**Preparation for Assignment #1 (the Structured Data in C++)**

**Objectives**: The main objective of this lab is to help students prepare for assignment #1. Students will use the structured data, which they learned in the lecture, to make the C++ code simpler, easier to read, and easier to work with. Students will also practice using arrays with structured data.

**Descriptions:** Lately, the coach of the Monarchs football team at **ODU** had some difficulties of keeping track of the players’ information. This type information is very dynamic due to students’ graduation. Those students who graduates must be replaced by new students whom just joined ODU. Assume you are hired by ODU to keep track of all players in the Monarchs football team. Your program must read the players information from a text file and provide the user the option to save data in another text file.

**Task:** Your task for this portion of the lab is to write a C++ program that declares a struct to store the data of a football players (*player’s name, player’s position, number of touchdowns, number of catches, number of passing yards, number of receiving yards, and the number of rushing yards*). Your program will read the players information from the file playersData.txt which is provided. The main() function of your program should be very simple. The main function should be a collection of variables declaration and functions call. You can implement this program in steps as follow:

* **STEP 1:** Declare a struct to read the data from the provided text file. Choose appropriate representative name for the struct and for all member data elements of your struct. Follow the naming convention, which the class instructor explained during his lecture time. Show your progress to your teaching assistant.
* **STEP 2:** Your program must use an array of **10** components to store the data of **10** football players. Declare the array, implement this task and show your work to the teaching assistant.
* **STEP 3:** Your program must contain a function to input data and another function to output data. Implement these functions and show your work to the teaching assistant.
* **STEP 4:** your program must include functions to search the array to find the index of a specific player, and update the data of a player. Implement this function and show your work to the teaching assistant.
* **STEP 5:** Before the program terminates, your program must give the user the option to save data in a file. Implement this function and show your work to the teaching assistant.
* **STEP 6:** Your program should be menu driven, giving the user various choices. Implement the menu and show your work to the teaching assistant.

**Sample Run:**

