CSGE601020
Dasar-Dasar Pemrograman 1
Foundations of Programming 1

Programming Assignment 1

LAST DAY for uploading the result of your work to SCeLE: Mon 18 Sept 2017 (11:55 PM).
Don't forget to write enough comments in your source code.
Please contact the TA (teaching assistant) for giving a demo of your work, 27 Sept 2017 at the latest. The TA will give you a mark after the demo.

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

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

Task Description

Chessboard and Flower with Random Colors

Write a Python program that can also be run outside of IDLE. The program draws a chessboard and a flower with random colors. The chessboard consists of squares (rectangle with equal width and height), each with a random color. The flower consists of petals (a pair of arcs). The total number of squares of the chessboard and the number of petals of the flower are displayed below the picture. In order to generate a random color component, you can import the module **random** and use the function **random().** You will need to use the while or 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)
3) the number of petals

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.

The following methods will be useful for this assignment:
Turtle( ), getscreen( ), title( ), numinput( ), speed( ), up( ), goto( ), down( ), color( ), write( ), setheading( ), begin_fill( ), forward( ), left( ), end_fill( ), hideturtle( ), exitonclick( ), etc.

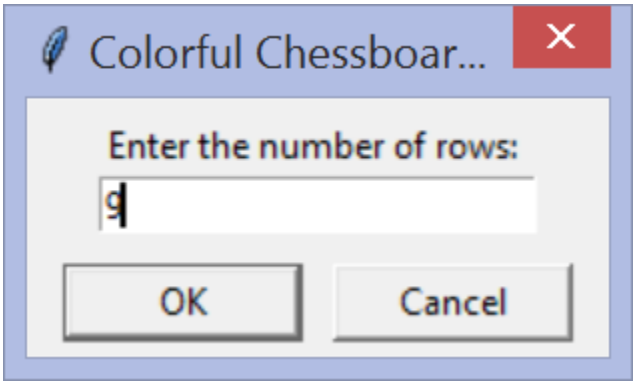
To find out more about the Turtle Graphics and Screen/Window, try the following from IDLE:
>>> from turtle import *
>>> help(Turtle)

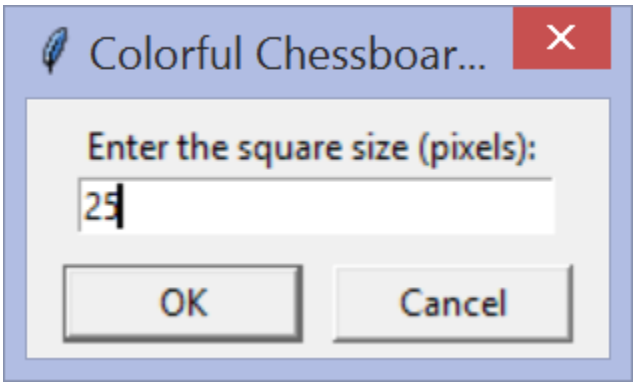
>>> help(TurtleScreen)

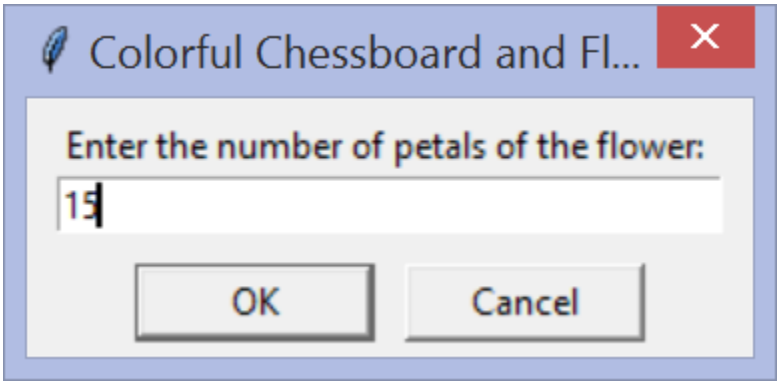
Happy Programming! ’Met ngoding!

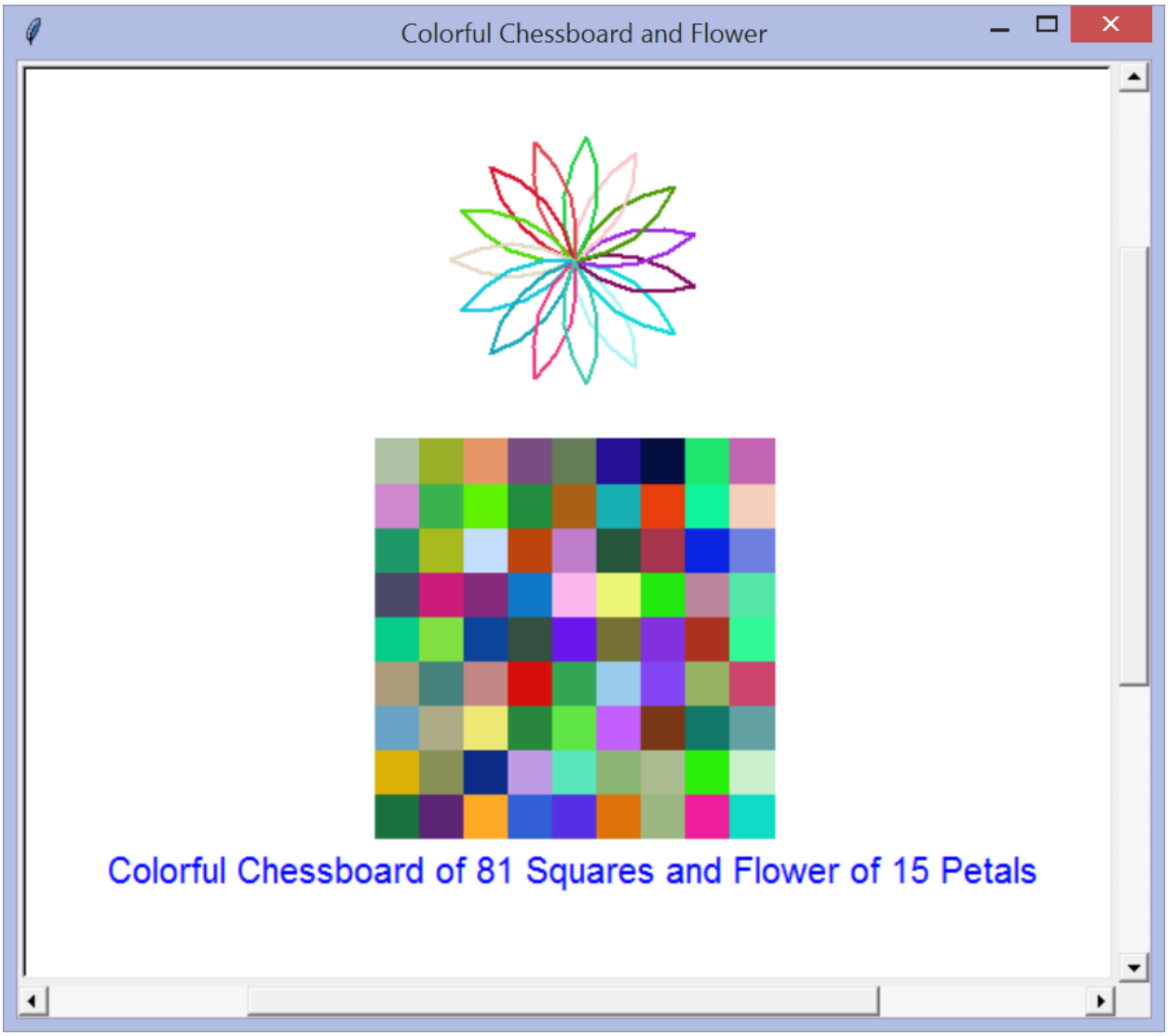
L. Y. Stefanus

Examples of program execution:








Colorful Chessboard and Flower
Colorful Chessboard of 81 Squares and Flower of 15 Petals