



Student Name: _____

Roll No: _____

Program: BS(CS/SE)

Quiz # 01

Semester: Spring 2022

Marks: 10

Time Allowed : 15 minutes

Date: 22-02-2022

Course: CS2001 - Data Structures

Instructor: Waqas Ali

1. Consider an array-based list of integers with a **maximum size** of 10. Consider if there are n integers in the list at any given time. You want to swap the 1st element with the n th element and the 2nd element with the $(n-1)$ th element in the list and so on.

Write a function that performs the swapping operation explained above. You are not allowed to use index of the array to access its elements, use pointers instead. You do not have to write the code to implement the array list. Assume that a pointer **start** is pointing to the first element in the list and there is no pointer pointing to the end of the list.

Solution

```
void reverse()
{
    int *left = arr;
    int *right = arr + n - 1;           // Considering n is the no. of elements
    int swaps = n / 2;
    for (int i = 0; i < swaps; i++)
    {
        int temp = *right;
        *right = *left;
        *left = temp;
        left++;
        right--;
    }
}
```