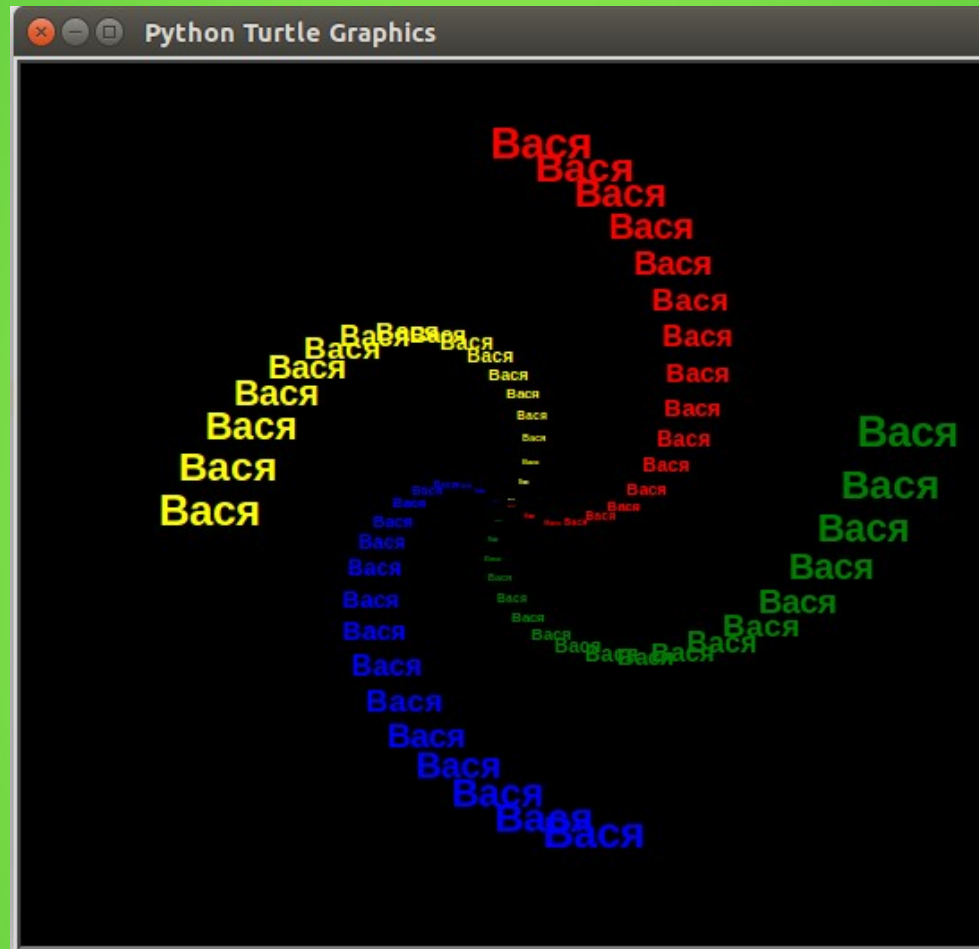


Turtle Graphics



Урок 3

Задать параметры рисования



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

Задать параметры рисования

```
# 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

```
1 import turtle
2 wn = turtle.Screen()
3 wn.bgcolor('lightblue')
4 wn.title("Squares")
5
6 lance = turtle.Turtle()
7
8 def drawSquare(t, sz=50):
9
10     for i in range(4):
11         t.forward(sz)
12         t.left(90)
13
14     command = turtle.textinput("Input command", "What to draw?")
15     commands = command.split()
16     figure = commands[0]
17     numfigure = int(commands[1])
18
19     lance.penup()
20     lance.goto(-300, -300)
21     lance.pendown()
22
23     if figure == 'square':
24         for i in range(numfigure):
25             drawSquare(lance)
26             lance.penup()
27             lance.goto(-300 + (i+1)*100, -300 + (i+1)*100)
28             lance.pendown()
29
30
31 wn.exitonclick()
```

Треугольник или квадрат?

```
1  import turtle
2  wn = turtle.Screen()
3  wn.bgcolor('lightblue')
4  wn.title('Many Figures')
5
6  lance = turtle.Turtle()
7
8  def drawSquare(t, sz=50):
9      for i in range(4):
10         t.forward(sz)
11         t.left(90)
12
13
14  def drawTriangle(t, sz=50):
15      for i in range(3):
16         t.forward(sz)
17         t.left(120)
18
19  command = turtle.textinput("Input command", "What to draw?")
20  commands = command.split()
21  figure = commands[0]
22  numfigure = int(commands[1])
23
24  lance.penup()
25  lance.goto(-300, -300)
26  lance.pendown()
27
28  if figure == 'square':
29      for i in range(numfigure):
30         drawSquare(lance)
31         lance.penup()
32         lance.goto(-300 + (i+1)*100, -300 + (i+1)*100)
33         lance.pendown()
34  elif figure == 'triangle':
35      for i in range(numfigure):
36         drawTriangle(lance)
37         lance.penup()
38         lance.goto(-300 + (i+1)*100, -300 + (i+1)*100)
39         lance.pendown()
40
41
42  wn.exitonclick()
43
```


Меняем цвет и размер

```
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])

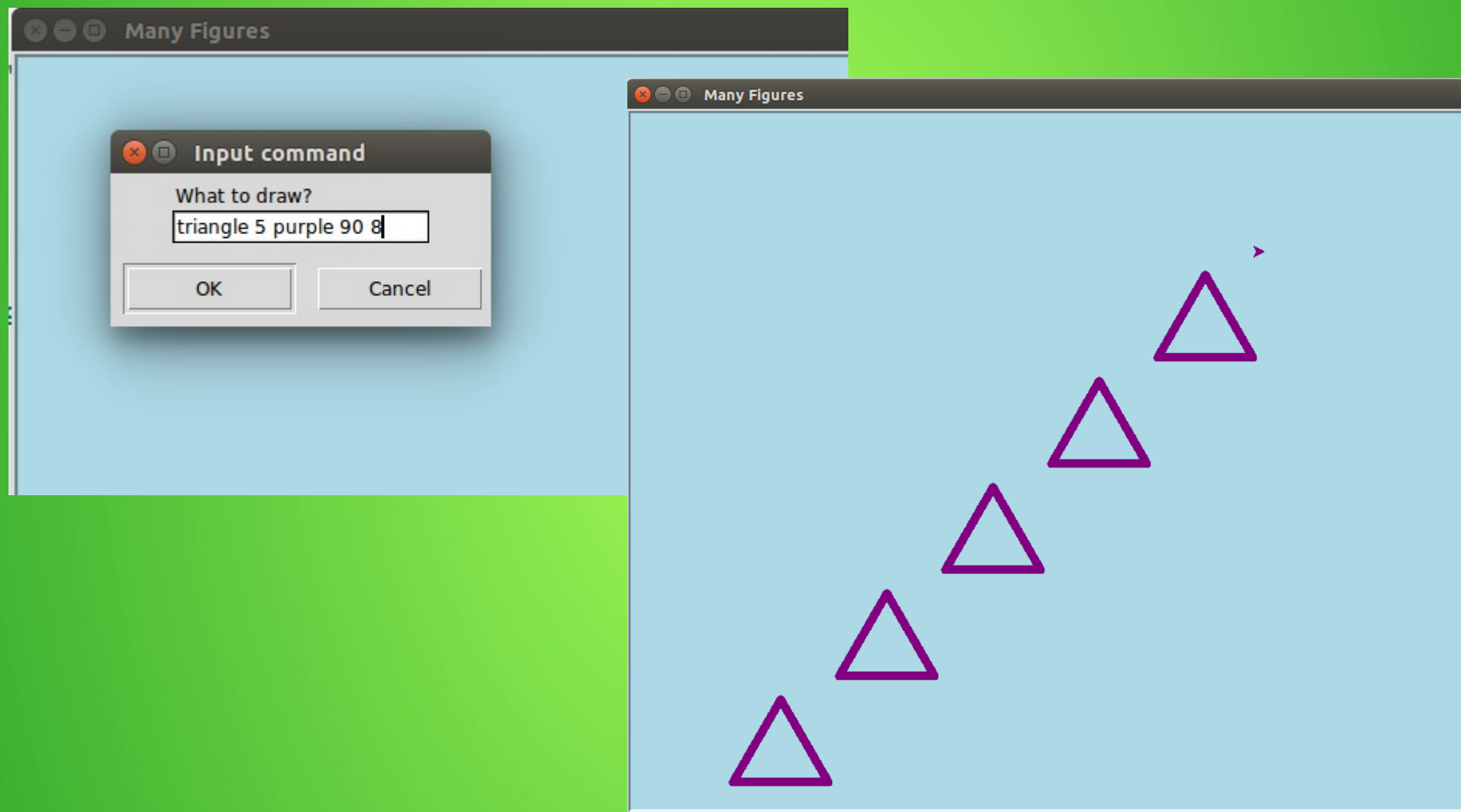
lance.penup()
lance.goto(-300, -300)
lance.pendown()

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

```
8
9  def drawSquare(t, sz=50, color='orange', width=3):
10      t.color(color)
11      t.pensize(width)
12      for i in range(4):
13          t.forward(sz)
14          t.left(90)
15
16
17  def drawTriangle(t, sz=50, color='orange', width=6):
18      t.color(color)
19      t.pensize(width)
20      for i in range(3):
21          t.forward(sz)
22          t.left(120)
23
24  command = turtle.textinput("Input command", "What to draw?")
25  commands = command.split()
26  figure = commands[0]
27  numfigure = int(commands[1])
28  color = commands[2]
29  size = int(commands[3])
30  penwidth = int(commands[4])
31
32  lance.penup()
33  lance.goto(-300, -300)
34  lance.pendown()
```

Цвет, размер и толщина линии



Домашнее задание

Дополнить программу:

Перед тем, как нарисовать фигуры, программа должна 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)