Programming & DS Lab (Course Code: CS112)
Practice Assignment - 5

Submission Deadline: **13/05/2022 Midnight**

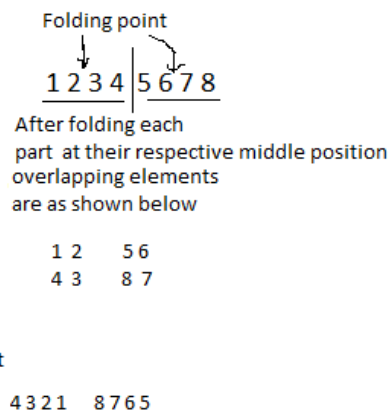**Instructions:**
- Proper indentation is mandatory.
- You should comment the statements whenever necessary, to make the code understandable.
- Answers files: 5_1.c, 5_2.c, 5_3.c, 5_4.c, 5_5.c, 5_6.c

Q1. Suppose we divide a one-dimensional array of integers of length 2n (where n is only) into two equal parts and then fold each part at its middle position. Swap the elements that overlap with each other in those respective parts.

e.g.

Example_1: int arr[ ]={1, 2, 3, 4, 5 , 6,7,8}   //even length array

Folding point

1 2 3 4 | 5 6 7 8

After folding each
part at their respective middle position
overlapping elements
are as shown below

1 2   5 6
4 3   8 7

Final output

4 3 2 1   8 7 6 5

Q2. Write a function Power() to raise a number m to a power n, where m and n are integers. Write a main that gets the values of m and n from the user and then calls Power() by passing m and n values as parameters.

Q3. Write a program that reads a floating point number and then displays the right-most digit of the integral part of the number. For example, if 123.45 is the input, then 3 should be the output.

Q4. Write a program to store 10 numbers in 1-D array and then sort the array in ascending order. After sorting display the sorted list.

Q5. Write a program to store 9 numbers in 3 by 3 matrix then transpose the matrix.

Q6. Write a program to check if a number is palindrome.