CS112: Computing Laboratory
Assignment :- 10
Date: 22/04/2020

For proper indentation and commenting in the code: 10 marks
For below questions: 10+20+10 =40 marks
Total marks: 40 + 10 = 50 marks

1) Given two sets A and B of strings. Write a program to find the number of pairs that are complete (meaning that they contain all all characters from 'a' to 'z') on concatenating a string from set A to a string from set B. For example, the pair "abcdefghi" (from A) and "jklmnopqrstuvwxyz" (from B) is complete as their concatenation has all characters from 'a' to 'z'.

2) Create a doubly linked list, and do the followings:

   (i) swap K-th node from the beginning of the list with K-th node from the end of the list. Please note here that the nodes are to be swapped and not the data in the nodes;

   (ii) Ask a value m and perform clockwise rotation of the doubly linked list by m places.

3) Write a function which takes a 2-D array of integers as argument and prints the values and their addresses in (i) row-major and (ii) column-major fashions. Please note that the function should be called from the main function using "call by reference" and all operations in the function should be performed using pointers.

Instructions to follow:

1. Implement all the above programs and give the file names as follows:
   a. Name of program file: question_1.c
   b. Name of output file: output_1.out

c. Run with few sample inputs and mention the details: execution_1.txt

*** Note that the format of details in execution_1.txt would be:

Run1: Input: 4 Output: 567

Run 2: Input: 19 Output: 5678

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2) Create a zip file which includes all the above files naming it **<Student_EmailID>.zip** and upload the zip file through google form: https://docs.google.com/forms/d/e/1FAIpQLSdpQvb9VrPMrvE3e7-eBXikpeIM4Hqzr_R_TkM3wg6USjXQ2Q/viewform

3) **Deadline of submission :- 6 PM 23/04/2020 (sharp)**

4) Feel free to contact your respective TA for any query.