**DS 710**

**R Programming Assignment**

**Homework 1:**  Share text file containing R code

For each of the following, copy **your R code and the output** (and your written response, for part 1.8) into a .r, .txt, .doc, .docx, or .rmd document.  Submit your finished document to GitHub.

1.0  Open R.  The first line of text in the console window tells you which version of R you are running (this should be version 3.1.2).  Copy this line of text into a document, to verify that you’ve installed the correct version.

R version 3.3.0 (2016-05-03) -- "Supposedly Educational"

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Platform: x86\_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.

You are welcome to redistribute it under certain conditions.

Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.

Type 'contributors()' for more information and

'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or

'help.start()' for an HTML browser interface to help.

Type 'q()' to quit R.

> ##1.1 Calculate the cube root of 2015, as follows:

> 2015^(1/3)

[1] 12.63063

> ##1.2 Find the absolute value of 5.7 minus 6.8 divided by .58:

> abs(5.7-6.8)/.58

[1] 1.896552

> ##1.3 Create a list of integers from 1 to 12 and call it “a”:

> a = 1:12

> a #(this will print a, so you can paste it into your homework; do this each time)

[1] 1 2 3 4 5 6 7 8 9 10 11 12

> ##1.4 Create a sequence of odd numbers from 1 to 11:

> b = c(1, 3, 5, 7, 9, 11)

> b

[1] 1 3 5 7 9 11

> ##1.5 Create the same sequence in another way:

> c = seq(1,11, 2)

> c

[1] 1 3 5 7 9 11

> ##1.6 Take the natural log (ln) of a. (Note that this is done to the entire “vector” called a.)

> ln.a = log(a)

> ln.a

[1] 0.0000000 0.6931472 1.0986123 1.3862944 1.6094379 1.7917595 1.9459101 2.0794415 2.1972246

[10] 2.3025851 2.3978953 2.4849066

> ##1.7 Compute the squares of the odd numbers from 1 to 11.

> c^2

[1] 1 9 25 49 81 121

> ##1.8 Use ?sd to view the help file for the sd function. What does it do?

> ?sd

> ## It provides help for the sd() function

> ##1.9. Create a variable Name that contains your first name. Because your name is a character string, not a number, you will need to put it in quotes so that R knows not to go looking for a variable with that name:

> Name = "Brent"

> ##Then type

> paste("My name is", Name)

[1] "My name is Brent"