CSGE601020
Dasar-Dasar Pemrograman 1 (Foundations of Programming 1)

Tugas Pemrograman 1 (Programming Assignment 1)

LAST DAY for uploading the result of your work to SCeLE: Friday 20 Sept 2024 (11:55 PM SCeLE time). Don't forget to write enough comments in your source code.

Your Python source code file should be named according to the format:

"<kode_asdos>_<nama_mhs>_<NPM>_<kelas>_TP01.py"

Please contact your TA (asdos) for giving a demo of your work, as soon as possible. Your TA will give you a mark after the demo. You will get a mark of 0 if you do not give a demo to your TA.

Please start working on this assignment immediately. If you have any questions, please ask the TA or the lecturer.

Marking scheme:
60 % correctness
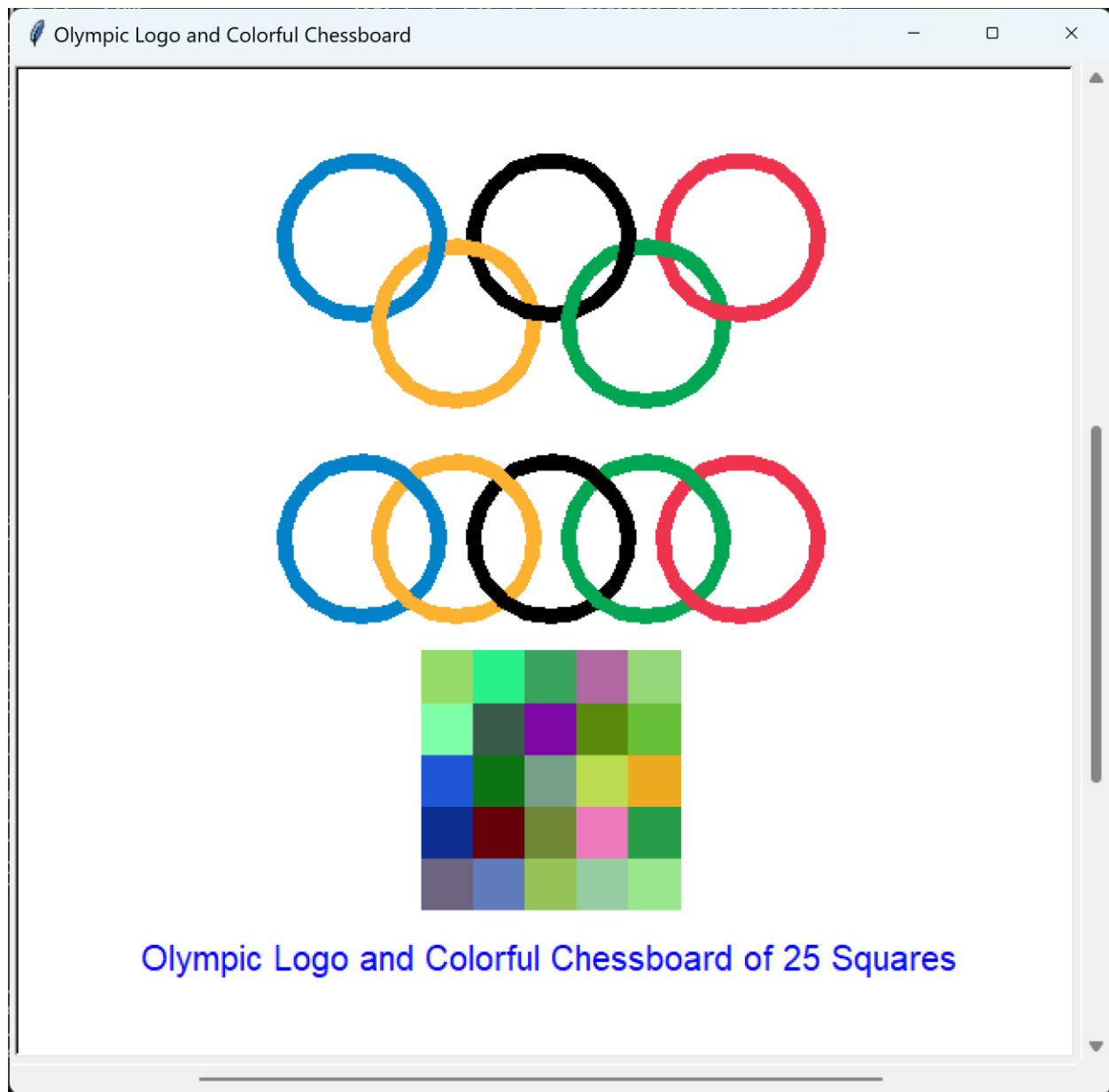30 % explanation in demo session
10 % program documentation (comments, neatness)

Task Description

Olympic Logo and Colorful Chessboard

Le Parisien 2024

Write a Python program that can draw the olympic logo with the correct colors and a chessboard with random colors. The chessboard consists of squares (rectangle with equal width and height), each with a random color. The total number of squares of the chessboard is displayed below the picture.

Pay attention to the rings of the olympic logo. The rings are **not** just one drawn on top of another. The rings are **chained** together. The blue ring is interlocked with the yellow ring; the yellow ring is interlocked with the black ring; the black ring is interlocked with the green ring; the green ring is interlocked with the red ring. The special colors of the olympic rings are defined by the following rgb values:
```
blue = (0,129,200)
yellow = (252,177,49)
```

```
black = (0,0,0)
green = (0,166,81)
red = (238,51,78)
```

In order to generate a random color component for the chessboard, you can import the module **random** and use the function **random().** You will have to use the for statement.
Your program has to interact with the user to ask for the value of
  1) the number of rows (which is equal to the number of columns)
  2) the size of a square (in pixels)

The user's input should be validated, which means that your program should check the validity of user's input. For example, if the user gives a wrong value (too small or too large), your program should reject it. You can use the method **numinput( )** from the **turtle** module for this purpose. The number of rows should be between 2 and 25, inclusive. The size of a square should be between 5 and 50, inclusive.

Your program is allowed to import only the modules **turtle** and **random**:
```
import turtle
import random
```

To find out more about the Turtle Graphics and Screen/Window, go to:
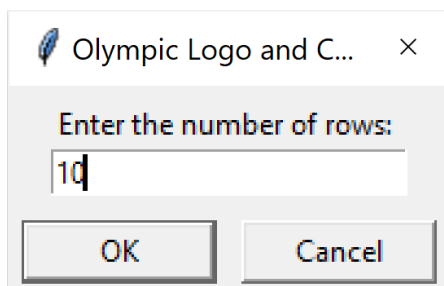**https://docs.python.org/3.12/library/turtle.html**

Happy Programming! 'Met ngoding!

L. Y. Stefanus & the Asdos Team

===================== **Sample Program Executions** =======================
1)

Olympic Logo and Colorful Chessboard of 100 Squares
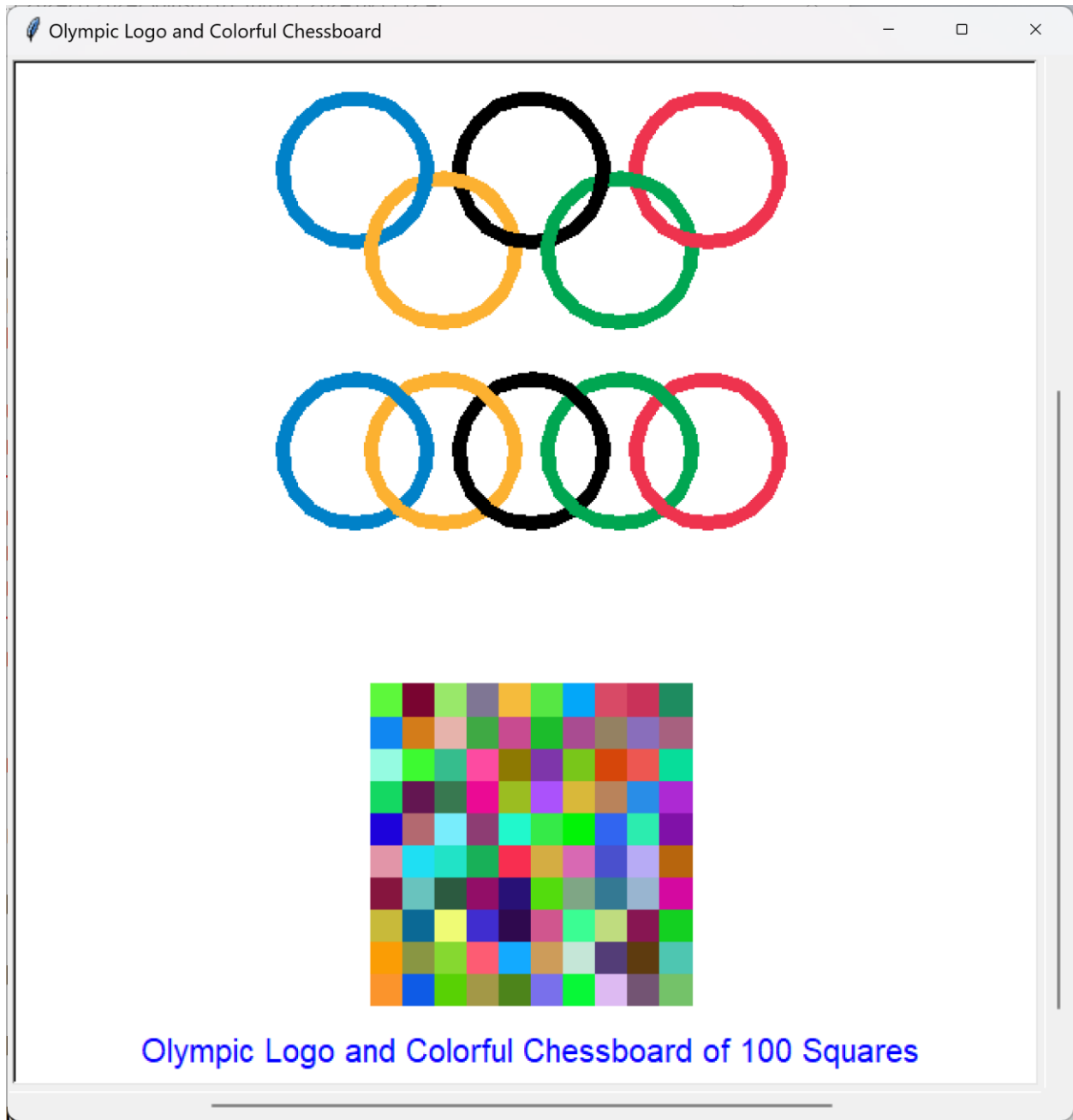
2)

Olympic Logo and C... ✕

Enter the number of rows:

-3

OK   Cancel

Too small   ✕

⚠ The allowed minimum value is 2. Please try again.

OK

Olympic Logo and C... ✕

Enter the number of rows:

100

OK   Cancel

Too large   ✕

⚠ The allowed maximum value is 25. Please try again.

OK