Cheat Sheet: LaTeX and Overleaf

What is LaTeX?

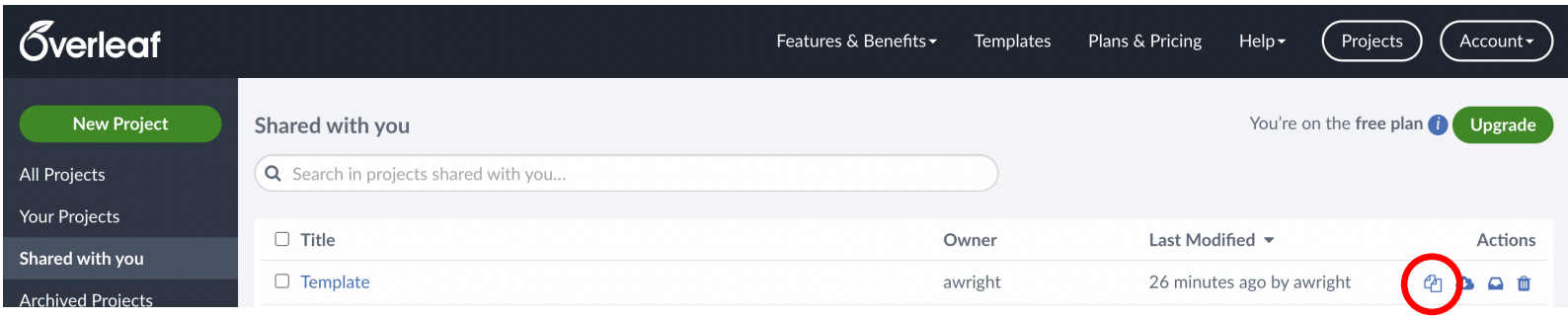
LaTeX is a language used for typesetting. This is useful for mathematical notation and other technical notation or symbols.

What is Overleaf?

Overleaf is an online LaTeX editor, where you can compile LaTeX into a pdf and also save and share your projects all in-browser.

How to get started with the template:

Log in to Overleaf and click "Shared with you" on the left side of the screen. There should be a project titled "Template" with owner awright. Click the "copy" icon on the project circled in red below. This will create a copy of the template where you are the owner. You can title the copy whatever you want. Now you can find your renamed template in "Your projects." Click on the new title to start working on it.



Basics of a tex file:

In the Overleaf display of the project, the files included in the project are listed in the left grey column. One of these must be a tex file where we can write our LaTeX to be compiled into a pdf. Once we select this file, we'll see the tex file plaintext on the left and the compiled pdf on the right, which we can update with the "recompile" button.

In LaTeX the character % begins a **comment**, so anything after % in a line is disregarded when compiling.

The beginning of the tex file (before the line \begin{document}) is called the **preamble** where you can input settings for the document. This is where you need to load whatever packages you need, define margins, create custom commands, or otherwise give LaTeX information on how to format your document correctly. The template includes some standard packages, but there are many you can add to the list if you need them. The template also includes margins that you can adjust and two custom commands to give examples of the syntax.

The **body** of the tex file is between the lines \begin{document} and \end{document}. This where you write the content of your document. The first two problems in the template are the first two homework problems of the week. The next two give some examples to demonstrate syntax.

Text in your document is typed normally, but **math mode** must be between dollar signs for example $x-3\neq y$ or $f(x)>x^2\geq 0$.

A useful tool to find the LaTeX command for a specific mathematical symbol is **Detexify** where you can draw the symbol and Detexify will try to match it to notation and provide the corresponding commands (including the needed packages when applicable): detexify.kirelabs.org

This takes you back to the projects you have access to.

This allows you to upload files to the project.

The files in the project are here.

This is where you edit the plaintext tex file.

This is the preamble.

Overleaf compiles your tex file into a pdf here.

This button will cause Overleaf to recompile the pdf with your updated tex file.