

A quick and painless introduction to LaTeX (via Overleaf), a comprehensive and powerful tool for scientific writing

The following is a free (with some small limitations) online LaTeX writing tool that requires no installation, and which auto-saves, auto-compiles, and comes with a tutorial as well as a sizable set of templates to you up and running in no time: <https://www.overleaf.com>

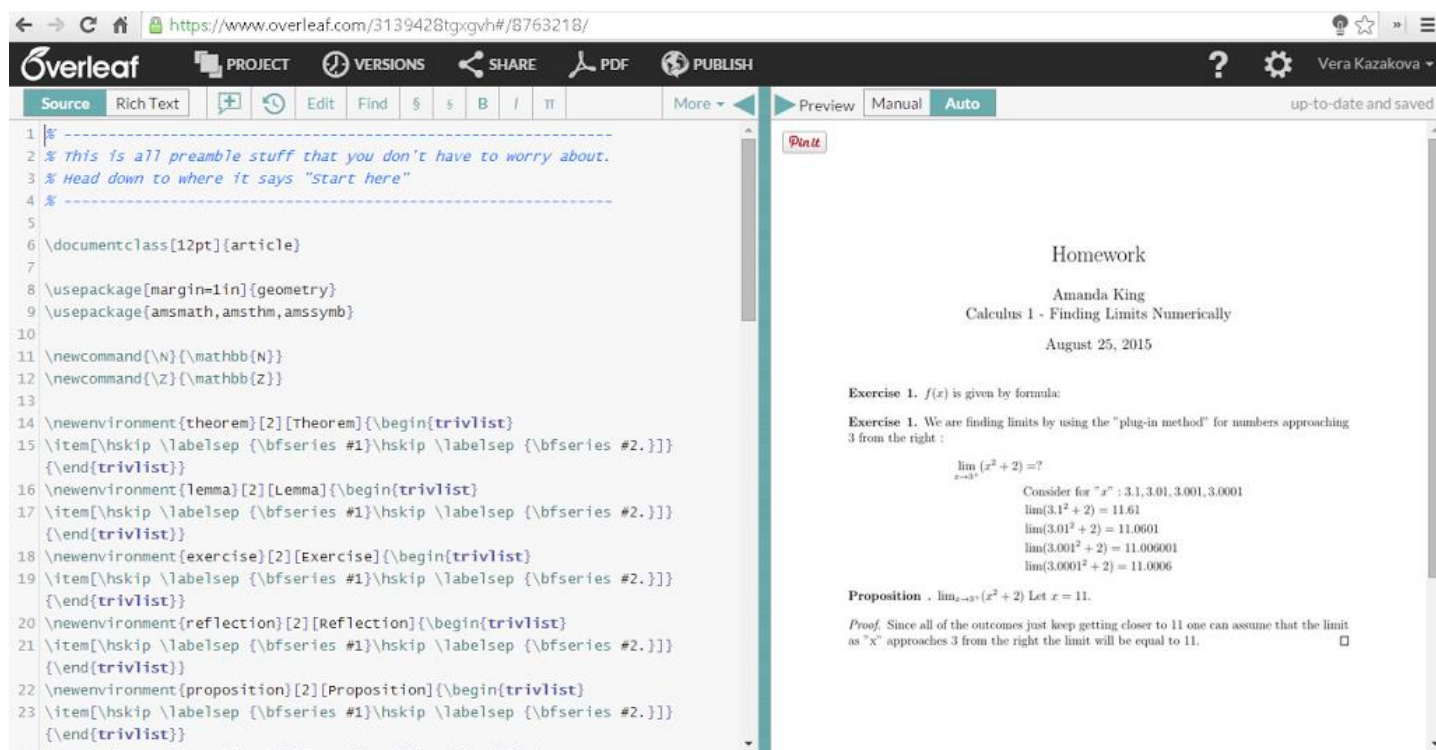
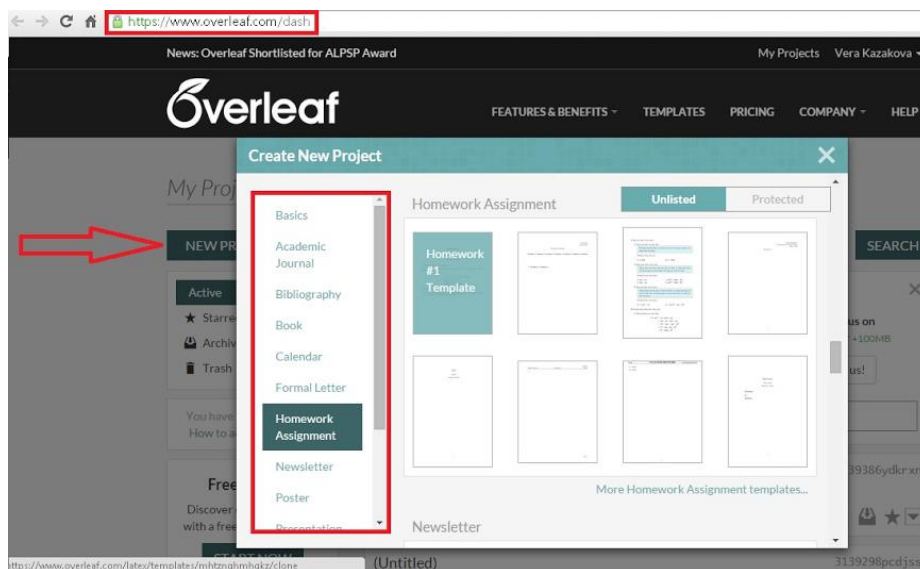
Note: you do NOT have to use Overleaf to use LaTeX. There are many other options (refer here for some of them: <http://latex-project.org/ftp.html>), but they usually require that you install something on your machine such as MiKTeX or are otherwise a bit more complex to work with than the Overleaf web-based service suggested here.

How-To begin using LaTeX via the web-based service Overleaf:

Step 1: Go to www.overleaf.com and either click “SIGN UP” (top right corner of page). You can use the service without signing up by clicking on “CREATE NEW PAPER” on the main page, but I recommend signing up as that way all your work will be continuously auto-saved to your account.

Step 2: Login and you should end up on your dashboard page (www.overleaf.com/dash). From here click “NEW PROJECT” and scroll down through the templates until you find the “Homework Assignment” section. Click “Homework #1 Template”.

Step 3: Now you should be seeing your document: source-code on the left, auto-compiled document on the right. From here just substitute the template code with your own work. When done, simply hit the PDF button near the top and re-save the document to your preferred location after it opens in your system’s viewer (by default it seems to currently go to some temp location).



Additional notes and resources:

LaTeX tutorial:

Part 1 - The Basics: <https://www.overleaf.com/latex/learn/free-online-introduction-to-latex-part-1>

Part 2 - Structured Documents & More: <https://www.overleaf.com/latex/learn/free-online-introduction-to-latex-part-2>

Part 3 – Not Just Papers: Presentations & More: <https://www.overleaf.com/latex/learn/free-online-introduction-to-latex-part-3>

LaTeX Cheat-Sheet:

This is a 2-page document in LaTeX about LaTeX to showcase some of what you can do as well as how you can do it, but it is really intended as a quick overview rather than a gentle introduction, so do take a look at the tutorial linked above first. <https://www.overleaf.com/latex/templates/14> (click “CREATE THIS NOW” to open it in the viewer/editor)

How to LaTeX:

There's no need to memorize the tutorial. LaTeX is like any other programming language: just try to do a thing and if you don't know how, look it up.

For instance, in this class you will need to create tables in your assignments, so take a look at the section on “Tables” in Part 2 of the tutorial linked above. Now, you don't have to use this particular tutorial to get the information you need.

Simply Google whatever you are trying to do and choose from the plethora of available resources.

For example, if you want a little more information on tables view this page: <http://www.andy-roberts.net/writing/latex/tables>

On the other hand, if you just can't be bothered, you can use something like the following table generator (although I actually find it more cumbersome...): <http://www.tablesgenerator.com/>

Rich Text Mode:

If you can't stand to see all that code, just switch from “Source” to “Rich Text” on the top left of the editor/viewer page.

This will display your document in a much more palatable format, although it will take away some of the functionality of the source-code view. Overall, the “Rich Text” view may be generally most useful for smaller edits.

You can read a bit more about it here: <https://www.overleaf.com/blog/81-having-a-hard-time-convincing-your-coauthors-to-learn-latex-with-our-rich-text-mode-you-no-longer-need-to-dot-dot-dot>

ps: while at first it may seem like overkill to have to “code” your papers/homeworks, in the end it is a very efficient approach, especially once you consider that it allows you to reformat your whole paper with the change of a single entry (useful when you need to submit to a different publication), or that it keeps track of what's actually been cited within your work, automatically adjusting to only display the relevant bibliography entries, all while magically formatting them for you so you never ever have to deal with formatting them manually again.