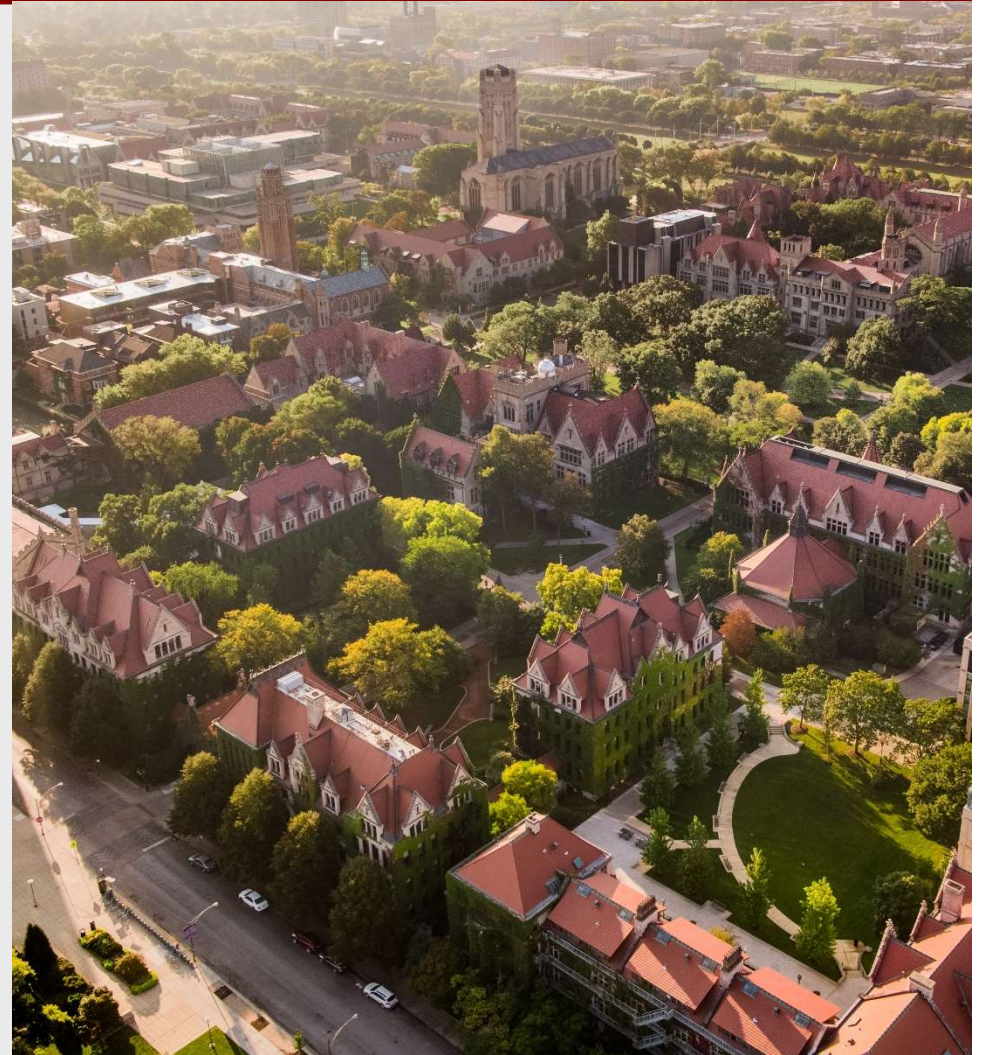

University of Chicago Professional Education

Programming for Analytics

Guide to Create R Markdown File



❑ Introduction

This document is designed to provide a step-by-step guide to create a R Markdown file. There will be three parts as follows:

Part 1: How to create an R Markdown file in RStudio.

Part 2: Write a script with text and R code chunks.

Part 3: Create an R Markdown document ready to be ‘knit’ into an html document to share your code and results.

You will need the most current version of R and, preferably, RStudio loaded on your computer.

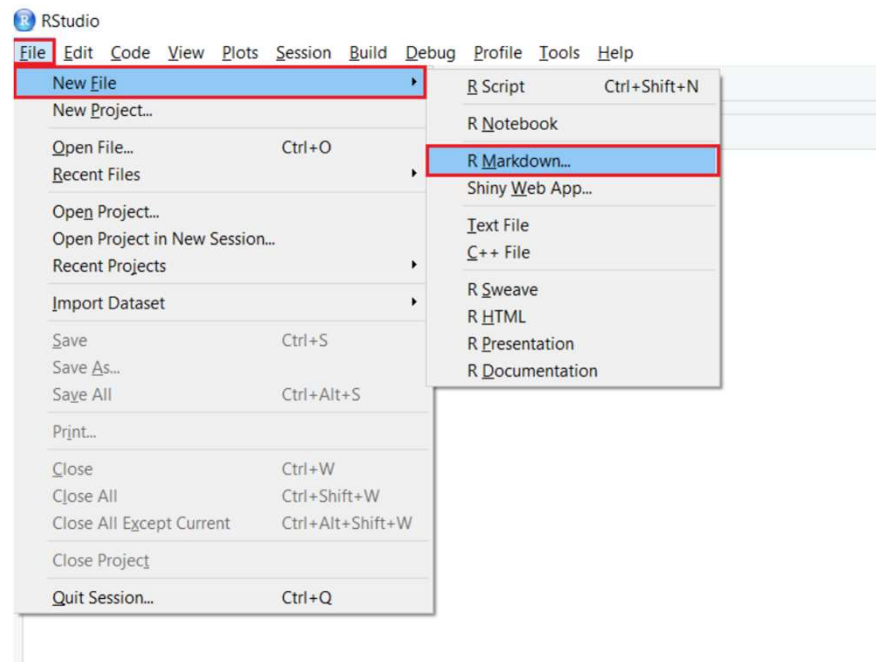
Install R Packages:

knitr: `install.packages("knitr")`

rmarkdown: `install.packages("rmarkdown")`

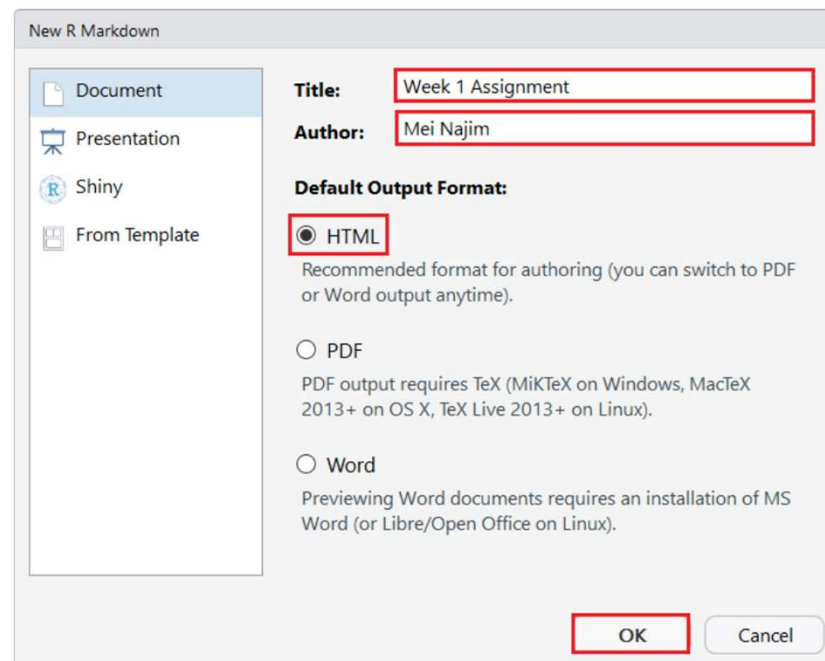
❑ Introduction – Create an R Markdown File

- Create a new R Markdown file:



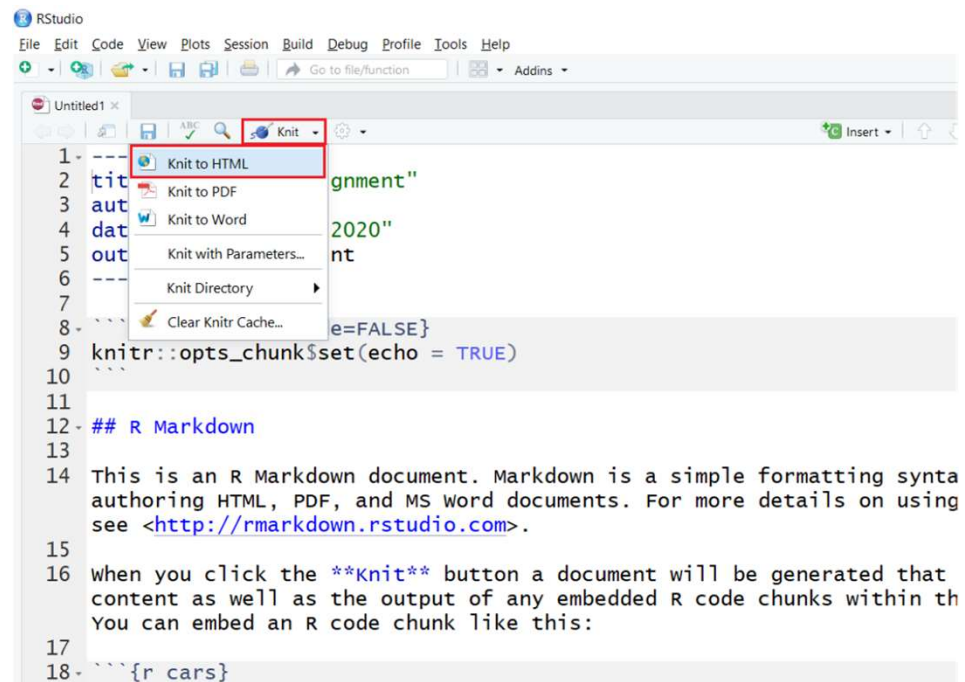
❑ Introduction – Create an R Markdown File

- There will be three parts as follows (choose html as the desired output format)



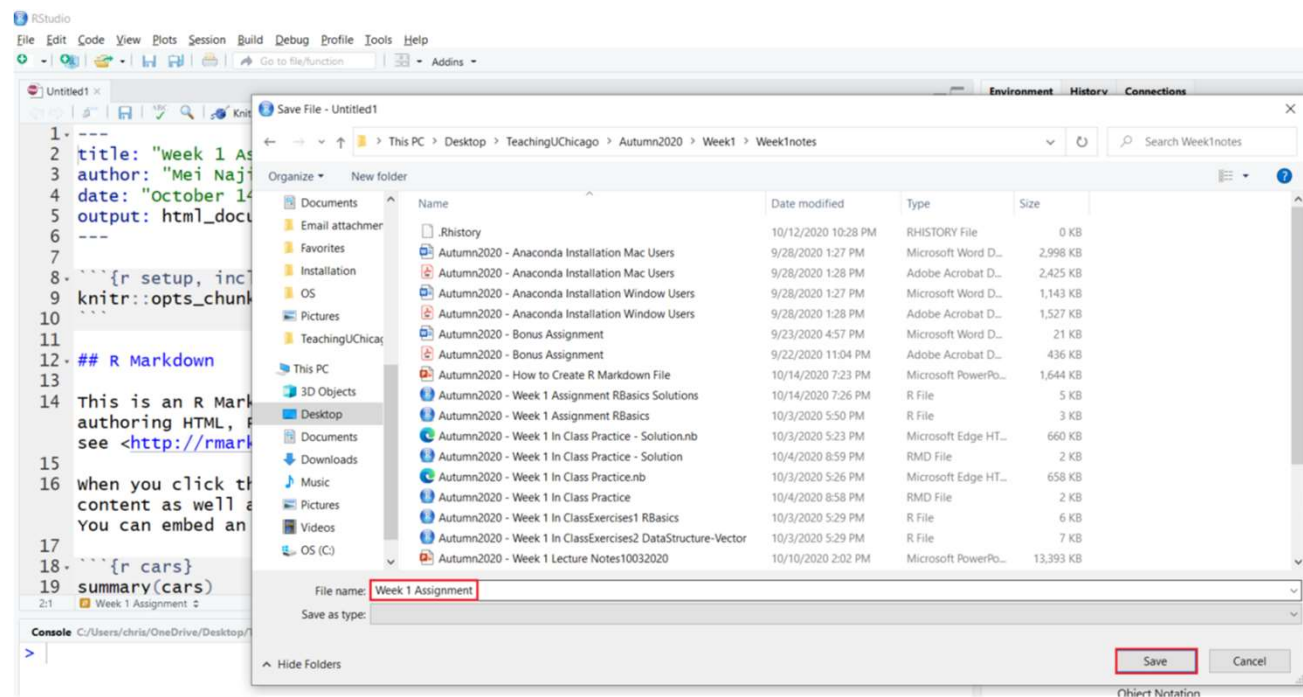
❑ Introduction – Create an R Markdown File

- Knit to HTML file:



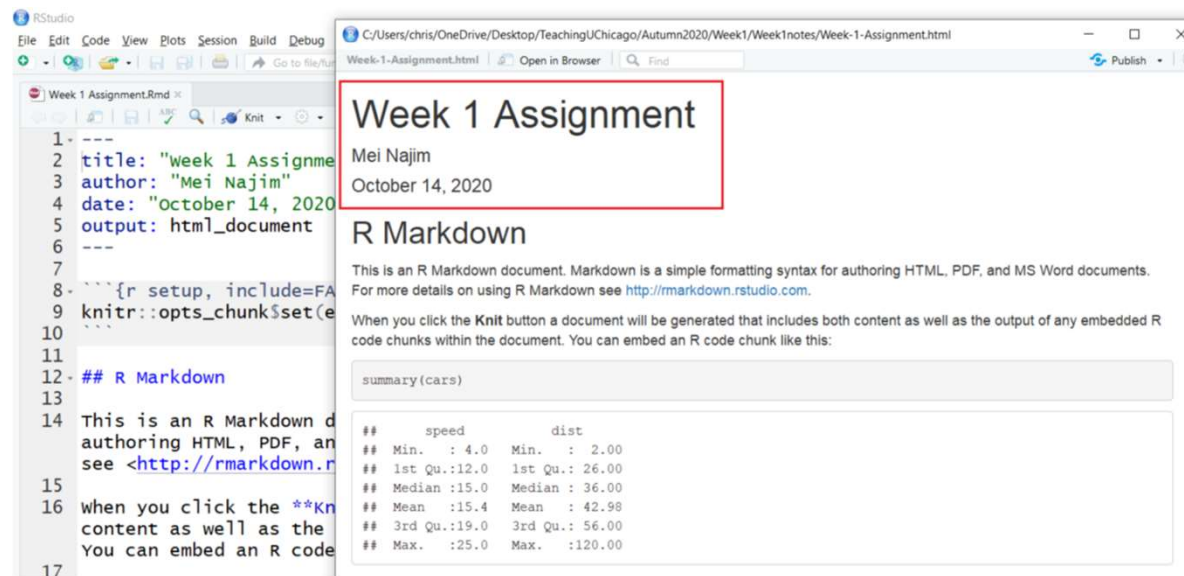
□ Introduction – Create an R Markdown File

- Save the file:



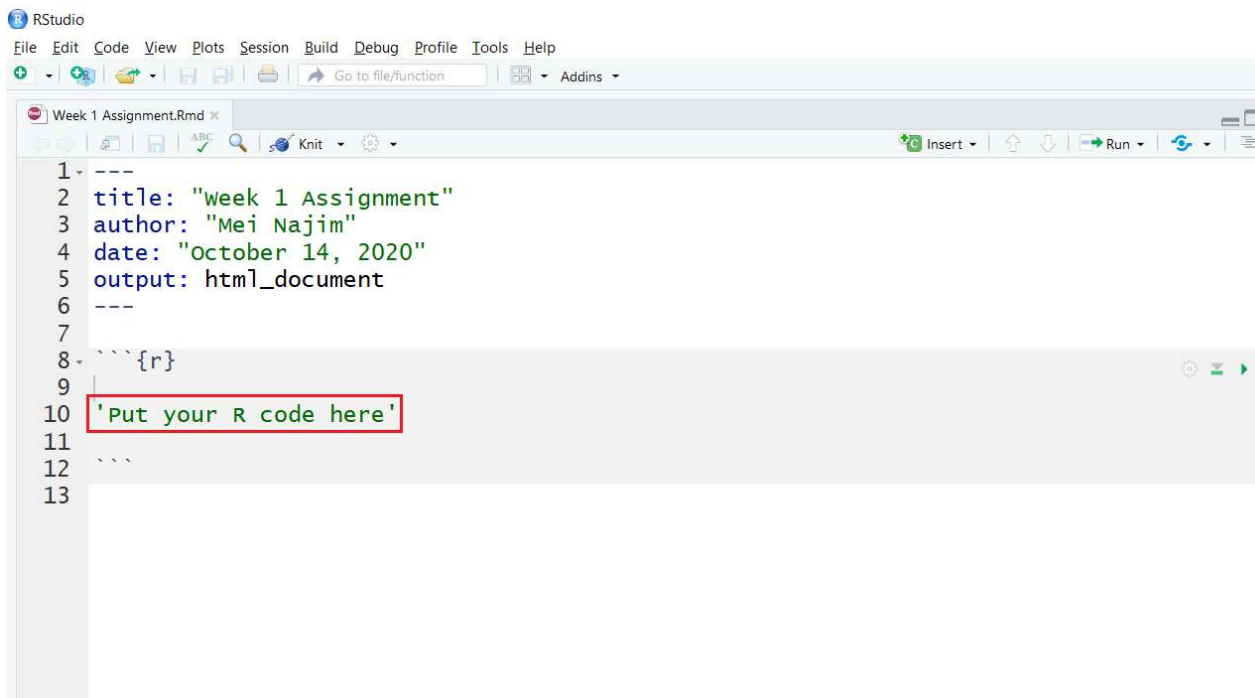
❑ Introduction – Create an R Markdown File

- The html output:



❑ Introduction – Write R code chunk

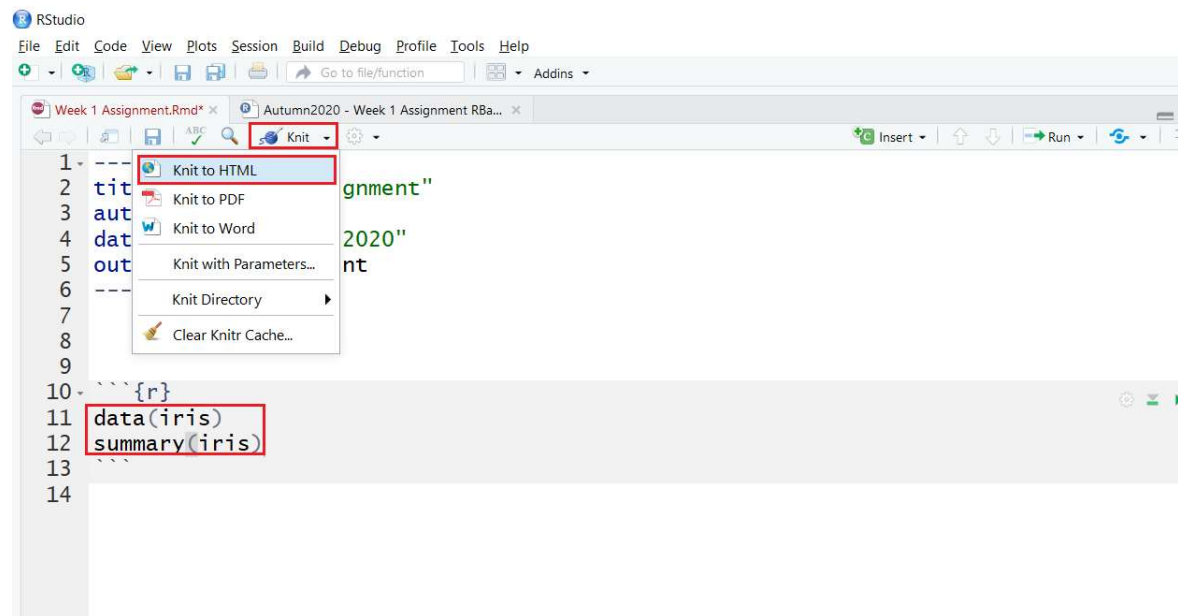
- Write R code chunk as follows:



```
1 ---
2 title: "week 1 Assignment"
3 author: "Mei Najim"
4 date: "October 14, 2020"
5 output: html_document
6 ---
7
8 ```{r}
9
10 'Put your R code here'
11
12 ```
13
```

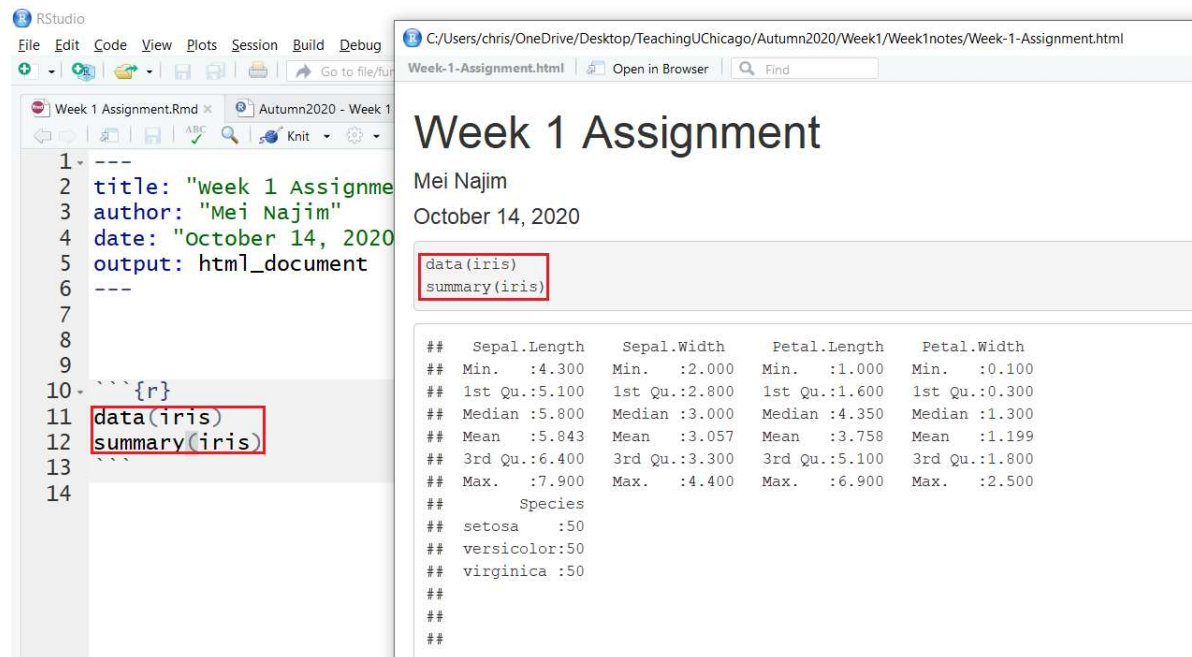

❑ Introduction – Write R code chunk and Knit to HTML

- An example to write R code chunk as follows:



❑ Introduction – Knit R Markdown to html File

- An example to knit to html file as follows:



The screenshot displays the RStudio interface with two panes. The left pane shows the R Markdown source file 'Week 1 Assignment.Rmd' with the following code:

```
1 ---
2 title: "Week 1 Assignment"
3 author: "Mei Najim"
4 date: "October 14, 2020"
5 output: html_document
6 ---
7
8
9
10 {r}
11 data(iris)
12 summary(iris)
13
14
```

The right pane shows the resulting HTML file 'Week-1-Assignment.html' with the following content:

Week 1 Assignment

Mei Najim
October 14, 2020

```
data(iris)
summary(iris)
```

	Sepal.Length	Sepal.Width	Petal.Length	Petal.Width
## Min.	:4.300	Min. :2.000	Min. :1.000	Min. :0.100
## 1st Qu.:	5.100	1st Qu.:2.800	1st Qu.:1.600	1st Qu.:0.300
## Median :	5.800	Median :3.000	Median :4.350	Median :1.300
## Mean :	5.843	Mean :3.057	Mean :3.758	Mean :1.199
## 3rd Qu.:	6.400	3rd Qu.:3.300	3rd Qu.:5.100	3rd Qu.:1.800
## Max.	:7.900	Max. :4.400	Max. :6.900	Max. :2.500
## Species				
## setosa :	50			
## versicolor:	50			
## virginica :	50			
##				
##				
##				

❑ Introduction – R Markdown Syntax

There are usually three parts to an .Rmd file:

- 1) Header: The text at the top of the document
- 2) Markdown sections: Text that describes your workflow written using markdown syntax.
- 3) Code chunks: Chunks of R code that can be run and also can be rendered using knitr to an output document.

❑ Introduction – R Markdown Syntax

R Markdown: headers

Level 1 heading
Level 2 heading
Level 3 heading
Level 4 heading

The screenshot displays the RStudio interface with two windows. The left window, titled 'Week 1 Assignment.Rmd', shows the source R Markdown code. The right window, titled 'Week-1-Assignment.html', shows the rendered HTML output.

R Markdown Source Code (Left Window):

```
1 ---
2 title: "Week 1 Assignment"
3 author: "Mei Najim"
4 date: "October 14, 2020"
5 output: html_document
6 ---
7 Markdown:
8
9 # Level 1 heading
10 ## Level 2 heading
11 ### Level 3 heading
12 #### Level 4 heading
13
14
15 ```{r}
16 data(iris)
17 summary(iris)
18
19
```

Rendered HTML Output (Right Window):

Week 1 Assignment

Mei Najim

October 14, 2020

Markdown:

Level 1 heading

Level 2 heading

Level 3 heading

Level 4 heading

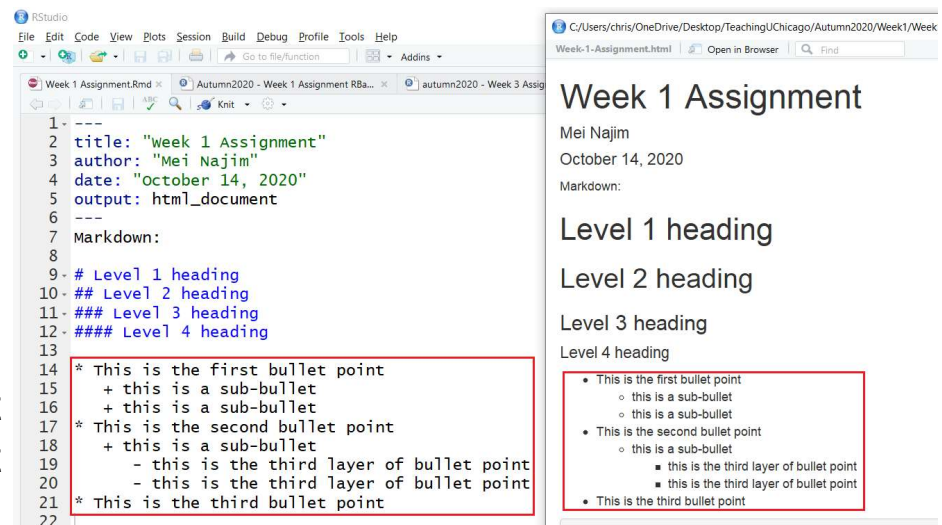
```
data(iris)
summary(iris)
```

	Sepal.Length	Sepal.Width	Petal.Length	Petal.Width
## Min.	:4.300	Min. :2.000	Min. :1.000	Min. :0.100
## 1st Qu.	:5.100	1st Qu.:2.800	1st Qu.:1.600	1st Qu.:0.300
## Median	:5.800	Median :3.000	Median :4.350	Median :1.300

❑ Introduction – R Markdown Syntax

R Markdown: bullet points

- * This is the first bullet point
 - + this is a sub-bullet
 - + this is a sub-bullet
- * This is the second bullet point
 - + this is a sub-bullet
 - this is the third layer of bullet point
 - this is the third layer of bullet point
- * This is the third bullet point



❑ Introduction – R Markdown Syntax

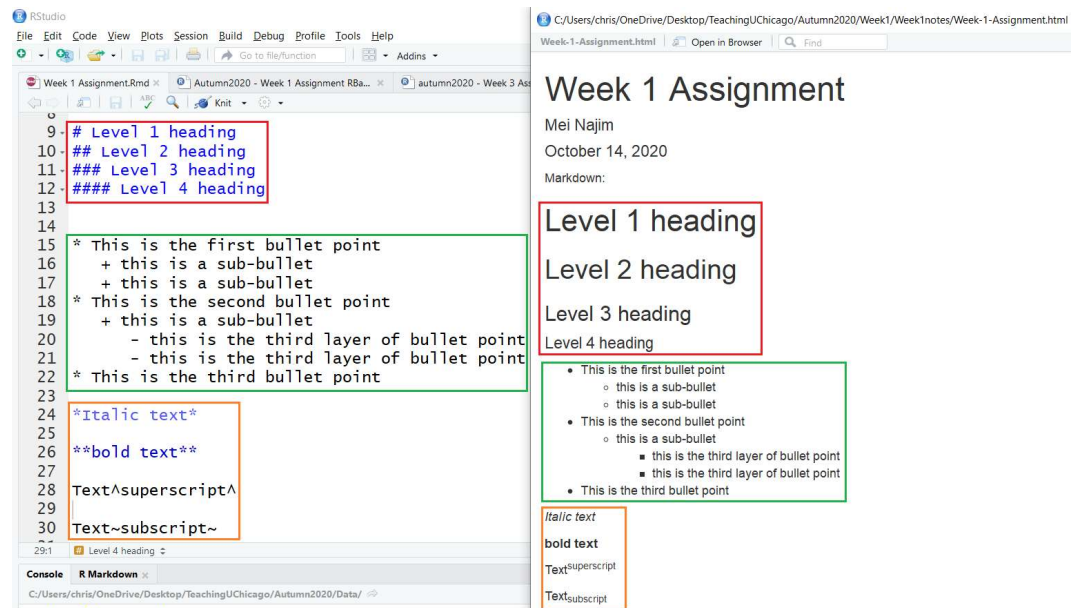
R Markdown: text types

Italic text

****bold text****

Text^{superscript}

Text_{subscript}





Q & A





Thank You





Contact Information:

Your comments and questions are valued and encouraged.

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