Lab Summary

Create a Console application that will ask the user to enter some text input, and then print a banner to the Console window. Once a banner has been printed, the app should **prompt the user again** to enter data for another banner and continue asking for data and printing banners until the user chooses to exit. The user should be prompted to enter two pieces of data:

1. The message to display (user get to choose what to display)
2. The width of the banner (how many characters wide?)
   Hint: Since you are developing a console application consider using a combination of Console methods "Write" and "ReadLine".

The resulting banner would then be displayed to the given width, as shown below. In the Sample Output below, the user has entered "Hello World!" as the message, and chosen 30 as the width of the banner. The resulting banner will look like this, below:

```
******************************
*         Hello World!         *
******************************
```

The banner's width (number of characters) and the message will differ, based on the user's input.

Think about…

- Can you use iteration to create the banner efficiently?
- How can you fill in the blank spaces before and after the message?
  - You may choose to use the space, " " character to create the white space.
  - How many spaces do you need?
- How can you use iteration to continue the program after the first banner has printed?
- What will happen if the message is wider than the given width?
- How will you keep the stars aligned on either side of the message?
- How can the user indicate that they want to exit?
- Hint: loops can be nested inside other loops!
- Another Hint: String variables have many useful properties including **length** which allows access to the number of characters within a string.

Lab Requirements

Your app should include:

- An easy-to-use text-based interface, with appropriate prompts to help the user interact with your program.
- Logically and syntactically correct code to respond to the user's actions and display the desired results.
- Allow user to input **only one** of the following combinations for each attempt to display banner:
  - **Even** number of characters in Message and **Even** number for width of banner
  - **Odd** number of characters in Message and **Odd** number for width of banner
- Use of decision structures and iteration structures in your solution
- A way to deal with the problem of the message being wider than the banner width
- Code should be commented, tabbed/formatted correctly, and well organized
- Objects and variables should be named appropriately
- **Bonus:** Allow your solution to handle input scenarios:
  - **Even** number of characters in Message and **Odd** number for width of banner
  - **Odd** number of characters in Message and **Even** number for width of banner

Lab Submission

The due date for this lab is 11:59 pm on the day of **your next class**.
Submit into the Blackboard Lab3 link a ZIP (compressed file) consisting of the **entire folder** containing your Console Application Project and Solution File. The file name should be YourName_Lab3.zip

Grading Scheme

Task	**Marks**
User interface / prompts	3
Variables and operators	3
Code logic and efficiency	3
Iteration structures	3
Code comments and organization	3
Bonus	*2*
Total	**15 Marks**