Problem Set 5 - Repetition flow

Hello student,

the goal of this problem-set is try out the different approaches we have learned about repetition.

In particular, we want to practice the usage of `for` and `while` loops.

Assignment 5.1 - Triangles (3 points)

Write a program that print 2 of the 4 triangles displayed below. The first one should be chosen between (a) and (b) while the second one should be chosen between (c) and (d). You should use *for* loop to generate them.
For each triangle, all the asterisk (*) should be printed using a single instruction *print()*.

```
(a)
*
**
***
****
*****
******
*******
********
*********
**********
***********
```

```
(b)
***********
**********
*********
********
*******
******
*****
****
***
**
*
```

```
(c)
***********
 **********
  *********
   ********
    *******
     ******
      *****
       ****
        ***
         **
          *
```

```
(d)
          *
         **
        ***
       ****
      *****
     ******
    *******
   ********
  *********
 **********
***********
```

Assignment 5.2 - Pi value (3 points)

Print a table that shows the number of iteration and the approximated value of π for the first 35 iterations.
The output should look like this:

```
Iter #          pi
0               4.0
1               2.666666666666667
2               3.466666666666667
3               2.8952380952380956
4               3.3396825396825403
```

Hint: The formula to approximate π is: $\pi = 4 - \frac{4}{3} + \frac{4}{5} - \frac{4}{7} + \frac{4}{9} - \frac{4}{11} + ...$

Assignment 5.3 - Product odd numbers (optional)

Write a program that asks the user for two integer numbers. Then it must calculate the product between all the odd numbers included in the range defined by them. The boundaries are included. The request should be repeated if the second number is lower than the first one.

The output should look like this:

```
Lower bound:-5
Upper bound:-15

Upper bound not valid. Retry: 22

Product of all the odd numbers between -5 and 22: -206239658625
```

Attention: "min" and "max" are reserved keywords, use "_min" and "_max"

Assignment 5.4 - Minimum and Maximum (optional)

Write a program that asks the user for four non-integer numbers. Then the program must print the minimum and the maximum between the numbers.

The output should look like this:

```
Insert 4 non-integer numbers: 1.25 2.75 6.33 -4.25
Minimum: -4.25
Maximum: 6.33
```