CptS 121 – Program Design and Development October 19, 2020

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**Take-Home Quiz 6 (15 pts) – Arrays**

**NOTE: Please submit your hard copy solution in lab this week**

1. (7 pts) Write a function called remove\_punct() that accepts an array of *characters* and the *number* of items in the array as parameters, *removes* the *punctuation* (',', '!', '.') characters from the array, and returns the *number* of punctuation characters removed.

For example, if the array contains ['C', 'p', 't', 'S', ',', '1', '2', '1', '.', 'i', 's', 'f', 'u', 'n', '!'], then the function should remove the punctuation characters. The function must remove the characters by shifting all characters to the right of each punctuation character, left by one spot in the array. This will overwrite the punctuation characters, resulting in: ['C', 'p', 't', 'S', '1', '2', '1', 'i', 's', 'f', 'u', 'n']. In this case, the function returns 3. Note: if the array does not contain any punctuation characters, then the array is unchanged and the function returns 0.

int remove\_punct(char array[])

{

int numspace = 0;

for (int i = 0; array[i] != '\0'; i++)

{

if (array[i] == ' ')

{

numspace++;

for (int j = i; array[j] != '\0'; j++)

{

array[j] = array[j + 1];

}

}

}

return numspace;

}



1. (8 pts) Write a function called largest\_sum\_sequence() that accepts an array of signed *integers* and the *number* of items in the array as parameters, and returns the largest sum of a sequence of numbers in the array. A *sequence* is defined as a single item or multiple items that are in consecutive adjacent memory locations.

Example 1: 9 3 -1 7 -12 largest sum in sequence is 18 [9, 3, -1, 7] Example 2: -77 3 -2 1 largest sum in sequence is 3 [3]

int largest\_sum\_sequence(int array[], int num)

{

if (num == 1)

{

return array[0];

}

else

{

int total = array[0];

int maxs = array[0];

for (int i = 1; i < num; i++)

{

total = max(array[i], total + array[i]);

maxs = max(maxs, total);

}

return maxs;

}

}

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