

CMPE 252 - C Programming, Spring 2023-2024

Prelab 01

In this prelab, you will create an array and swap given 2 elements of this array by means of following functions.

```
void readInput(int arr[], int *nPtr); // reads numbers from the standard input into  
arr, and stores the number of elements read in the memory cell pointed to by nPtr
```

```
void swap(int *xPtr, int *yPtr); // swaps the numbers pointed to by xPtr and yPtr
```

```
void printNumbers(const int arr[], int n); // prints the elements in arr[0..(n-1)]
```

Prelab Steps

- Define a macro named "SIZE" with the value "1000".
- Define an integer array with the size "SIZE".
- Call readInput function.
- In the readInput function,
 - First, read total element count to be stored in arr into nPtr.
 - After, read array elements into arr with the amount in the cell pointed by nPtr.
- Print the array elements with printNumbers function.
- Take 2 integers from the user. These integers are the indices to be swapped.
- Swap the values of those indices by using swap function.
- Print the array elements again.

Important Note: You are going to use these implemented functions in the lab questions. So, implement them carefully, if you do not want to have problems during the lab.

Example Run:

```
Enter the number of elements:
5
Enter 5 elements:
1 2 3 4 5
Array elements: 1 2 3 4 5
Enter the first index to be swapped:
2
Enter the second index to be swapped:
3
Array elements: 1 2 4 3 5

Process returned 0 (0x0)   execution time : 16.808 s
Press any key to continue.
```