

# functions.h

```

1  /*****
2  * AUTHOR      : JOSHUA SALZEDO, Chris Burrell
3  * LAB #8      : Array Train - Set # 1
4  * CLASS       : CS1A
5  * SECTION     : MW: 8AM
6  * DUE DATE    : 04/23/2018
7  *****/
8
9  #ifndef FUNCTIONS_H_
10 #define FUNCTIONS_H_
11
12 #include <string>
13
14 using namespace std;
15
16 /*****
17 * AverageIntArray
18 *     Outputs the average of the elements of the array
19 *     ==> returns index: the position of the item's first occurrence
20 *****/
21 double AverageIntArray(const int ARR[], // IN - integer array
22                       int arrLen);     // IN - Array length
23
24
25 /*****
26 * FindFirstInstance
27 *     Outputs the index the first time input integer occurs within the array
28 *     ==> returns index: the position of the item's first occurrence
29 *****/
30 int FindFirstInstance(const int ARR[], // IN - integer array
31                      int arrLen,      // IN - length of array
32                      int searchInt);  // IN - int to search for
33
34 /*****
35 * FindOccurrencesInt
36 *     Outputs the number of times an int occurs within the input array
37 *     ==> returns occurrences: the number of times an int occurs
38 *****/
39 int FindOccurrencesInt(const int ARR[], // IN - integer array
40                      int arrLen,      // IN - length of array
41                      int searchInt);  // IN - int to search for
42
43 /*****
44 * FindLargestInt
45 *     Outputs the index of the largest element within the input array
46 *     ==> returns minIndex: largest element's index
47 *****/
48 int FindLargestInt(const int ARR[], // IN - integer array
49                  int arrLen);     // IN - Array length
50
51
52 /*****
53 * FindString
54 *     Outputs the index of the searched string within an array
55 *     ==> returns Index: the index of the searched name
56 *****/
57 int FindString(const string ARR[], // IN - integer array
58               int arrLen,          // IN - Array length
59               const string &string1); // IN - string to search for
60
61 /*****

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62  * FindSmallestInt
63  *
64  *      Outputs the index of the smallest element within the input array
65  *      ==> returns minIndex: smallest element's index
66  *****/
67 int FindSmallestInt(const int ARR[], // IN - integer array
68                    int arrLen);    // IN - Array length
69
70 /*****
71  * SumIntArray
72  *      Outputs the sum of all elements within an integer array
73  *
74  *      ==> returns sum : sum of array
75  *****/
76 int SumIntArray(const int ARR[], // IN - integer array
77                int arrLen);    // IN - Array length
78
79
80 #endif /* functions */
81
```