Homework Assignment 6

Part A (20%)

1. The keyword used to transfer control from a function back to the calling function is
   A. switch
   B. goto
   C. return
   D. exit
2. The default parameter passing mechanism is
   A. Call by value
   B. Call by reference
   C. Call by value result
   D. None
3. After a function returns, its local variables keep their values, which serve as their initial values the next time the function is called.
   A. True
   B. False
4. A function declaration just specifies the function's interface while a function definition lists the contents of a function.
   A. True
   B. False

Part B (80%) Programming Exercises:

1. Write a program whose input is two integers and whose output is the two integers swapped.
   a. Your program must define and call a function swapValues print the two values in swapped order. **void swapValues (int userVal1, int userVal2)**
   b. The expected output:

```
Input 1st number: 2
Input 2nd number: 4
Before swapping: n1 = 2, n2 = 4
After swapping:  n1 = 4, n2 = 2
```

2. Modify your Homework Assignment 5 Part B1 program by using functions.
   a. Read numbers in an array from your keyboard.
   b. Display it in reverse: implement with **void revDisply( )** function
   c. Find the maximum and minimum element in this array: implement with **maxElemt() and minElemt()** functions.
   d. Design the parameter list and return type of above two functions.
   e. The expected output:

```
Input the size of the array to store the number:4
Input 4 number of elements in the array:
element - 0: 4
element - 1: 2
element - 2: 7
element - 3: 6

The values store into the array are: 4 2 7 6
The values store into the array in reverse are: 6 7 2 4
Maximum element is: 7
Minimum element is: 2
```

3. Write a program to read two square matrices of the same size in 2-D arrays from your keyboard:
   a. Display addition of the two matrices.
   b. Display subtraction of the two matrices.
   c. Define two functions with Void return datatype:
      void **arrayAddition( ),** void **arraySubtraction( )** to structuring your program**.**

   d. The expected output:

```
Input the size of the square matrix (less than 5): 2
Input elements in the first matrix :
element - [0],[0]: 1
element - [0],[1]: 2
element - [1],[0]: 3
element - [1],[1]: 4
Input elements in the second matrix:
element - [0],[0]: 5
element - [0],[1]: 6
element - [1],[0]: 7
element - [1],[1]: 8

The First matrix is :
1 2
3 4
The Second matrix is :
5 6
7 8
The Addition of two matrix is :
6 8
10 12
The Subtraction of two matrix is :
-4 -4
-4 -4
```

Please reference the assignment submission guide on the iLearn for submission.