Solution

Consider the following C++ program.
#include <iostream>
using namespace std;
int main() {
    cout << words[1];
    return 0;
}

What is the output of the above program: (10pts)
CS
(array index from 0, words[1] means the second element from array words)

Write the function titles of the functions called in the following main function.
Do not support the body of the function.

```cpp
int main(){
    int x[3] = {1,2,3};
    double a[2][3] = {{1.5,2.5,3.5},{3.5,2.5,1.5}};
    print(a, 2, 3);
    if (isBig(x[0])) swap(a[x[0]][0], a[0][x[0]]); //if x[0] is big, swap 3.5 with 2.5
    return 0;
}
```

Function title of print (10 pts): void print(double a[][3], int row, int col);
Function title of isBig (10 pts): bool isBig(int m); //x[0] is the first element of x
Function title of swap (10 pts): void swap(double &a, double &b); // & for
//swap, a[x][0][0], double value at row x[0] (that’s a 1), col 0 of array a

Write C++ instructions to do the following.
Assume, we have declared,
int a[5] = {3,1,4,-1,8};

1. Print out all the elements in the array. (20pts)
2. Calculate the average of the entries in an array. (20pts)
3. Subtracts this average from every positive entry of the array. (20pts)

Example, if a has value 3,1,4,-1,8, the average of all is 3, then a should change to 0,-2,1,-1,5

1. for (int i = 0; i < 5; i++) cout << a[i] << “ ”; cout << endl;
2. int sum = 0;
   for (int i = 0; i < 5; i++) sum += a[i]; int avg = sum / 5;
3. for (int i = 0; i < 5; i++) if (a[i] > 0) a[i] -= avg;

Note: You may combine step 1 & 2 in one for loop, but it is wrong to
combine step 2 & 3 in one for loop because avg hasn’t been correctly calculated until the end of the for loop in step 2.