CS111 HW14

Soccer Scores: Array of Structs Operations (20 points for each function)

Define a structure named **Player** that stores the following data about a soccer player.

- name: a string that stores player's name
- number: an integer that stores player's number
- address: a string that stores player's address (3rd field in the given file)
- city: a string that stores player's city
- state: a string that stores player's state
- zip: an integer that stores player's ZIP code
- phone: an unsigned long int that stores player's phone number
- date: an unsigned long int that stores player's contract date
- points: an integer that stores points scored by player

Note: phone and date are large numbers and cannot be stored in a simple integer. That's why I recommend you to use unsigned long int. You can also define them as doubles, but then when you want to print those values, you should set up setprecision s.t. it displays zero floating point digits.

Define an array of 10 Player structures named **team**. Each element is for a different player in team. (20 pts) Call a function named **readData** that reads players' info from file **team.txt** into the array.

Display a menu containing the following choices. Write a function for each choice.

1. (20 pts) displayData. Display all the data stored in the array.
2. (20 pts) getAverage. Calculate and display the average of points earned by the team members.
3. (20 pts) getHighest. Display (print) all the info of the player who has earned the most points.
4. (20 pts) getTarget. Return (by references) all the info of the player whose number is **num**.

Function getTarget should accept an array as its first argument and an integer as its second argument. The second argument should be the number of target player. The function should return all the info of the first occurrence of the given number. Use references to return all the player's info fields.

Example: getTarget (team, 17, …) returns Mike_Lynam 65_Terramar Carlsbad CA 92034 7609642364 09272015 5000.

Before calling the function, ask the user to enter the target player's number. In this example, I assume the user enters 17. Then pass the number entered by the user (which is 17 in this example) to the function. Then the function searches the elements of array to find an element with player's number 17. The function finds out that 17 is the number of player Mike_Lynam. Then the function returns all the info of this player using references. After calling this function, the main function prints all the values returned by the function.