Assignment 5
Deadline October 2, 2023

Write a program that can be used to gather data about the number of cricket matches college students play in a year. The program should perform the following steps:

a) In the 'main' function, ask the user how many students were surveyed. An array of type 'string' and an array of type 'int' should be dynamically allocated – one will store the name of each student, and the other will store the number of cricket matches each student played in the year.

b) The 'input' function should be called to populate the two arrays.

c) The 'display' function should be called to display all data stored in the two arrays.

d) The 'displayMostMatches' function should be called to calculate the student who played the most matches. The student's name should be displayed and the number of matches they played.

e) The 'mean' function should be called to calculate the average number of matches played. This information should then be displayed following the function call.

f) The 'sortStudents' function should be called to sort the array of student names into ascending order, and the array storing the number of games played by each student should be updated accordingly. After the function has been called, the updated arrays should then be displayed again.

Function Requirements:

1) void input(string names[], int matches[], int size);

> *Allow the user to enter the name of each student and number of cricket matches played by that student and store this information in the two arrays.*
> *Do not accept negative numbers when entering the number of cricket matches played. If a negative number is input, then the user should be asked to re-enter the correct number.*

2) void display(const string names[], const int matches[], int size);

   Display the names of the students, and the number of matches each has played.

3) void displayMostMatches(const string names[], const int matches[], int size);

   Display the name of the student who played the most cricket matches in the year, and the number of matches they played.

4) double mean(const int matches[], int num);

   In statistics, the 'mean' is the sum of the matches in a list divided by the number of matches. This function's arguments are an array of integers, and the number of elements in the array. The function should determine the mean of the array and return this value as type double.

5) void sortStudents(string names[], int matches[], int size);

   Sort the array of student names into ascending order, and the array storing the number of matches played by each student should be updated accordingly.

THE DEPARTMENT STANDARDS FOR "STYLE GUIDELINES" SHOULD BE FOLLOWED IN ALL CODE.