**Advanced Data Science**

**Unit I: Homework 1**

This homework assignment is designed to get you started with RStudio and some of the basic coding skills for R.

**Part I: Using RStudio and Running Code from the Console Pane**

Start RStudio and answer the following questions. To demonstrate your competency for each of these questions, please take the appropriate screen shots, paste them, resize them and add them to this document. A portion of your grade on this assignment will be the neatness, clarity and readability of your submitted assignment.

1. Define the variable **string var** as **Trinity Prep Class of 2024** in the Console pane. Define the variable using snake case and then display the variable.

2. Define the variable **string var2** as **Period 4 Data Science** in the Console pane. Define the variable using camel case and then display the variable.

3. Define the variable **string var3** as **Stuart 411** in the Console pane. Define the variable using camel case and then display the variable.

4. Define one Boolean variable and display the results.

5. Define one Integer variable and display the results.

6. Define one Double variable and display the results.

7. Define one String variable and display the results.

8. For the four variables you defined in exercises 4 – 7, use the typeof() function to check the types of your variables.

**Part II: Use RStudio to Open, Run and Edit an R script**

9. Download the file exercise\_1-1.R from Canvas.

Open the file names exercise\_1-1.R using either File Open File in RStudio or locating the file on your computer and double-clicking it.



10. Click the Run button in the Source pane. This will run the first statement in the script. Note that the comments are printed to the console but otherwise don’t do anything.

11. Press Ctrl+Enter (Windows) or Command+Enter (macOS). This will run the second statement in the script.

12. Keep running statements until you have run every line of code in the script. As you do, notice how variables are added to the Environment pane and changed.

13. Examine the code in the Source pane and note how it uses some of the arithmetic operators we learned in this unit to calculate percentages. Compare the first calculation, which uses two statements to divide and multiple, to the second calculation, which uses one statement with parentheses.

14. Add a calculation for the number of pirates who chose neither R nor C as their favorite letter and store this number in a new variable. You can name this variable whatever you want.

15. Print a message and the value of your new variable to the console.