CSCI 14 Programming assignment #6 (looping) -- 60 points. Due 3/8/18

Write a program that prompts for a number of rows (nRows) from the user, and prints a diamond of either nRows or nRows+1 rows. Your program should only print diamonds of 3 to 23 rows (to let the shape fit on a single screen), so force the user to enter a reasonable number of rows. Print different error messages if the entered nRows is too big or too small. Then, if the entered nRows is even, add one to it to get an odd number of rows. The middle rows of the diamond must abut the left margin. You may only print single character spaces (' ') or stars ('*'), and newline ('\n'), `flush` or `endl`. You may not use any output manipulators, e.g., `setw()`, in this program.

You must follow the design discussed in class for this program. **Per the class design, you may use ONLY THREE LOOPS to print the shape itself.** You will have other control structures, for example, you will have a fourth loop to force user entry to be reasonable. For example (with user entries shown here for reference only in ***bold italic***):

```
Enter number of rows: 1
That is too few rows for me to make a diamond.
Enter number of rows: 30
That is too many rows for me to make a diamond.
Enter number of rows: 4       (notice this becomes 5 rows)
  *
 ***
*****
 ***
  *
```

Another run:

```
Enter number of rows: 13
      *
     ***
    *****
   *******
  *********
 ***********
*************
 ***********
  *********
   *******
    *****
     ***
      *
```

The "(notice this becomes 5 rows)" message above is not part of the output: don't try to print it. As usual, your prompts and messages may contain any reasonable text. Do not skip a line before or after your prompt(s) before or after the shape. Test with entries of too many rows, too few rows, 3 rows, 23 rows, a few even numbers of rows and a few odd numbers of rows. Per the in-class design of this, you MUST do the number-of-spaces and number-of-stars calculations for each row based ONLY on the total number of rows and the current row number. **You MAY NOT use the previous line's number of spaces or stars for these calculations.**