Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Group\_\_\_\_\_\_\_\_\_\_

Intro to R and RStudio

In order to use R and not be super-duper frustrated, it’s important to learn the basics of both Statistics and Computer Science. This Crash Course guides you through both subjects in an effort to alleviate some R-related concerns.

Use the file titled RCrashCourse.R to answer the following questions!

Any highlighted questions are challenge questions. Optional, but recommended!

1. R Basics and Math:

a) What are the 4 primary data types used in the R coding language?

b) Explicitly write out the output of CharVector.

c) What is the output when you subtract IntegerVector from DoubleVector?

d) What happens when you add CharVector to DoubleVector? (Can you logically do this???)

e) What is the output when you add DoubleVector to BoolVector?

f) What is a comment and how do you write one?

1. Vectors and Accessing Elements:

a) What types of data can Vectors contain?

b) What code do you use to get the 5th element of Vector1? What is it? Is it what you expected?

c) What code gives you index 1, 18, 24, and 27-end of the vector? What is the output?

1. Lists Are Hard:

a) What code calls the Value of “List Element” 9 of Listy?

b) Without running it, what is the output of ListPrime[[2]][1] ? Of ListPrime[[2]][2] ?

1. Dataframes and Columns:

a) In your own words, what is a dataframe? (Hint: think matrix)

b) Do you prefer looking at df in the Console or View(df)?

c) How big is df? What class is it?

d) What class/type of data are Variable1 and Variable2?

1. R Logic and Logic Equations:

a) What does the “!” symbol do to logic?

b) What is the value of !(13 < 6) & ( (40 - 3) != 37) ?

c) What about !(13 < 6) | ( (40 - 3) != 37)

d) What about !(13 < 6) & ( (40 - 3) != 37) | (42 <= (8\*6 + 9 - 15)) ?

1. Logical Subsetting:

Write the code that represents the following English phrase:

* Category1 column of dataframe df ***such that*** the values of Category1 are *within* the vector (“Jesse”, “Is”, “So”, “Not”, “Uncool”).