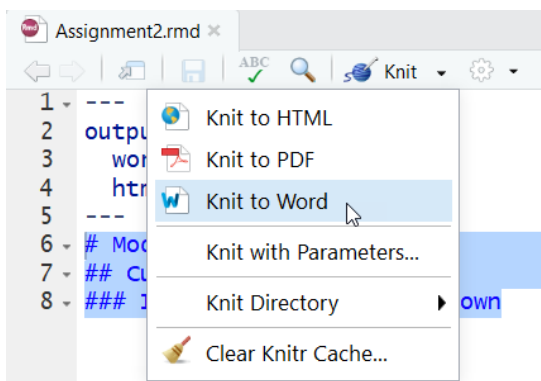# Creating R Markdown Documents

Open RStudio and create a new project under your Module 2 folder and call it **Assignment2.** For this assignment, you will be creating your first R Markdown document. Once completed, all you need to do is submit the word document that is created.

Part 1: Creating the R Markdown Document

1.) While there are a number of ways to create R Markdown documents, I would like you to create an R Markdown file using a text file. This starts with a clean document unlike other approaches that contain extraneous material.

2.) In RStudio, select *File -> New File -> Text File*. This will create a blank text file in the same area that scripts were created in previous assignments (upper left panel). Save this file to your project as **Mod2Assign2Answer.rmd** (it is important to save with the .rmd extension as this saves the text file as an R Markdown file).

3.) The R Markdown Reference Guide (https://www.rstudio.com/wp-content/uploads/2015/03/rmarkdown-reference.pdf) will help when creating the document.

4.) Create a Header 1 with the title: **Module 2 - Assignment 2**

5.) Create a Header 2 with the title: **Last Name, First Name** (replace with your name)

6.) Create a Header 3 with the title: **Introduction to R Markdown**

7.) Click on the dropdown arrow next to the Knit icon at the top of the R Markdown Pane in RStudio and select Knit to Word. Your output should look similar to the screenshot below:

8.) Notice that you now have a document in your files for the project named Assignment2Answer.docx. This is the file you will be uploading later to Canvas.
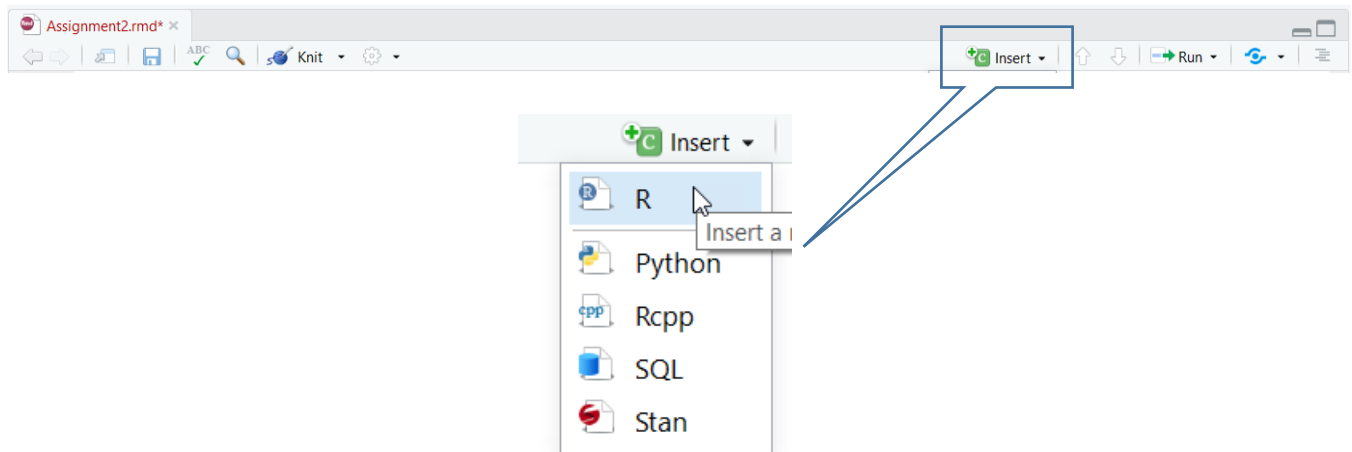
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Part 2 – Adding code and commentary

1.) For this assignment, we will be doing some of the work from Module 1 – Assignment 2 but instead of writing it as a script we will create an R Markdown document.

It may help to see the previous script from Module 1 (this will allow you to reuse the code). To access your previous project, open another session of RStudio and select File -> Open Project… and browse to the folder where your Module 1 Assignment 2 is located and double click on the Assignment2.Rproj file in the folder.
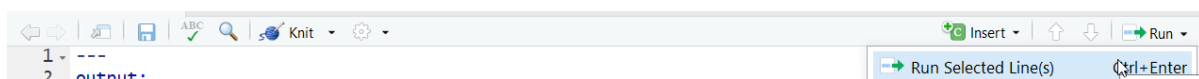
2.) Back in the RStudio session for this project, create a new paragraph (3-4 sentences) below that last header in your .rmd document that will describe what this document will present (include text about this being your first R Markdown document and it will go over some previous topics covered in class including atomic vectors, data frames and data types).

3.) In a new paragraph, include a commentary about the code you will be entering after this paragraph which will be a basic plot showing sales over the past 6 months.

4.) Insert a new chunk of R data by clicking on Insert at the top of the pane in which the R Markdown file is located.

5.) Within the chunk of code, add the code from Module 1 - Assignment 2, Question 2 (this is where you created a plot of sales by month). This should appear in the chunk between ```{r } and ``` (see below)
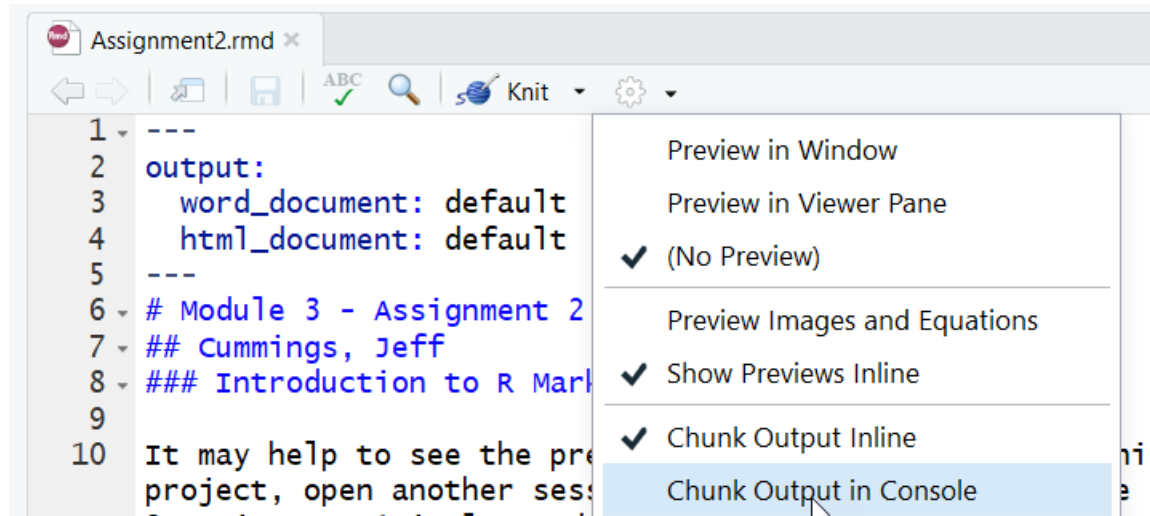

6.) Run the code in the R Markdown file by highlighting the code and clicking on the Run -> Run Selected Line(s) option in the banner of the pane.
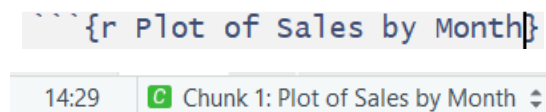

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7.) You may notice that when you run the code, the plot and console code will appear right below the chunk of code you added to the r markdown file. Remember, that you can chose not to display the console code in the R Markdown file by going to the setting screen and unchecking

8.) Before moving on, notice that on the bottom of the markdown pane, there is a part that says Chunk 1 (see image below):

9.) This will not show up in the document presented to me but it is a good idea to start naming your chunks of code in RStudio. To do this modify the first line in the chunk of code you just created to have title like the image below and notice how the Chunk 1 title will change:

10.) This will be helpful in finding where code is located in your file as we continue to create larger R Markdown files in subsequent modules.

11.) Add a paragraph after the code that would answer the questions from the Module 1 - Assignment 2, Question 2. These questions concerned the month with the largest sales and the sales amount for that month.

12.) Below this paragraph, insert another chunk of r code by following the directions in step 4 above.

13.) Within this chunk, add just the code for Module 1 – Assignment 2, Question 4 (this includes the plot as well). Do not include the answers as comments in this code as you will be answering those shortly.

14.) Rename this chunk of code to: Working with Data Frames

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15.) Answer the two questions that were originally comments in the code in a separate paragraph immediately following the chunk of code you just created. These questions were asking about the months that had the most and least amount of sales.

16.) Finally, knit the R Markdown File (see step #7 in Part 1 if you need help) to create a new R Markdown Word output file (it should still be named Assignment2Answer.docx and will appear in the files pane at the bottom right of R Studio).

17.) Upload the **Mod2Assign2Answer.docx** file to Canvas.