**Python code allowing to draw hexagons using turtle**

#!/usr/bin/env python

# coding: utf-8

# hexagons

# we need the module turtle

import turtle

import time

turtle.shape("turtle")

turtle.reset()

# parameters

# coordinates of the start of the drawing (on the left top of the windouw)

x=-330

y= 240

# geometry of the hexagon

# length of hexagon sides = radius of the circumbsribed circle =rc

b=90

# length of the diameter of the inscribed circle = di = 2ri

c=b\*3\*\*.5

print(" side of the hexagon: ", b, "internal radius ", c/2)

# dnumber of cells per raw

j=5

# function for drawing the basic hexagon with number of sides 1- 6 for uncomplete figures

# for instance (hexax(lenth , 3) draws a semi-hexagone with 3 sides

for i in range(6):

 def hexax(length, rg):

 for side in range(rg):

 turtle.forward(length)

 turtle.left(60)

# # print examples of inidividual hexagons

# turtle.up()

# turtle.goto(x+100, y-100)

# turtle.right(90)

# turtle.down()

# hexax(b,6)

# turtle.up()

# turtle.goto(x+100+5\*b, y-100)

# turtle.down()

# hexax(b,3)

# turtle.up()

# turtle.goto(-100, 100)

# turtle.write("Examples of polygons with 6 and 4 sides", True, align="center", font=("Arial", 12, "normal"))

# time.sleep(3)

# turtle.reset()

#hexa4(b)

# # function for drawing a raw of j basic cells of hexa3

def draw\_hexa\_raw():

 for i in range(j):

 hexax(b, 3)

 turtle.up()

 turtle.forward(b)

 turtle.left(180)

 turtle.down()

# #move the pointer to the start (top left of the window)

turtle.up()

turtle.goto(x, y)

turtle.down()

turtle.color('blue')

turtle.right(90)

# repeat the drawing

for i in range(j//2):

 # draw the first row (semi-cells)

 draw\_hexa\_raw()

 turtle.forward(b)

 # move the pointer to next raw

 turtle.up()

 turtle.right(90)

 turtle.forward(j\*c)

 #draw a connecting side

 turtle.left(30)

 turtle.down()

 turtle.forward(b)

 turtle.left(60)

 # draw the second row (full cells)

 draw\_hexa\_raw()

 hexax(b, 5)

 # move the pointer to next row

 turtle.up()

 turtle.right(30)

 turtle.forward(j\*c)

 turtle.left(90)

 turtle.forward(2\*b)

 turtle.down()

# close the first row

turtle.up()

turtle.goto(x,y)

turtle.left(90)

turtle.forward(j\*c)

turtle.down()

turtle.left(150)

for i in range(j):

 hexax(b, 2)

 turtle.left(240)

turtle.exitonclick()