# Homework (HW01) Intro to R

### General Instructions

For this exercise you will upload 1 R file into blackboard. You can find this by going to Weekly Content, Week 1, and then clicking on the HW01 DropBox near the lower 1/3 of your blackboard screen. Be sure to read the Homework guideline that defines what your first 3 lines of code (comments in this case) will look like. This code picks up right where you left off when completing PrepX-01.

Reminder:

* We expect that you will benefit from the code presented in Introduction to Data Science, as well as examples provided by the instructors, the Internet, and other sources. But you must always, always, always give credit to your sources.
* All HW must start with an Identification Block like this sample…

################################################

# IST 387/687, Standard Homework Heading

#

# Student name:

# Homework number:

# Date due:

#

# Attribution statement: (choose the statements that are true)

# 1. I did this homework by myself, with help from the book and the professor

# 2. I did this homework with help from the book and the professor and these Internet sources: <provide the urls>

# 3. I did this homework with coaching from <Name of another student> but did not cut and paste any code

# Run these three functions to get a clean test of homework code

dev.off() # Clear the graph window

cat('\014') # Clear the console

rm(list=ls()) # Clear all user objects from the environment!!!

# Set working directory

# Change to the folder containing your homework data files

setwd("~/MyDesktop/ISTX87/Homework")

### HW01

**Step 1: Open a new R Script File and copy all of your PE01 R code into your new file or open your existing PE01 and simply save it as HW01\_YourLastName**

**Step 2: Using the max/min functions in R**

1. Compute the max height, store the result in ‘maxH’
2. Compute the min weight, store the results in ‘minW’

**Step 3: Vector Math**

1. Create a new vector called extraWeight, which is the weight + 25 (every person has a 25-pound backpack)
2. Compute the average of extraWeight

**Step 4: Using Conditional if statements** *Hint - Try the following code in R:*

*if ( 100 < 150 ) "100 is less than 150" else "100 is greater than 150"*

1. Test if maxH is greater than 70 (output “yes” or “no”)
2. Test if minW is greater than the variable ‘a’ (output “yes” or “no”)

**Step 5: Practice with Vectors**

1. Store in ‘bigHT’ all the values in the height vector which are greater than 60
2. Create a new vector (called ‘smallWT’), which is the second & fourth elements of the weight vector.
3. Remove the third element of weight (and store the result in weight).
4. Does height(3) generate an error? If so, why?

***You must submit all Homework to blackboard prior to the deadline specified for each assignment.***

Late HW assignments will not be graded or accepted for credit.

*Materials provided by the instructors of this course are copyrighted 2018 by Jeffrey Saltz and Jeffrey Stanton, or by the respective instructor that produced them. These materials are provided to enrolled students for their exclusive use during the semester of instruction. Uploading instructor-produced materials to Internet sites (e.g., Coursehero) without permission is considered a breach of professional ethics and will be reported as a possible academic integrity violation.*