BIL214 - Systems Programming
LAB3

In this lab, you will follow the 2 questions given below step by step. For the first question, write your answers or commands into a file named "q1_<studentid>.txt". For the second question, you will write a bash script into a file named "q2_<studentid>.sh" and upload your file into the form below. **Do not** write outputs into the file.

Upload Form: https://forms.gle/SwhCHro9QDcF9V7i8
Deadline: 18:30 07.10.2021

1. **tr and sed**
   We want to change the input "You need to work faster" to "I need to work faster", using the terminal.
   a. Run the following command **echo "You need to work faster" | tr 'You' 'I'**
      Did it accomplish what we want? Why / Why not? Explain.
   b. Write the necessary bash command to change *"You need to work faster"* to *"I need to work faster"* using **sed**.

2. **Bash Script**
   Write a bash script that takes 3 arguments to perform caesar (shift) cipher.
   These arguments will be the input file name (-i), the output file name (-o), and shift amount (-s).
   Caesar cipher shifts each letter to the right by the shift amount.
   e.q. if your input text is "zebra" with the shift amount 3 the output will be "cheud".

   Example
   ~$ cat input.txt
     Caesar cipher

   ~$ ./q2_111111111.sh -i input.txt -o output.txt -s 4

   ~$ cat output.txt
     Geiwev gmtliv

   The order of the arguments can be mixed.
   The cipher should be done using the English alphabet.
   You can only use tr or sed to modify text.
   If the provided input file does not exist an error should be displayed.
   If the provided output file does not exist the script should create it.
   You should override the output file if it exists.