

R Markdown Instructions

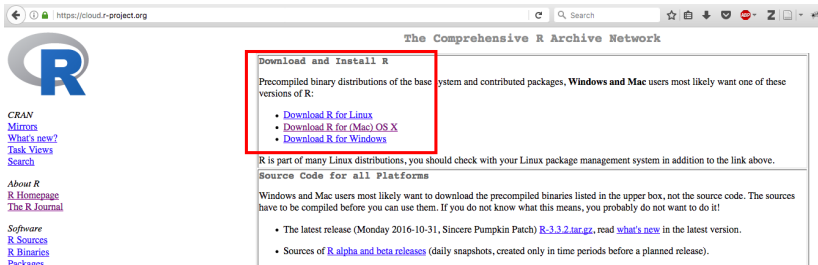
IE 490 - Data Mining

Read carefully.

February 21, 2017

Step 1 - Install R

<https://cloud.r-project.org/>



The screenshot shows a web browser window with the URL <https://cloud.r-project.org>. The page title is "The Comprehensive R Archive Network". On the left side, there is a navigation menu with links for "CRAN", "Mirrors", "What's new?", "Task Views", "Search", "About R", "R Homepage", "The R Journal", "Software", "R Sources", "R Binaries", and "Packages". The main content area is titled "Download and Install R" and contains the following text: "Precompiled binary distributions of the base system and contributed packages, **Windows and Mac** users most likely want one of these versions of R:" followed by a bulleted list of links: "Download R for Linux", "Download R for (Mac) OS X", and "Download R for Windows". Below this, it states "R is part of many Linux distributions, you should check with your Linux package management system in addition to the link above." and "Source Code for all Platforms". Further down, it says "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!" followed by another bulleted list: "The latest release (Monday 2016-10-31, Sincere Pumpkin Patch) [R-3.3.2.tar.gz](#), read [what's new](#) in the latest version." and "Sources of [R alpha and beta releases](#) (daily snapshots, created only in time periods before a planned release)."

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.

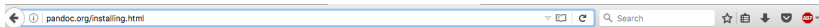
Source Code for all Platforms

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 (Monday 2016-10-31, Sincere Pumpkin Patch) [R-3.3.2.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).

Step 2 - Install pandoc

<http://pandoc.org/installing.html>



Pandoc a universal document converter

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Linux

Installing pandoc

Windows

- There is a package installer at pandoc's [download page](#).
- For PDF output, you'll also need to install LaTeX. We recommend [MiKTeX](#).
- If you'd prefer, you can extract the pandoc and pandoc-citeproc executables from the MSI and copy them directly to any directory, without running the installer. Here is an example showing how to extract the executables from the pandoc-1.19.1 installer and copy them to `C:\Utils\Console\`:

```
mkdir "%TEMP%\pandoc\  
start /wait msexec.exe /a pandoc-1.19.1-windows.msi /qn targetdir="%TEMP%\pandoc\  
copy /y "%TEMP%\pandoc\pandoc.exe" C:\Utils\Console\  
copy /y "%TEMP%\pandoc\pandoc-citeproc.exe" C:\Utils\Console\  
rmdir /s /q "%TEMP%\pandoc\  
"
```

Mac OS X

- There is a package installer at pandoc's [download page](#). If you later want to uninstall the package, you can do so by downloading [this script](#) and running it with `perl uninstall-pandoc.pl`.

Step 3 - Install R Studio

<https://www.rstudio.com/products/rstudio/>

https://www.rstudio.com/products/rstudio/#Desktop

Studio

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Overview

- Access RStudio locally
- Syntax highlighting, code completion, and smart indentation
- Execute R code directly from the source editor
- Quickly jump to function definitions
- Easily manage multiple working directories using projects
- Integrated R help and documentation
- Interactive debugger to diagnose and fix errors quickly
- Extensive package development tools

All of the features of open source; plus:

- A commercial license for organizations not able to use AGPL software
- Access to priority support

Support Community forums only

- Priority Email Support
- 8 hour response during business hours (ET)

License AGPL v3 [RStudio License Agreement](#)

Pricing Free \$995/year

[DOWNLOAD RSTUDIO DESKTOP](#) [BUY NOW](#)

Remember. You need to install them after downloading.

Remember. You need to install all programs after downloading them. If ok, proceed to next steps.

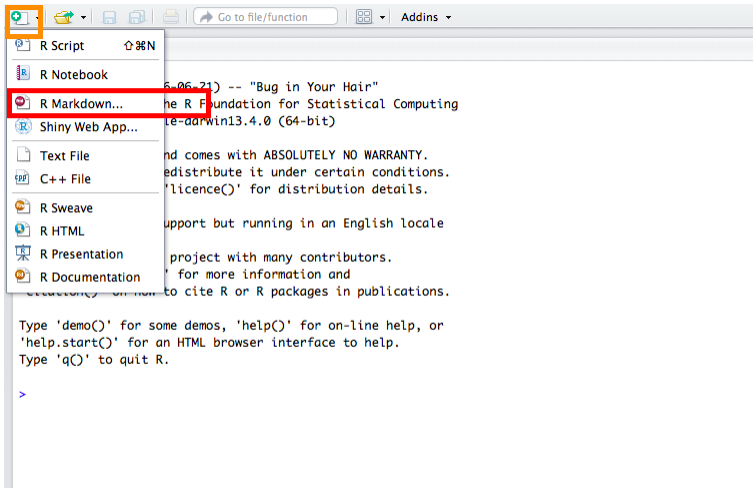
Step 4 - Open R Studio and open an R Markdown document.

Note: If prompted, install the required packages.

Change the title and author accordingly. Select Word format.

Save your R Markdown file (.Rmd) with a proper name.

R Markdown Document



New R Markdown

Document

Presentation

Shiny

From Template

Title: Name of the Activity

Author: Group X - Name1 Surname1 - Name2 Surname2

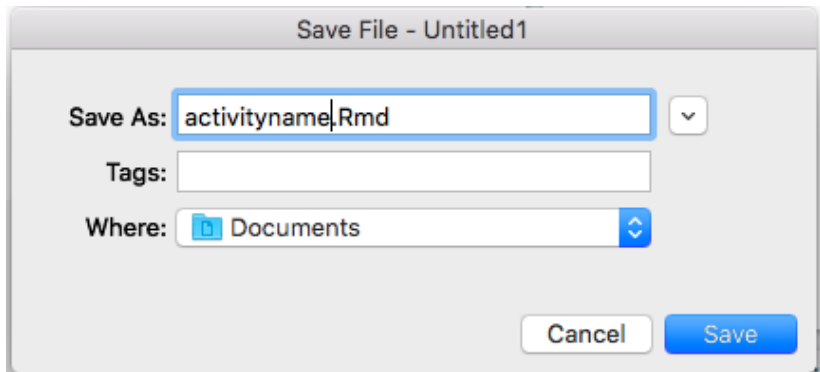
Default Output Format:

HTML
Recommended format for authoring (you can switch to PDF or Word output anytime).

PDF
PDF output requires TeX (MIKTeX on Windows, MacTeX 2013+ on OS X, TeX Live 2013+ on Linux).

Word
Previewing Word documents requires an installation of MS Word (or Libre/Open Office on Linux).

OK Cancel



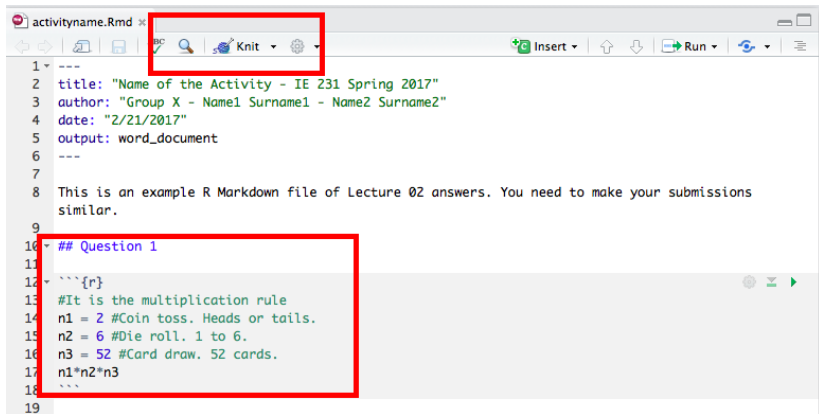
Step 5 - Change the content to answer the questions and Knit.

Note: R code inside the chunks (areas denoted by special backticks).

Hash symbol `#` means commenting in R.

After you click Knit, it will compile below.

You will have a word document.



The screenshot shows an R Markdown editor window titled "activityname.Rmd". The toolbar at the top contains several icons, with the "Knit" button (a blue globe icon) highlighted by a red rectangle. Below the toolbar, the R Markdown code is displayed. The code includes a header section with metadata, a paragraph of text, and a section titled "## Question 1" containing a code block with mathematical expressions.

```
1 ---
2 title: "Name of the Activity - IE 231 Spring 2017"
3 author: "Group X - Name1 Surname1 - Name2 Surname2"
4 date: "2/21/2017"
5 output: word_document
6 ---
7
8 This is an example R Markdown file of Lecture 02 answers. You need to make your submissions
  similar.
9
10 ## Question 1
11
12 ```{r}
13 #It is the multiplication rule
14 n1 = 2 #Coin toss. Heads or tails.
15 n2 = 6 #Die roll. 1 to 6.
16 n3 = 52 #Card draw. 52 cards.
17 n1*n2*n3
18 ```
19
```

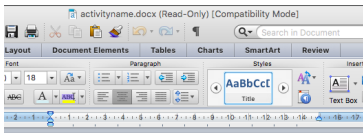
```
Console | R Markdown x
~/Documents/activityname.Rmd
ordinary text without R code

|.....| 80%
label: unnamed-chunk-4
|.....| 90%
ordinary text without R code

|.....| 100%
label: unnamed-chunk-5

/usr/local/bin/pandoc +RTS -K512m -RTS activityname.utf8.md --to docx --from markdown+autolink_bare.
ascii_identifiers+tex_math_single_backslash --output activityname.docx --highlight-style tango
output file: activityname.knit.md

Output created: activityname.docx
```

Name of the Activity - IE 231 Spring 2017

Group X - Name1 Surname1 - Name2 Surname2

2/21/2017

This is an example R Markdown file of Lecture 02 answers. You need to make your submissions similar.

Question 1

```
#1 is the multiplication rule
n1 = 1 #Coin toss, Heads or tails.
n2 = 6 #Die roll, 1 to 6.
n3 = 52 #Card draw, 52 cards.
n1*n2*n3
```

[1] 624

Question 2

```
#Permutation rule
factorial(4)
```

[1] 24

Question 3

```
#Two Os, two Ds and two As
factorial(18)/(factorial(2)*factorial(1)*factorial(1))
```

[1] 453600

Question 4

```
# Permutation of n to r items.
factorial(6)/factorial(6-2)
```

[1] 30

Final Step - Submit your work on Moodle.