
Homework04 – Arrays

Due 11:55 PM Saturday, March 29, 2014, **3.5 points**, **Individual** assignment

Purpose of Assignment

- The goal of this homework is to get familiar with an array processing.
- This time, we deal with two data types of arrays, characters and integers.

Assignment 1 (2.0 points)

1. Debug Program 2.12 in your textbook according to Figure 2.10 which explains the algorithm correctly. Don't rewrite the whole program nor introducing a new algorithm.
2. Once you fix the bug in Program 2.12, then rewrite Program 2.12 to satisfy the function prototype specified below;

```
char *strninsExtended(const char *s, const char *t, int i)
```

This function allocates a string that just fits two input strings to be combined and returns its pointer as a function return value. The caller of the function is responsible for freeing the resource. Don't use a magic number such as MAX_SIZE and try not to use the **temp** variable in the Program 2.12. You are supposed to extend Program 2.12 since it is a fine algorithm or you don't need to invent a wheel again. My implementation is a few statements longer than Program 2.12.

3. strninsDriver program is provided for your programming reference.

Assignment 2 (1.5 points)

4. Write a function called smoothie() that takes an array of ints. On completion the array contains the same numbers, but wherever the array had two or more consecutive duplicate numbers, they are replaced by one copy of the number. Hence, after smoothie() is done, no two consecutive numbers in the array are the same. Any unused elements at the end of the array are set to -1. For example, if the input array is [0 0 0 0 1 1 0 0 0 3 3 3 1 1 0], it reads [0 1 0 3 1 0 -1 -1 -1 -1 -1 -1 -1 -1 -1] after smoothie() completes.
5. smoothieDriver.cpp is provided for your programming reference.

Checklist

1. Turn in one source file called **hwo401_StudentID_Name.cpp** that includes both strnins() and strninsExtended().
2. Turn in smoothie() function in the file called **hwo402_studentID_NAME.cpp**.
3. Don't turn in any ~driver.cpp files.
4. If I can't find your file because of your filename, I can't grade it, and your grade will suffer.
5. Each source code must be documented properly that includes author(s), date, description, parameters/input/output and example(s).
6. Include the following line at the top of your every file with your name signed.
On my honor, I pledge that I have neither received nor provided improper assistance in the completion of this assignment. Signed: _____