

```
1  """
2  Name: Lam Dang
3  For CS360 Parallel Programming
4  Intro to C Assignment
5  """
6
7  #include <stdio.h>
8  #include <string.h>
9  #include <stdlib.h>
10 #define MAXVALUES 1000000
11
12
13 int sum(int a, int b){
14     return a + b;
15 }
16
17 void sum_pointer(int a, int b, int *summation){
18     *summation = sum(a,b);
19 }
20
21 void sum_array(int len,int a[], int b[], int ** sum){
22     *sum = malloc(sizeof(int)*len);
23     for(int i = 0; i < len; i++){
24         (*sum)[i] = *a + *b;
25         a++;
26         b++;
27     }
28 }
29
30 int compareArray(int len, int ** a, int ** b){
31     for(int i = 0; i < len; i++){
32         if((*a)[i] != (*b)[i]){
33             return 0;
34         }
35     }
36
37     return 1;
38 }
39
40 int main(int argc, char* argv[])
41 {
42     FILE *infileHandler;
43     FILE *canonHandler;
44     char infileName[128];
45     char canonName[128];
46     int value_count = 0;
47
48     int rowOne[MAXVALUES];
49     int rowTwo[MAXVALUES];
50     int valueRowOne;
51     int valueRowTwo;
52
53     if (argc < 3) {
54         fprintf(stderr, "missing filename to read");
55         return(-1);
56     } else {
57         strcpy(infileName, argv[1]);
58         strcpy(canonName, argv[2]);
59     }
60 }
```

```
61     if (!(infileHandler = fopen(infileName, "r"))) {
62         fprintf(stderr, "error opening input file %s\n", infileName);
63         return(-1);
64     }
65
66     while (fscanf(infileHandler, "%d , %d", &rowOne[value_count],
67 &rowTwo[value_count]) != EOF){
68         value_count++;
69     }
70     fprintf(stderr, "read %d values from data\n", value_count);
71     fclose(infileHandler);
72
73
74
75     int * sumArr;
76     sum_array(value_count, rowOne, rowTwo, &sumArr);
77     free(sumArr);
78
79     if (!(canonHandler = fopen(canonName, "r"))) {
80         fprintf(stderr, "error opening input file %s\n", canonName);
81         return(-1);
82     }
83
84
85     int* canonArr = (int*)malloc(value_count*sizeof(int));
86     int item_count = 0;
87     while (fscanf(canonHandler, "%d", &canonArr[item_count]) != EOF){
88         item_count++;
89     }
90     fprintf(stderr, "read %d values\n", item_count);
91     fclose(canonHandler);
92
93
94
95
96     int success = 0;
97     success = compareArray(value_count, &canonArr, &sumArr);
98     if(success == 1){
99         printf("Success");
100     } else {
101         printf("Failed");
102     }
103 }
```