使用 R Markdown，knit 和 MikTex 将.Rmd 文件转化为 pdf 报告（只针对 windows 10，可能 windows 系统都可以）

因为上课需要用到 RStudio 创建.Rmd 文件，并且需要将该文件转化为 PDF 报告。本人第一次接触 RStudio 软件，在用 knit 生成 pdf 文件出错了，在网上找资料想解决该问题。

按照网络上提供的资料，下载 MikTex 之后，再进行一系列的 RStudio 配置，但最终还是没有成功转化为 PDF。之后进行研究发现，按照 RStudio 给的提示信息，不用那么麻烦

即可成功将.Rmd 文件转化为 pdf 报告。

写这篇文档希望帮助初次基础到 RStudio 的朋友，希望本文对你们有帮助！

要想用 RStudio 需要先下载 R。所以首先进入到这个网址 https://cran.r-project.org/ 进行 R 的下载。显示如下图：

The Comprehensive R Archive Network

Download and Install R

Precompiled binary distributions of the base system and contributed packages, **Windows and Mac** users most likely want one of these versions of R:

- Download R for Linux
- Download R for (Mac) OS X
- Download R for Windows

R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above.

Source Code for all Platforms

Windows and Mac users most likely want to download the precompiled binaries listed in the upper box, not the source code. The sources have to be compiled before you can use them. If you do not know what this means, you probably do not want to do it!

- The latest release (2017-11-30, Kite-Eating Tree) R-3.4.3.tar.gz, read what's new in the latest version.
- Sources of R alpha and beta releases (daily snapshots, created only in time periods before a planned release).
- Daily snapshots of current patched and development versions are available here. Please read about new features and bug fixes before filing corresponding feature requests or bug reports.
- Source code of older versions of R is available here.
- Contributed extension packages

Questions About R

- If you have questions about R like how to download and install the software, or what the license terms are, please read our answers to frequently asked questions before you send an email.

点击绿色荧光部分。之后选择 base

R for Windows

Subdirectories:

base	Binaries for base distribution. This is what you want to install R for the first time.
contrib	Binaries of contributed CRAN packages (for R >= 2.13.x; managed by Uwe Ligges). There is also information on third party software available for CRAN Windows services and corresponding environment and make variables.
old contrib	Binaries of contributed CRAN packages for outdated versions of R (for R < 2.13.x; managed by Uwe Ligges).
Rtools	Tools to build R and R packages. This is what you want to build your own packages on Windows, or to build R itself.

Please do not submit binaries to CRAN. Package developers might want to contact Uwe Ligges directly in case of questions / suggestions related to Windows binaries.

You may also want to read the R FAQ and R for Windows FAQ.

Note: CRAN does some checks on these binaries for viruses, but cannot give guarantees. Use the normal precautions with downloaded executables.
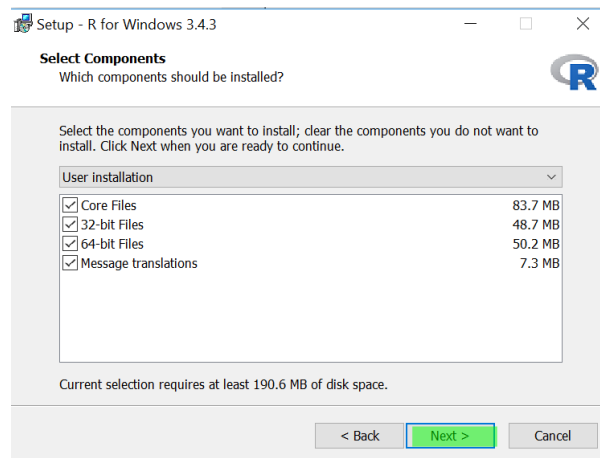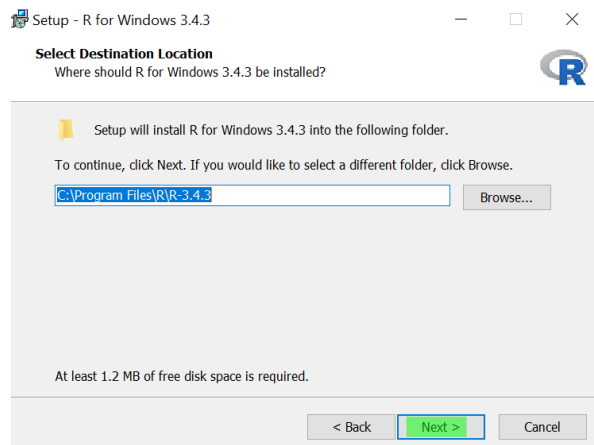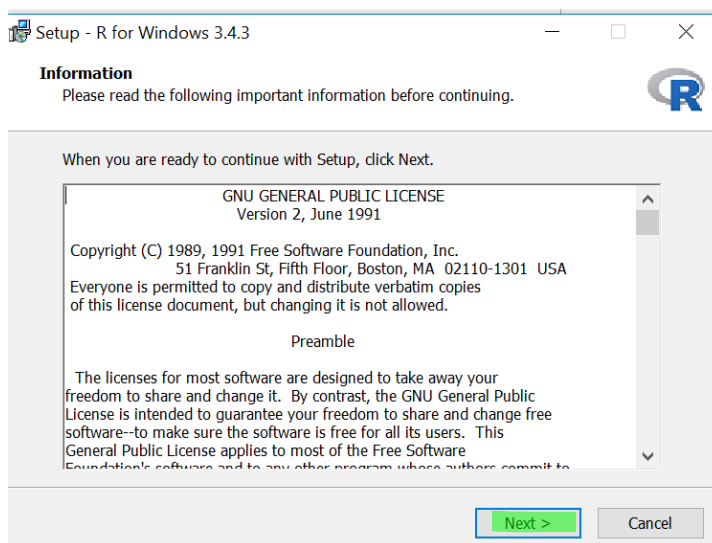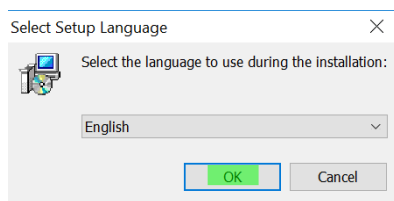
之后下载即可

下载之后进行安装，建议选择 English，之后一直点击 next，可以更换安装路径，之后等待安装即可。
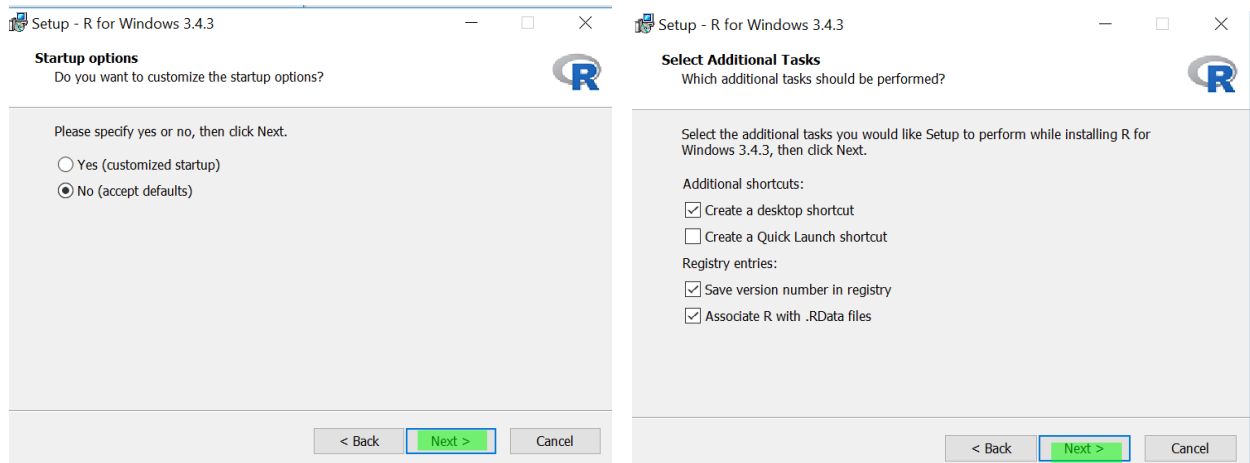
之后进入到这个网址 https://www.rstudio.com/products/rstudio/download/ 下载 RStudio（Free 版本即可） 按照如下步骤：

Choose Your Version of RStudio

RStudio is a set of integrated tools designed to help you be more productive with R. It includes a console, syntax-highlighting editor that supports direct code execution, and a variety of robust tools for plotting, viewing history, debugging and managing your workspace. Learn More about RStudio features.

| RStudio Desktop Open Source License	RStudio Desktop Commercial License	RStudio Server Open Source License	RStudio Server Pro Commercial License	RStudio Server Pro + RStudio Connect Commercial License
FREE	$995 per year	FREE	$9,995 per year	$29,995 per year
DOWNLOAD	BUY	DOWNLOAD	DOWNLOAD	TALK
Learn More	Learn More	Learn More	Learn More	Learn More

RStudio Desktop 1.1.383 — Release Notes

RStudio requires R 3.0.1+. If you don't already have R, download it here.

Installers for Supported Platforms

Installers	Size	Date	MD5
RStudio 1.1.383 - Windows Vista/7/8/10	85.8 MB	2017-10-09	450755b853dcdbaa60be641552ef3c0f
RStudio 1.1.383 - Mac OS X 10.6+ (64-bit)	74.5 MB	2017-10-09	ec121f9abc0b817ddcca85d71a5988e3
RStudio 1.1.383 - Ubuntu 12.04-15.10/Debian 8 (32-bit)	89.2 MB	2017-10-09	9588bce746f2a5e8da299c4a8b35d4fa
RStudio 1.1.383 - Ubuntu 12.04-15.10/Debian 8 (64-bit)	97.4 MB	2017-10-09	3eede231b7206a7eebbf090f4991358f
RStudio 1.1.383 - Ubuntu 16.04+/Debian 9+ (64-bit)	65 MB	2017-10-09	fccec7cbf773c3464ea6cbb91fc2ec28
RStudio 1.1.383 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (32-bit)	88.1 MB	2017-10-09	36b4d00c6ec5c6a39194287b468ceb44
RStudio 1.1.383 - Fedora 19+/RedHat 7+/openSUSE 13.1+ (64-bit)	90.6 MB	2017-10-09	ae400e2504ec9c5862343c24fe3cd61d

之后进行安装，点击 next，最后点 finish。
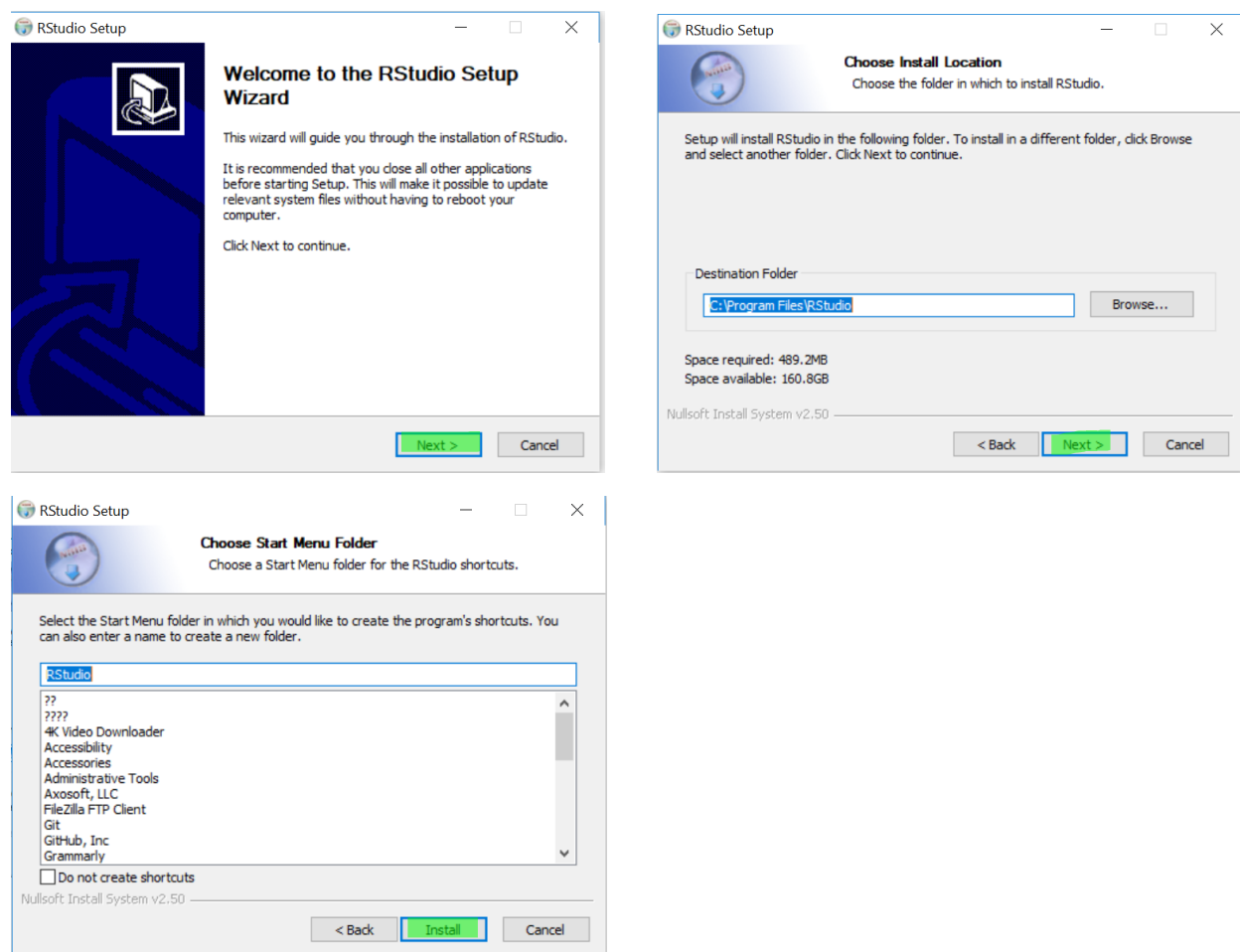
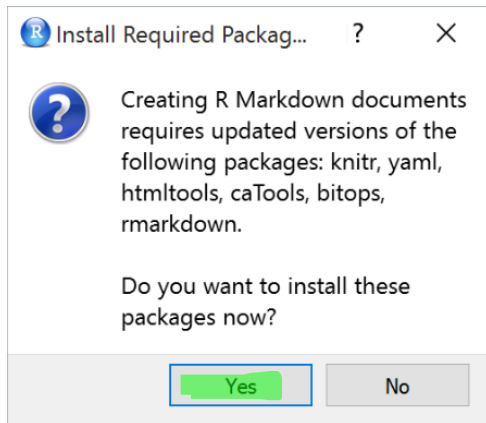要想将.Rmd 文件转化 pdf 还需下载 MikTex。https://miktex.org/download
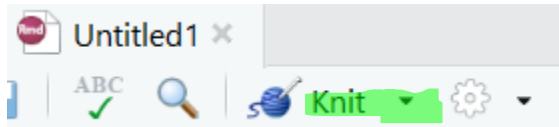
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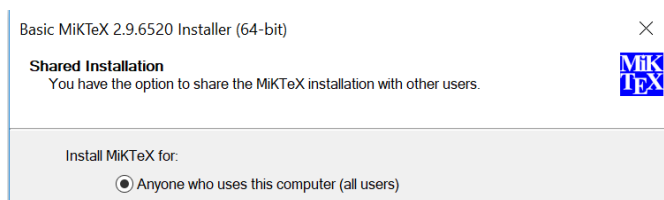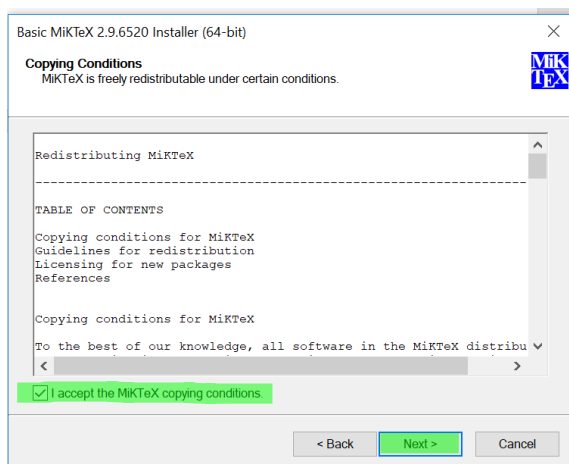
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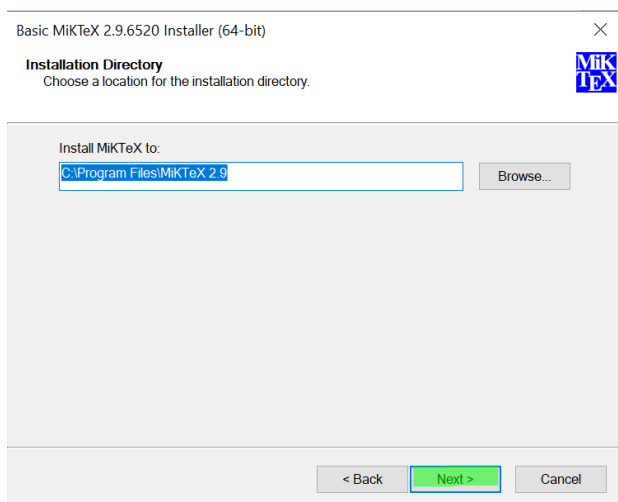
这步需要注意，建议安装到推荐的路径，我之前更换路径了，转换 pdf 时 RSttudio 仍然报错说没有 MikTex，当更换到默认推荐路径时，成功转换成 pdf，所以个人觉得是路径原因。之后就一直点击 next 等待安装成功。

下载了必要的软件，之后就可以进行转换了。

打开 RStudio，点击菜单栏的 file--> new file--> R Markdown. 如果第一次用 RStudio 没有安装 R Markdown 只需按照提示进行安装

安装成功后就可编写 R Markdown 文件，写完之后点击 Knit 右侧的小三角，选择 Knit to PDF，之后保存到想要保存的路径即可。

是不是很简单呢！根本不需要进行 RStudio 的配置，可能网站上提供的是之前 RStudio 版本的方法，RStudio 软件本身可能进行了升级，不管怎么样希望帮到大家就好！！！