CMPE 59H: Bioinformatics, Fall 2018
Assignment 2 - Burrows-Wheeler Transform
Due: 28/12/2018, 23:00

A. Implement a program that constructs the Burrows-Wheeler transform of a string. Your program should take a string (DNA or protein sequence) ending with the special $ character and output its Burrows-Wheeler transform. For example, for the sample input *GCGTGCCTGGTCA$*, the output should be *ACTGGCT$TGCGGC*.

B. Implement a program that given the Burrows-Wheeler transform of a string, reproduces the original string. Your program should take the Burrows-Wheeler transform of a string (DNA or protein sequence) including a single $ character as input and output its original version. For example, for the sample input *ACTGGCT$TGCGGC*, the output should be *GCGTGCCTGGTCA$*.

In your report include *screenshots* from running both of your programs on the sample inputs given above.

Submission: Please submit your assignment using Moodle. Upload a single zip file named as YourNameSurname.zip. Your zip file should include your report, your source code, and the corresponding readme file. You can use any programming language of your choice. But, your readme file should clearly explain how to run your program.

Late Submission: You are allowed a total of 3 late days on homeworks with no late penalties applied. You can use these 3 days as you wish. For example, you can submit the first homework 2 days late, then the second homework 1 day late. After using these 3 extra days, 10 points will be deducted for each late day.