**CSC142, Computer Science II, Project 1 assignment**

Develop the following programs and submit each java file to D2L. Later submission is not accepted.

1. RightTriangle.java: Write code that reads in a number R from the user, and displays a figure with R rows of "$" characters as the following pattern. For instance, if the user enters a 4 for R, your program should display:

$$$$

$$$

$$

$

1. RightHollowTriangle.java: Write code that reads in a number R from the user, and displays a figure with R rows of "$" characters as the following pattern. For instance, if the user enters a 4 for R, your program should display:

$

$

$

$

1. OddTriangle.java: Write code that reads in a number R from the user, and displays a figure with R rows of "$" characters as the following pattern. For instance, if the user enters a 4 for R, your program should display:

$

$$$

$$$$$

$$$$$$$

1. OddHollowTriangle.java: Write code that reads in a number R from the user, and displays a figure with R rows of "$" characters as the following pattern. For instance, if the user enters a 4 for R, your program should display:

$

$ $

$ $

$ $

1. HollowDiamond.java: Write code that reads in a number R from the user, and displays a figure with (2\*R-1)-rows of "$" characters as the following pattern. Note that it is not a simple 2\*R rows! For instance, if the user enters a 4 for R, your program should display:

$$$$$$$

$$$ $$$

$$ $$

$ $

$$ $$

$$$ $$$

$$$$$$$

1. Diamond.java: Write code that reads in a number R from the user, and displays a figure with (2\*R-1)-rows of "$" characters as the following pattern. For instance, if the user enters a 4 for R, your program should display:

$

$ $

$ $

$ $

$ $

$ $

$

1. Cal.java: Calculate the result 1/i+2/(i-1)+3/(i-2)+…+(i-1)/2+i/1. Note that “i” can be any positive integer input from keyboard. Test your program with the input of i=2, 3, and 4, and verify the result 2.5, 4.3333…, and 6.41666…