Data Structure and Algorithm Lab
Lab Sheet-2

Lab schedule: September 2, 2021
Submission deadline: September 8, 2021, 11.59 PM

Q1. Given an array, write a user defined function to reverse every sub-array formed by consecutive k elements. The array should be passed by reference to the function.

Examples:

Input:
arr = [1, 2, 3, 4, 5, 6, 7, 8, 9]
k = 3
Output:
[3, 2, 1, 6, 5, 4, 9, 8, 7]

Q2. Write a recursive function to obtain the first 25 numbers of a Fibonacci series. In a Fibonacci sequence the sum of two successive terms gives the third term. Following are the first few terms of the Fibonacci sequence:

1 2 3 5 8 13 21 ….

Q3. Write a program of a menu-driven interface to offer the user four options as follows:
Enter a choice:

0 Print the array of grades
1 Find the minimum grade
2 Find the maximum grade
3 Print the average on all tests for each student
4 End program

Functions should be implemented using pass by reference method. The memory for the array should be allocated dynamically.

Q4. Write a program that compares two given dates. To store date use structure say date that contains three members namely date, month and year. If the dates are equal then display message as "Equal" otherwise "Unequal". Create a user defined function Compare_Date() to do so which takes pointer to structure as input.