Homework 6

Dr. Manna

CS 10 | 30 points | due: 02/22/17 @ 11:59 pm

Problem statement

1. (10 points) Write a program that lets user enter the total rainfall for each of 12 months into an array of `doubles`. You should have another array of `string` holding all the 12 months (you can initialize the array with months). The program should calculate and display the total rainfall for the year, the average monthly rainfall, and the months with the highest and lowest amounts.
   Input validation: Do not accept negative numbers for monthly rainfall figures.

   Sample output:

   ```
   Enter rainfall for January: 3
   Enter rainfall for February: 2
   // ….
   Total rainfall of the year: 30 // just an example
   Average monthly rainfall: 2.5 // just an example
   December has the highest rainfall. // just an example
   August has the lowest rainfall. // just an example
   ```

2. (10 points) Write a C++ program, which has a function **find_greater** that accepts three arguments:
   a. an array
   b. the size of the array
   c. a number n.

   Assume that the array contains integers. The function should display all of the numbers in the array that are greater than the number n. The function declaration is given as follows:
   ```
   void find_greater(int a[], int size, int n);
   ```

   Sample output:

   ```
   // if the array is int a[] = {30, 40, 12, 35, 56, 59, 60};
   // if the size = 7 and n = 30
   // when the function is called from main(), it should display

   The numbers greater than 30 are: 40 35 56 59 60

   // you should test with other sample arrays
   ```

3. (10 points) Write a C++ program, which has a function **search_char** that accepts three arguments:

    a. an array of characters
    b. the size of the array
    c. a character c.

Assume that the array contains characters. The function should return `true` if the character c is found in the array and `false` otherwise. The function declaration is given as follows:

```cpp
bool search_char(char c[], int size, char c);
```

Sample output:

```
// if the array is char c[] = {'a', 'f', 'v', 's', 'd'};
// if the size = 5 and c = 'v'
// when the function is called from main(), it should display

The character v is found in the array!

// if the function is called with c = 'm', it should display

The character m is NOT found in the array!

// you should test with other sample arrays
```

Submission instructions

Please upload .cpp files for all questions to Camino under Assignment→ Homework 6→ ….
Please email me or use the discussion board for clarification.