Problem Set #2 - Due 02/19/02

The purpose of this problem set is to:

- Help you become familiar with straight-line programming.
- Familiarize you with the material covered in the second week of class

1. Please turn in each problem on a separate page. Each page should have your Name, email id, and the problem number clearly printed/written on it. Keep track of how long time it takes to complete each problem. The time taken for each problem should be printed on the first page. If you use more than one page, please STAPLE the pages together. You will loose points if you do not document the time taken for each problem, which at the same time means that you will get points for documenting "time taken" A template (in PDF form) is available on the web.
2. There is a template (in PDF form) available for presenting case studies. Please use that if the problem requires you to use the case study methodology.

Problem 1

Write an Ada 95 program that will accept 10 floating-point numbers and return the average of all of them. Use a single FOR Loop to get the inputs. Present the **solution in case study format. Turn in your code electronically**.

Problem 2

Write an Ada95 program that will display the following output.

```
**********
*********
********
*******
******
*****
****
***
**
*
```

The Number of lines in the triangle is user defined (i.e., prompt the user to get the number of lines in the triangle.) How many FOR loops do you need to implement the program? Turn in a **hard copy of your code listing** and **an electronic copy of your code**.

DO NOT DO:
Put("**********");
Put("*********");
Put("********");

Problem 3

Write an Ada95 program using the For loop(s) that will display an inverted isosceles triangle as shown below:

```
***********
 *********
  *******
   *****
    ***
     *
```

As with problem 2, the number of lines is user defined. Turn in the solution **in case study format** and **an electronic copy of your code**.

Hint: How many *'s do you need on the top line? What is the correlation between successive lines?

Problem 4

Solve the following problems form Chapter 1 of Brookshear Page 67.

Part 1. Chapter Review Problem #32
Part 2. Chapter Review Problem #34 Part f
Part 3. Chapter Review Problem #34 Part k.
Part 4. Chapter Review Problem #35 Part e.

Problem 5

Solve the following problems form Chapter 1 of Brookshear Page 68.

Part 1. Chapter Review Problem #39 Part a
Part 2. Chapter Review Problem #39 Part b
Part 3. Chapter Review Problem #41 Part d
Part 4. Chapter Review Problem #41 Part f

Problem 6

Solve Chapter Review Problem #45 in Chapter 1 of Brookshear Page 68