CIT 660 - Statistical Analysis and Visualization.
Spring 2022.
Assignment 05.
Deadline: Wednesday – July 6th, 2022, 11:59 pm.

Write an R script called “Assignment_05.R” to do the following:

- Read the data in the file titled “Assignment_05_GE_Data.txt”.
  - This file has 100 expression values for one gene from healthy tissues and another 100 values from cancerous tissues for the same gene.
  - Data are not paired.
- Use hypothesis testing to investigate whether cancer changes the expression level for this gene.
- Do the hypothesis testing using the below two methods:
  1. Either t-test or Wilcoxon: you need to justify your choice.
  2. Permutation test: take the test statistic as the difference between the average healthy values and the average cancerous values.
- Compare the p_values for the above two methods.

- You need to deliver the following:
  - A single script file to do all the above requirements.
  - A single text file reporting the p_value of each method.

Good luck!