Fundamentals of Computing and Programming

In-class programming exercise. Time Limit: 30min

October 26 , 2022

For this assignment, you will write a program, compile and execute it. Once you are done please submit the program to this email address for evaluation:

You will write a program with the following functions:

1. `int read_array(int a[]);`
   Reads positive integers into he array. Returns when a number less than or equal to zero is entered. Returns the number of integers read.

2. `void print_array(int a[], int n);`
   Prints the `n` items in the array.

3. `void split_array(int a[], int n, int p, int b[]);`
   This function copies all items from position `p` to the end of the array `a[]` of `n` items into `b[]` .

4. `void join_array(int a[], int n, int b[], int m);` It copies the `m` elements of `b[]` after the `n` elements of `a[]` (ie appends the second array to the end of the first array)

5. Write a `main()` function to read an array `a[]` and a position `p` from the user. It splits `a[]` into two at position `p` . It then appends the remainder of `a[]` (which was not copied) to the end of `b[]` . Thus we can say hat the `main()` function creates a certain shuffle of `a[]` at point `p` in `b[]` .

Here is a sample of the execution of the program: For clarity the input given by the user is shown in *italics*:

```
$ ./myprog
Give me positive values for the array and end with a negative number
 10 15 20 25 1 2 3 -1
The array is
10 15 20 25 1 2 3
Give me a position in the above array to shuffle at
 4
After shuffle at position 4 the new array is
1 2 3 10 15 20 25
$
```