Exercises about variables

- Solve them in Visual Studio or use https://dotnetfiddle.net/.

Exercise 02.01

- There is a fixed percentage of reduction given to clients of 7%.
- There is also a fixed percentage of 21% taxes.
- Ask thru the console a name.
  - E.g., Vincent
- Ask thru the console an amount (no decimals).
  - E.g., 1000
- First, subtract the discount of it (7%) (decimals possible).
- Then, add the taxes to it (21%) (decimals possible).
- Show this message on the console.
  - Hello Vincent, your amount was 1000.
- On the next line.
  - You need to pay xxx. (The result of your calculation)
- Show the result (no formatting at all).
- After you have a good result.
  - Show the result rounded to 2 decimals.

	*Tip 1:* *YourVariable.ToString("F2")* *F2 means floating with 2 decimals.* *Tip 2:* *"You need to pay {0:F2}", yourResultOfTheCalculation* *F2 means floating with 2 decimals.*

Notes

Exercise 02.02

- Ask thru the console a number(no decimals).
  - That number must be between 0 and 21 (borders not included).
  - E.g., 11.
- As long as the number is not correct, ask it again.
  - When the number is lower than 1.
  - When the number is higher than 20.
  - When the number is not a number. E.g. “abc”.
- Then you loop from 0 till the given number (A counter in a loop).
  - Show on the console this:
    - A “*” – A number of spaces – A “*”.
    - The number of spaces is the value of the counter in the loop.
- At the end, when another key is entered on the keyboard, the application stops.

An example

Given number

- 10 → Loop from 0 till 10.

Result

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

Notes

Exercise 02.03

- The same exercise as 02.02.
- You also ask for 2 characters:
  - First character to start and stop with.
  - Second character to put in between.
- The first character cannot be a space.
  - If it is, it must be re-asked after showing a nice error message.
- The second character cannot be a space.
  - If it is, it must be re-asked after showing a nice error message.
- The second character must be different than the first character.
  - If it is the same, it must be re-asked after showing a nice error message.

Given number

- 10 → Loop from 0 till 10.

Given first character

- +

Given second character

- O

Result

```
++
+O+
+OO+
+OOO+
+OOOO+
+OOOOO+
+OOOOOO+
+OOOOOOO+
+OOOOOOOO+
+OOOOOOOOO+
+OOOOOOOOOO+
```

Notes

Exercise 02.04

- Ask thru the console a number (no decimals).
  - That number can be very big.
- As long as the number is not correct, ask it again.
  - When the number is not a number.
  - Show a nice error message.
- We show numbers on the console (Fibonacci Sequence).
  - We start with 0.
  - We continue with 1.
  - All the next numbers are the sum of the last 2 put on the screen.
    - 1 → 2 → 3 → 5 → 8 → 13 → … → 196418 → …
- You stop the loop, when the last shown number in the Fibonacci Sequence is larger than the asked number.

Given number

- 250.

Result

```
0
1
1
2
3
5
8
13
21
34
55
89
144
233
377
```

Notes