Introduction to Programming in R - STA 521

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1 Agenda

1. No planned tasks today. Any questions that you have about R.

2 Lab Tasks

1. Store a sequence of integers from $1, \ldots, 25$ in the variable mySeq using the $a : b$ method.
2. Use the sample() function to select a sample of size $n = 5$ from mySeq with replacement.
3. Use the command set.seed(1) to set the seed for the random number generator.
4. Use the function rnorm() to generate $n = 100$ standard normal draws and store this in the variable myData.
5. Write a function named (anotherTrivialFunction()) that takes as its inputs one argument, a data vector. Your function should store this vector, by row, into a symmetric 10×10 matrix. Next, create an empty list of length 5 using the vector() command. Loop through this list and at each empty position in the list, store a 10×10 matrix that contains 10 rows sampled, with replacement from your original matrix. Finally, return this list. Apply your function to myData

3 Directions

In general for Labs, at the top of any file you are asked to submit, please list the following:

1. First Name Last Name
2. Lab Date
3. Team Member(s)

With respect to any item for which you are asked to generate any output, please provide the actual R output as a part of your solution and any explanation needed as well. For any functions/ computations that you will write, please list the following as comments before the step in R:

1. Task number and descriptions.
2. Input(s) with descriptions.
3. Outputs(s) with descriptions.
4. Function/ output summary (along with intermediate step comments).

For Lab 2, please provide the following deliverable items:

1. Please provide your solutions using Markdown as a .pdf with the following naming convention: LastName_FirstName_Solutions_Lab2.pdf.
2. Provide your .Rmd file (this **MUST** compile) for the lab using the following naming convention: LastName_FirstName_Solutions_Lab2.Rmd