

## ES 112 Algorithms and Computer Programming (Spring 2018)

### Assignment 2

**1) (50p)** Write a function to get an integer array A and flip the order of every group of 5 integers in stack (use a second array B for the flipped version). In the main function, ask the user to enter the array elements and print the index of the items if they have the same value between the first (before the function is called) and the last (after the function is called) array. Assume that the size of the array entered by the user is a multiple of 5.

Ex:

```
Enter numbers: 1 5 6 5 4
B becomes:    [4 5 6 5 1]
You should print 1 2 3 because
A[1]=B[1] (which is 5)
A[2]=B[2] (which is 6)
A[3]=B[3] (which is 5)
```

```
Enter numbers: 1 5 6 7 4 6 8 5 8 5
B becomes:    [4 7 6 5 1 5 8 5 8 6]
You should print 2 6 7 8 because
A[2]=B[2] (which is 6),
A[6]=B[6] (which is 8),
A[7]=B[7] (which is 5)
and A[8]=B[8] (which is 8)
```

**2) (50p)** Write the following C function:

```
int most_repeated( int A[], int *last)
```

which returns the element in the array A that has the maximum number of occurrence. The function does not receive the size of the array; instead it receives a pointer (\*last) to the last element of the array. Assume that there only one element with max occurrence. Write the main function to test your function with the arrays in the following examples.

Ex:

```
A: [5 10 10 4 10 5 6]
You should print 10,
because 10 appears 3 times and
3 is the max occurrence number.
```

```
A: [5 10 10 4 10 5 6 5 5 6 10 5 5 5 6 10]
You should print 5,
because 5 appears 7 times and
7 is the max occurrence number.
```

#### Submission information:

Create two “.c” files (Do not use Turkish characters or spaces in the filenames; use only letters from English Alphabet, digits and underscores):

YOUR\_FULLNAME\_Q1.c, YOUR\_FULLNAME\_Q2.c

Put these files in a single archive file (zip or rar): YOUR\_FULLNAME\_Hw2.zip and submit this file to the COADSYS system.

Late submissions will not be accepted!

Please do your own work! Good luck!