enable the creation of .TEX (LaTeX files, our source files) and .PDF (portable data format files, our output files).

The first software is the editor; a free software called **TexMaker**.

“TexMaker is a free, modern and cross-platform LaTeX editor for Linux, MacOS and Windows systems that integrates many tools to develop documents with LaTeX, in just one application.”... “TexMaker is easy to use and to configure”. [TexMaker’s website]

The second software is a LaTeX collection of libraries called MiKTeX.

“MiKTeX (pronounced mick-tech) is an up-to-date implementation of TeX/LaTeX and related programs for Windows (all current variants). TeX is a typesetting system written by Donald Ervin Knuth who says that it is *“intended for the creation of beautiful books - and especially for books that contain a lot of mathematics”* ... “Easy to install” ... “Complete” ... “Integrated package management” ... “Open Source” [MiKTeX’s website]

How to obtain the software?

Both pieces of software are free and available to download from the internet.

TexMaker: <http://www.xm1math.net/texmaker/>

MiKTeX: <http://miktex.org>

They are available in both installer and portable versions. As I don’t have admin rights on my machine, I will install and configure portable versions.

How do I install?

As already installed, portable version will be used. Installing portable applications is easy. Simply extract the files in a selected location. Here are the steps I used:

1. Create a folder CSC135 on your C drive
2. Create a new folder inside the CSC135 folder called TexMaker

3. The TexMaker portable file is called **texmakerwin32usb.zip** and is about 50MB. Extract the files from this file in C:\CSC135\TexMaker
4. Create another new folder inside the CSC135 folder called MiKTeX
5. The MiKTeX portable file is called **miktex-portable-2.9.5105.exe** (self-extracting) and is a little over 155MB. Run this self-extracting and direct the extraction to C:\CSC135\MiKTeX

That's it. Now all we have to do is configure TexMaker to use MiKTeX and we are done. I would also recommend that you create a shortcut to c:\CSC135\TexMaker\texmaker.exe on your desktop for easier access.

How to configure?

Start TexMaker and pull down the 'Options' menu. Select 'Configure Texmaker'. The 'Configure Texmaker' dialog should come up. There are two things to do ⁽¹⁾:

1. Let TexMaker know where MiKTeX is: If not already selected, click the 'Commands' icon on the top left hand side of the dialog. The main dialog area switches to a view where all commands are listed and can be configured. In my version (4.0.2) the second item from the top is **PdfLaTeX**. Click the browse button on the far right. In the "Browse Program" dialog that comes up navigate to the **C:\CSC135\MiKTeX\miktex\bin** folder (notice there is a \miktex\bin at the end). In that folder locate a file called **pdflatex.exe**. Click 'Open'; the field updates. This step is finished.
2. Let TexMaker know how you want 'Quick Build' to operate: If not already selected, click the 'Quick Build' icon on the left hand side of the configuration dialog (underneath the 'commands'). The main dialog area switches to a view where you can select what the 'Quick Build' command does. Select the radio button: **PdfLaTeX + View PDF**. Click the OK button to apply the change.

The configuration is complete. You should now be able to create basic TeX documents and generate the respective PDF file. See the next section for how to start up a basic document.

How to create .tex and .pdf files?

To create a basic document open TexMaker, pull down the 'Wizards' menubar item and select 'Quick Start'. In the dialog that comes up select :

- Article, as the document class
- 12pt, as the typeface size

¹ Actually there is a third but that is for later in the course.

- a4paper, as the paper size

... leaving the other options as they are with the AMS packages selected. Click 'Create' and you should have the following new document window

```
1 \documentclass[12pt,a4paper]{article}
2 \usepackage[utf8]{inputenc}
3 \usepackage{amsmath}
4 \usepackage{amsfonts}
5 \usepackage{amssymb}
6 \begin{document}
1 7
8 \end{document}
```

The body of the document can be filled in where the dot is at line 7. Try it...

1. write something to replace the dot at line 7
2. save the source document somewhere by clicking the little disk icon (the extension used is .tex)
3. click the arrow to the left of the Quick Build dropdown to instruct the engine to create and view the PDF file



Given that the two configurations (mentioned in the previous section) have been properly completed this button will use the **pdflatex.exe** (configuration step 1) and after it generates the .PDF it will use the **view PDF** (configuration step 2). The .PDF (output) file is generated by the engine and stored in the same location as the .TEX (source) file. In the same location you will find two more files that are generated during the processing.