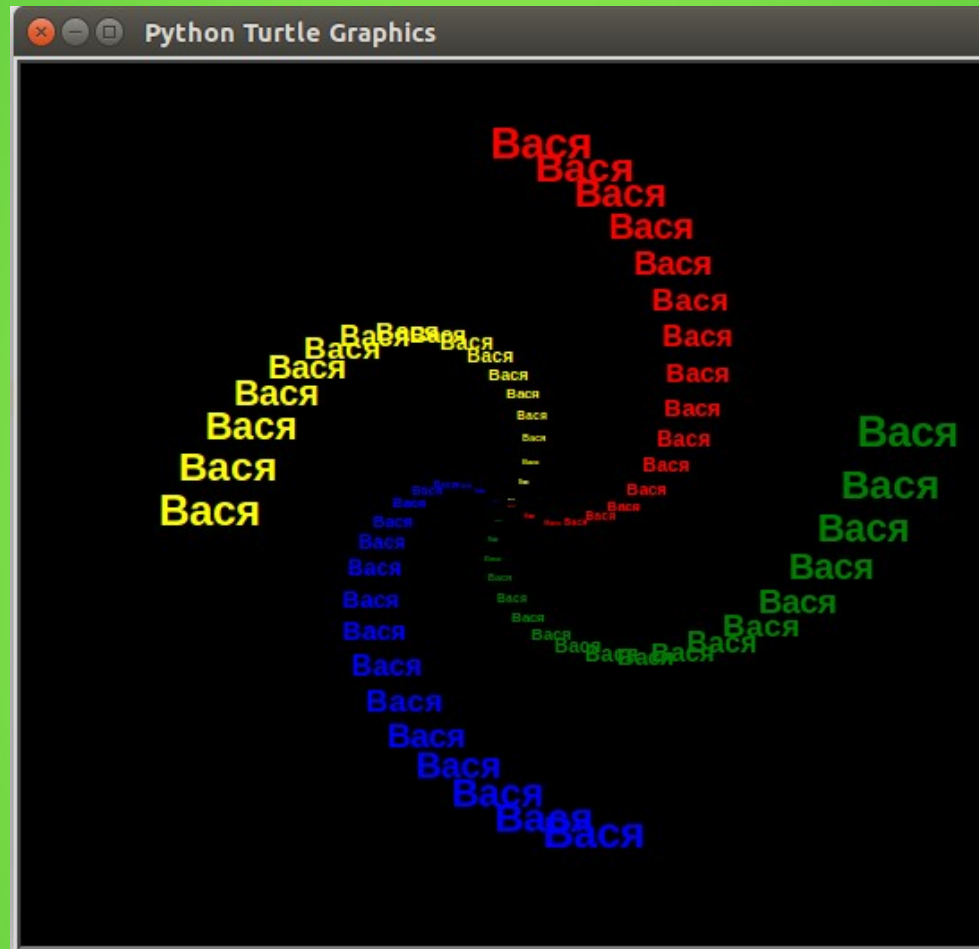# Turtle Graphics

Урок 3

Задать параметры рисования

Нарисовать спираль, элементом которой будет слово, введенное пользователем с клавиатуры

Задать параметры рисования

```python
# SpiralMyName.py - prints a colorful spiral of the user's name
import turtle                       # Set up turtle graphics
t = turtle.Pen()
turtle.bgcolor("black")
colors = ["red", "yellow", "blue", "green"]
# Ask the user's name using turtle's textinput pop-up window
your_name = turtle.textinput("Enter your name", "What is your name?")
# Draw a spiral of the name on the screen, written 100 times
for x in range(100):
    t.pencolor(colors[x%4])  # Rotate through the four colors
    t.penup()                # Don't draw the regular spiral lines
    t.forward(x*4)           # Just move the turtle on the screen
    t.pendown()              # Write the user's name, bigger each time
    t.write(your_name, font = ("Arial", int( (x + 4) / 4), "bold") )
    t.left(92)               # Turn left, just as in our other spirals
```

Рисуем квадрат по команде

```python
import turtle
wn = turtle.Screen()
wn.bgcolor('lightblue')
wn.title("Squares")

lance = turtle.Turtle()

def drawSquare(t, sz=50):

    for i in range(4):
        t.forward(sz)
        t.left(90)

command = turtle.textinput("Input command", "What to draw?")
commands = command.split()
figure = commands[0]
numfigure = int(commands[1])

lance.penup()
lance.goto(-300, -300)
lance.pendown()

if figure == 'square':
    for i in range(numfigure):
        drawSquare(lance)
        lance.penup()
        lance.goto(-300 + (i+1)*100, -300 + (i+1)*100)
        lance.pendown()


wn.exitonclick()
```

Треугольник или квадрат?

```python
import turtle
wn = turtle.Screen()
wn.bgcolor('lightblue')
wn.title('Many Figures')

lance = turtle.Turtle()

def drawSquare(t, sz=50):
    for i in range(4):
        t.forward(sz)
        t.left(90)


def drawTriangle(t, sz=50):
    for i in range(3):
        t.forward(sz)
        t.left(120)

command = turtle.textinput("Input command", "What to draw?")
commands = command.split()
figure = commands[0]
numfigure = int(commands[1])

lance.penup()
lance.goto(-300, -300)
lance.pendown()

if figure == 'square':
    for i in range(numfigure):
        drawSquare(lance)
        lance.penup()
        lance.goto(-300 + (i+1)*100, -300 + (i+1)*100)
        lance.pendown()
elif figure == 'triangle':
    for i in range(numfigure):
        drawTriangle(lance)
        lance.penup()
        lance.goto(-300 + (i+1)*100, -300 + (i+1)*100)
        lance.pendown()


wn.exitonclick()
```

Меняем цвет и размер

```python
command = turtle.textinput("Input command", "What to draw?")
commands = command.split()
figure = commands[0]
numfigure = int(commands[1])
color = commands[2]
size = int(commands[3])

lance.penup()
lance.goto(-300, -300)
lance.pendown()

if figure == 'square':
    for i in range(numfigure):
        drawSquare(lance, size, color)
        lance.penup()
        lance.goto(-300 + (i+1)*100, -300 + (i+1)*100)
        lance.pendown()
elif figure == 'triangle':
    for i in range(numfigure):
        drawTriangle(lance, size, color)
        lance.penup()
        lance.goto(-300 + (i+1)*100, -300 + (i+1)*100)
        lance.pendown()
```

Цвет, размер и толщина линии

```python
def drawSquare(t, sz=50, color='orange', width=3):
    t.color(color)
    t.pensize(width)
    for i in range(4):
        t.forward(sz)
        t.left(90)


def drawTriangle(t, sz=50, color='orange', width=6):
    t.color(color)
    t.pensize(width)
    for i in range(3):
        t.forward(sz)
        t.left(120)

command = turtle.textinput("Input command", "What to draw?")
commands = command.split()
figure = commands[0]
numfigure = int(commands[1])
color = commands[2]
size = int(commands[3])
penwidth = int(commands[4])

lance.penup()
lance.goto(-300, -300)
lance.pendown()
```

Цвет, размер и толщина линии
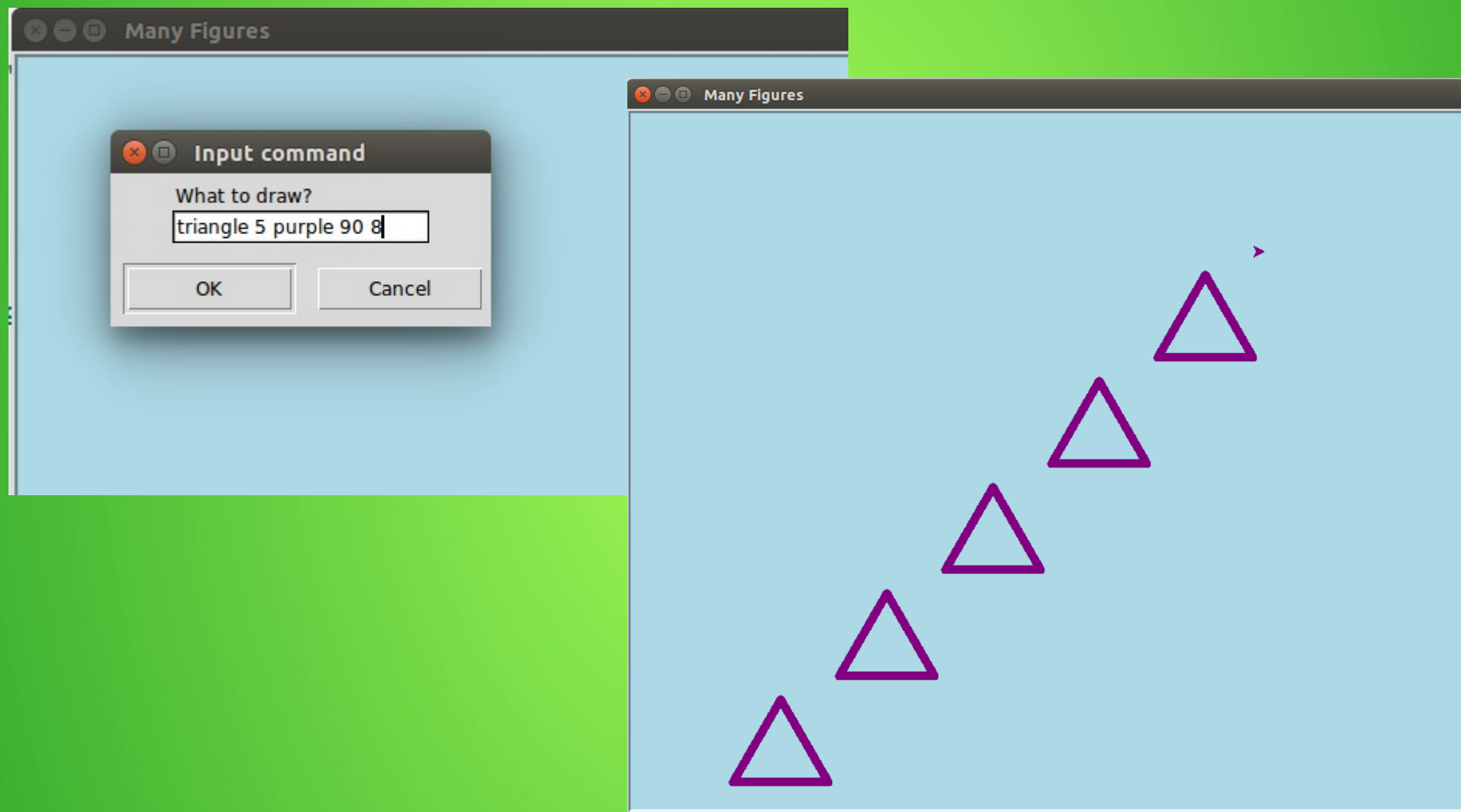
Домашнее задание

Дополнить программу:

Перед тем, как нарисовать фигуры, программа должны будет вывести в левом верхнем углу пояснение типа:

6 squares
Size 90
Color Red
Penwidth 4

Подсказка содержится в примере со спиралью, состоящей из имен (первый пример в данном уроке)