Computer Science I Honors
Thursday Problem 1: Employee List
Due Friday, 1/20/2012, 11:55pm on Webcourses

Assignment Objectives

1) **Practice manipulating Linked Lists.**

The Problem

You are working as the Vice President's assistant at UCF inc. and are required to gather a list of employees and their monthly points earned at the end of each month. Then at the monthly meeting you are to bring two lists: (1) the Vice President's List which is just a list of the employees sorted by their points earned, and (2) the President's List which is the sorted list in reverse order with the highest earner added to the beginning. You see, the President is busy, so he wants to see the one person he should promote if he has it in his budget, followed by all of the people he can fire if need be. You also need to print out the total points earned and the average points earned.

Since you have just learned Linked Lists, you are going to practice using them. You want to read from your file ("employee_list.in") and insert each employee in order into a linked list. Then you can easily print the list out for the Vice President. Then for the President's list you will just have to reverse that list and take off the last and append to the front.

Input/Output Specification

You read in input from a file, "employee_list.in". You generate your output to the file **"employee_list.out"**.

Implementation Restrictions

You must use the following struct:

```
struct employee {
     int points;
     char name[50];
     struct employee *next;
};
```

Input File Specifications

The number of employees, ***n***, will be followed by ***n*** lines containing each employee's information on a separate line. The employee's name will be a string with no spaces, followed by that employees points earned.

Sample Input File

```
5
Maggie_Pie 250
Sarah_Buchanan 1500
Miss_Dixie 550
Bella_Ball 100
Bobby_Black 1000
```

Corresponding Output

```
Vice President's List:
1) Sarah_Buchanan 1500
2) Bobby_Black 1000
3) Miss_Dixie 550
4) Maggie_Pie 250
5) Bella_Ball 100

President's List:
1) Sarah_Buchanan 1500
2) Bella_Ball 100
3) Maggie_Pie 250
4) Miss_Dixie 550
5) Bobby_Black 1000

Total Points Earned:
3400

Average Points Earned:
680
```

Deliverables

- Turn in a single file, ***employee_list.c***, over WebCourses that solves the specified problem.
- You do not need to turn in ***employee_list.in*** or ***employee_list.out***, but make sure your program reads input from a file named ***employee_list.in*** and writes output to a file named ***employee_list.out***.
- If you decide to make any enhancements to this program, clearly specify them in your header comment so the grader can test your program accordingly.