Compiling RMD to PDF on home PC

NOTE 1: these instructions do not apply to AUT PCs, as they already include the required software

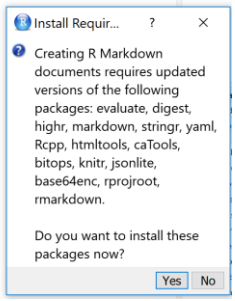
NOTE 2: there may be a quicker way, but hopefully this works!

Step 0: Check the what version of R you are running.

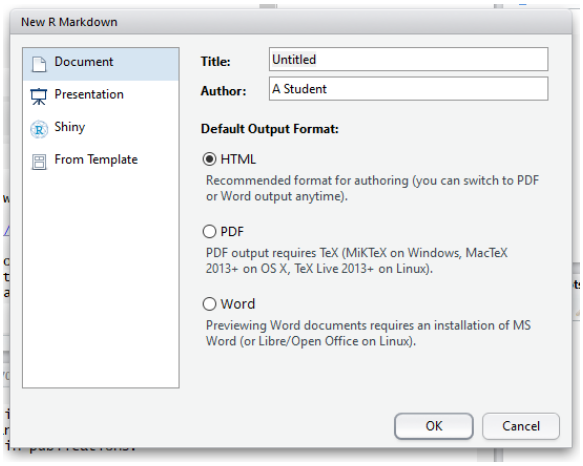
1. Check the most recent version of R for your system at https://cran.r-project.org/
2. Check the current version by typing "version" on the command line in R Studio. The version is something like 4.2.0.
3. If the major version number (i.e. the first number) is less than the most recent version on cran, you need to update R. i.e. If you are running 3.6.7 and the most recent version is 4.2.1.
4. To update R follow one of these options: https://www.linkedin.com/pulse/3-methods-update-r-rstudio-windows-mac-woratana-ngarmtrakulchol

Step 1: Check that Rmarkdown is working

1. Open RStudio. Select File/New File/RMarkdown.
    a. If you get asked to install packages (like the following image), click YES

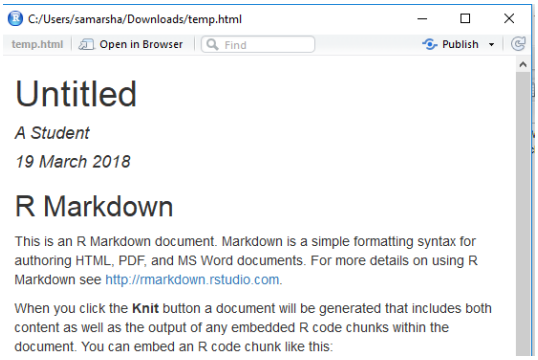


    b. Enter a title for the document and save it in a location of your choice.
    c. Ensure HTML is selected as default output format



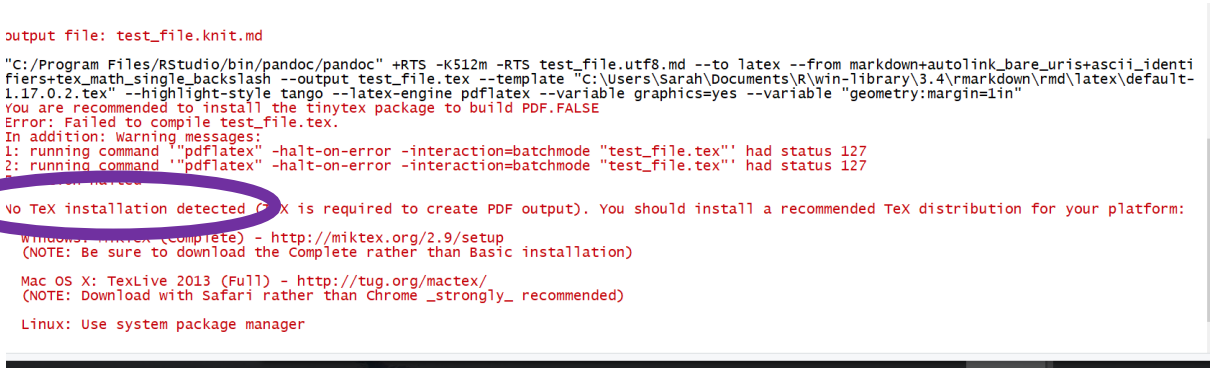
2. Click the "Knit" button

3. The document should compile you and a new window, e.g.



Step 2: Check if required software is installed to compile to PDF

1. Select the dropdown menu next to “Knit” and select “Knit to PDF”
   If a PDF file is created, great! If not, continue with the instructions below.
2. You may receive an error message like:



To fix this you need to **install LaTex**, the document preparation system that is used to compile the pdf files. This involves a few steps.

Step 3: Install LaTeX

Three options:

1. TinyTeX
2. MikTex
3. TexLive.

If you only plan to use LaTex with RStudio, then use TinyTex. It is the quickest and most straightforward solution. MikTex has a few additional steps that will be required, but is also fairly quick. TexLive, does it all in one go, but takes 2+ hours to do the installation.

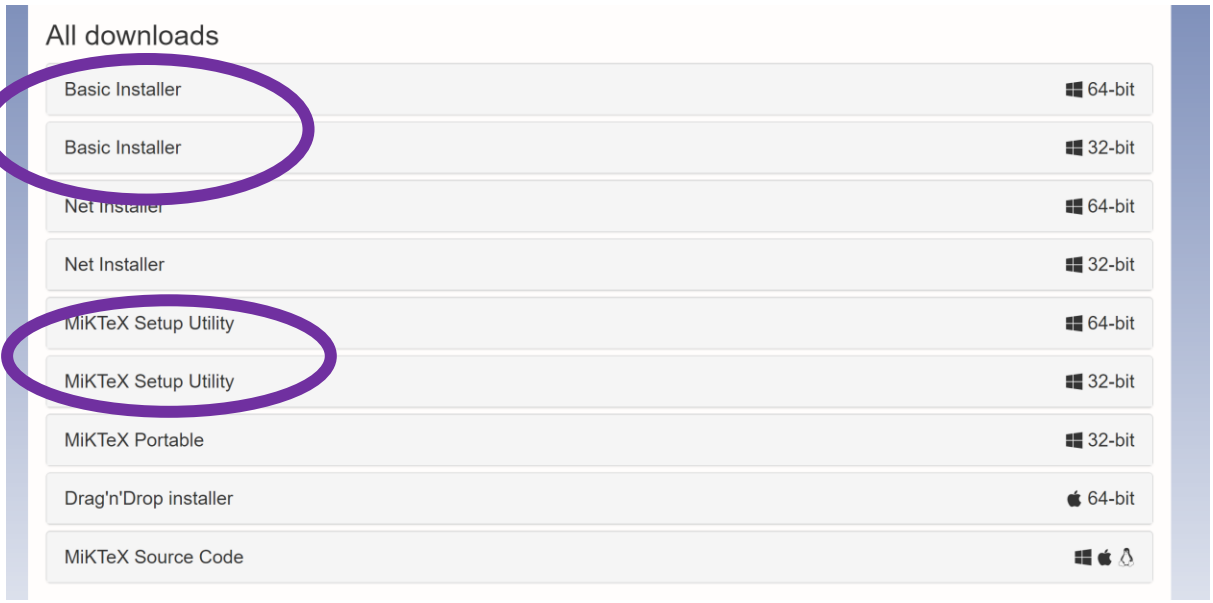
Step 3 – option 1: TinyTeX

In the error message in Step 2 you may get a prompt suggesting that you install tinytex. To do this:

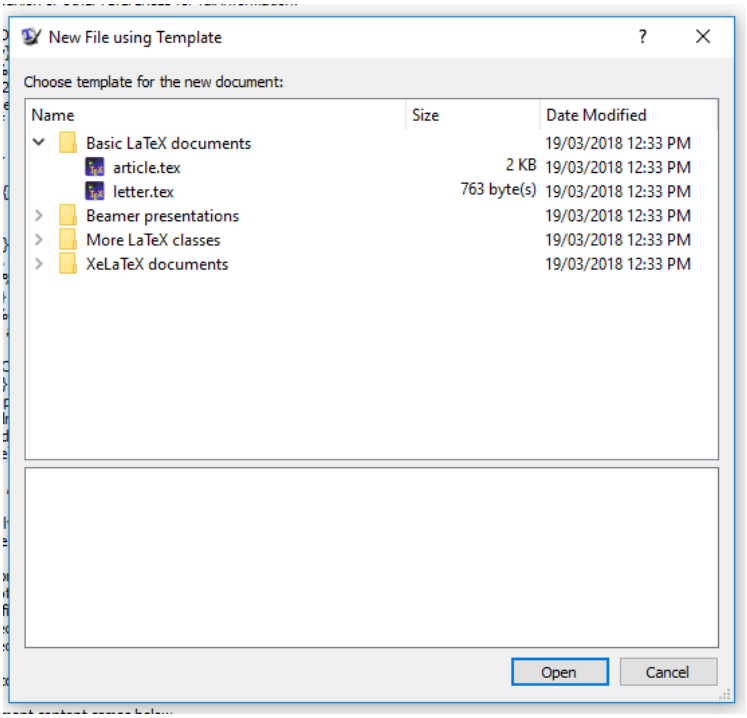
1. In RStudio, type tinytex::install_tinytex() on the command line. This will take a few minutes.
2. Go to step 4.

Step 3 – option 2: MikTex

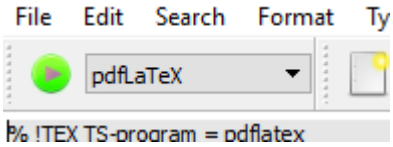
1. Install MikTex. Go to https://miktex.org/download
2. Select Basic Installer (either 32 or 64bit depending on your machine). Download and run.
3. Select “MikTex Setup Utility”. Download and run.



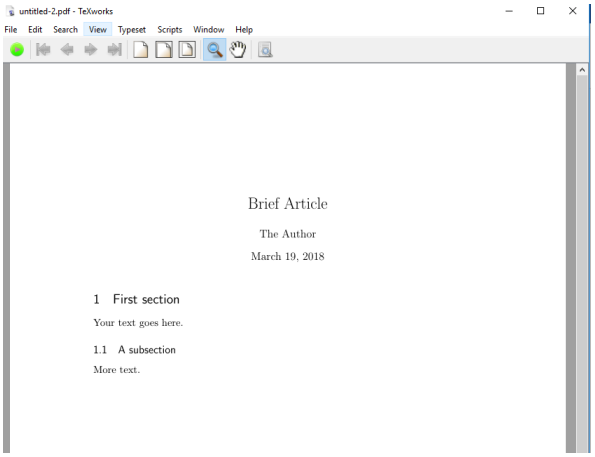
4. Check LaTex has been installed correctly.
5. Open TexWorks. Select File/New from Template/ Basic Latex Documents/article.tex. Open.



6. Run/Compile by clicking the green play button. A pdf document should appear in another window.



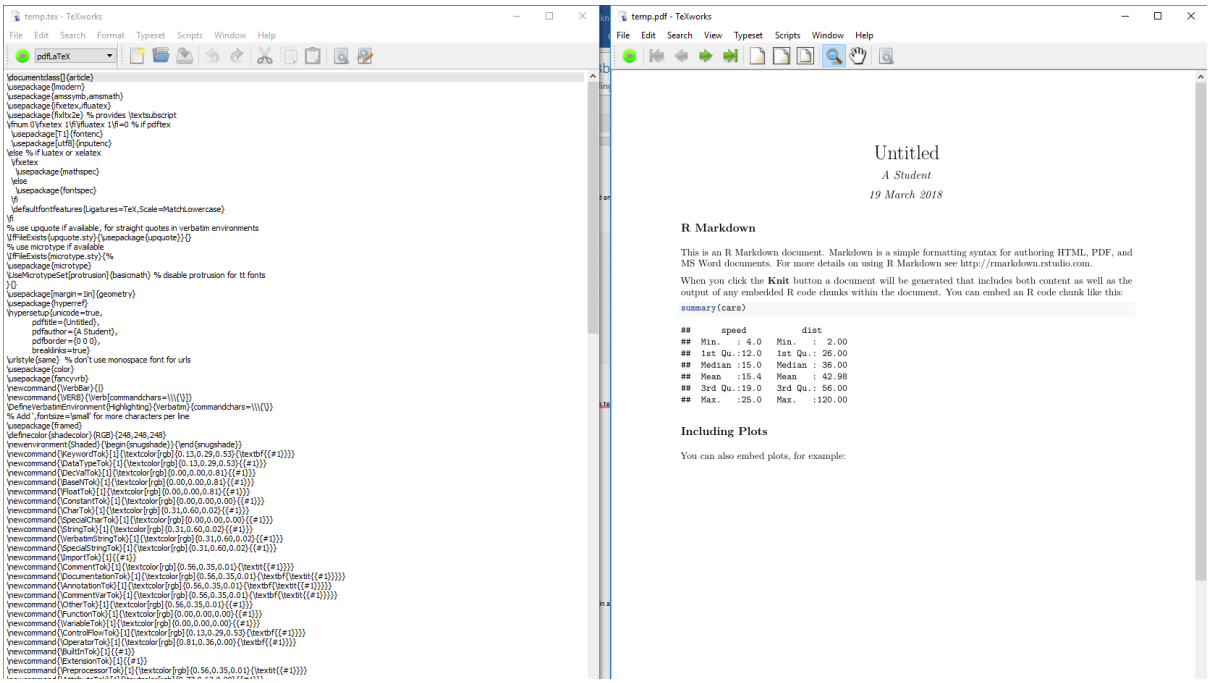
The pdf document.



If the PDF document appears – success – LaTeX is correctly installed. If not, check installation.

7. Install required LaTeX packages
   a) Download temp.tex from Blackboard and open in TeXWorks.
   b) Run/Compile by clicking the green play button.
   c) Select ok if asked to install a package. Packages install one by one. You may need to compile multiple times until the PDF appears.

(Note: You can create and find this .tex file using your own PC. If you want to know how, let me know.)



Step 3 – option 3: TexLive

1. Go to https://tug.org/texlive/acquire-netinstall.html download install-tl-windows.exe
2. Run .exe file
3. Wait patiently… for approx 2.5 hours
   (It takes ages because it installs all of the packages, whereas MikTex only installs the basic ones, hence the additional step required to installed the packages)

Step 4. Compile RMD to PDF

1. In R studio, open RMD file and select "Knit to PDF"
2. A PDF (hopefully!) should appear.

Feedback on these instructions is welcome!