PDF_CODE

HIT137 Software Now
Week 7

```
import turtle

from turtle import*
shape("turtle")

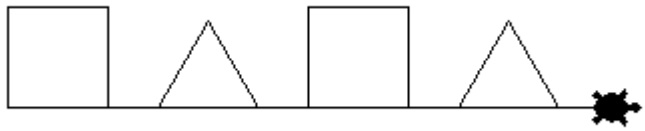
def draw_square():
      for i in range(0,4):
            turtle.fd(50)
            turtle.lt(90)
      turtle.fd(75)

def draw_triangle():
      for i in range(3):
            turtle.fd(50)
            turtle.lt(120)
      turtle.fd(75)

turtle.goto(-250, 0)

draw_square()
draw_triangle()
draw_square()
draw_triangle()

delay = input("Press enter to finish.")
```



```
#Add color to the draw_shape function
import turtle
from turtle import*
shape("turtle")
def draw_shape(shape, color):

      turtle.color(color)

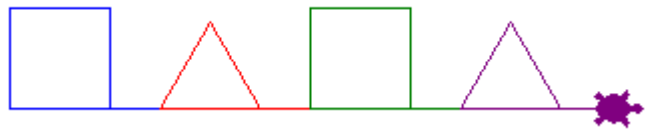
      if shape == "square":
            for i in range(0,4):
                  turtle.fd(50)
                  turtle.lt(90)
            turtle.fd(75)

      if shape == "triangle":
            for i in range(3):
                  turtle.fd(50)
                  turtle.lt(120)
            turtle.fd(75)

turtle.goto(-250, 0)

draw_shape("square", "blue")
draw_shape("triangle", "red")
draw_shape("square", "green")
draw_shape("triangle", "purple")

delay = input("Press enter to finish.")
```



```
#Add color to the draw_shape function
#Let's think algorithmically
#Add constants
import turtle
from turtle import*
shape("turtle")
#Define constants
#Use capital letters
SQUARE = 4
TRIANGLE = 3
PENTAGON = 5
HEXAGON = 6

def draw_shape(sides, color):

      turtle.color(color)

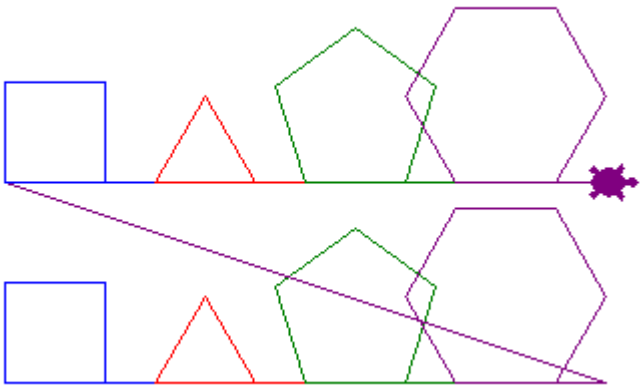
      for i in range(0,sides):
            turtle.fd(50)
            turtle.lt(360/sides)
      turtle.fd(75)


turtle.goto(-250, 0)

draw_shape(SQUARE, "blue")
draw_shape(TRIANGLE, "red")
draw_shape(PENTAGON, "green")
draw_shape(HEXAGON, "purple")

turtle.goto(-250, 100)
draw_shape(SQUARE, "blue")
draw_shape(TRIANGLE, "red")
draw_shape(PENTAGON, "green")
draw_shape(HEXAGON, "purple")

delay = input("Press enter to finish.")
```



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#Let's think algorithmically
#Add constants
import turtle
from turtle import*
shape("turtle")
#Define constants
#Use capital letters
SQUARE = 4
TRIANGLE = 3
PENTAGON = 5
HEXAGON = 6

def draw_shape(sides, color):

      turtle.color(color)
      for i in range(0,sides):
            turtle.fd(50)
            turtle.lt(360/sides)
      turtle.fd(75)

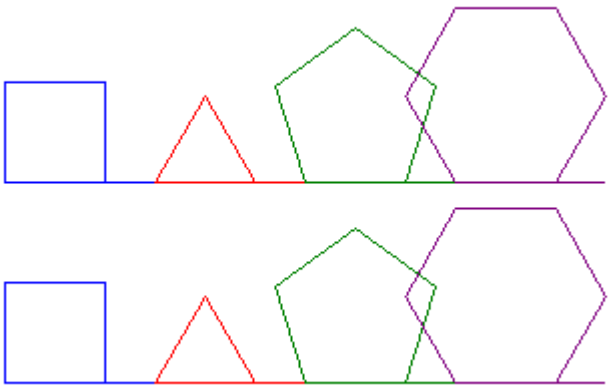
turtle.up()
turtle.goto(-250, 0)
turtle.down()

draw_shape(SQUARE, "blue")
draw_shape(TRIANGLE, "red")
draw_shape(PENTAGON, "green")
draw_shape(HEXAGON, "purple")

turtle.up()
turtle.goto(-250, 100)
turtle.down()

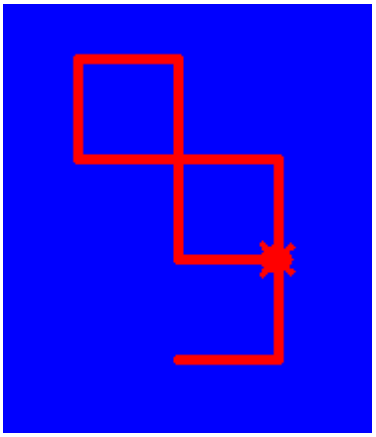
draw_shape(SQUARE, "blue")
draw_shape(TRIANGLE, "red")
draw_shape(PENTAGON, "green")
draw_shape(HEXAGON, "purple")
turtle.hideturtle()

delay = input("Press enter to finish.")
```



```
import turtle
from turtle import*
t=Turtle()
import random
def  randomWalk(t,turns,distance=20):
    t.shape("turtle")
    for x in range(turns):
        t.left(random.randint(0,360))
        t.forward(distance)
randomWalk(t,40)
```

```
import turtle
from turtle import*
import random
t=Turtle()
t.shape("turtle")
t.color("red")
t.pensize(5)
wn=turtle.Screen()
wn.bgcolor("blue")
for i in range(10):
    t.fd(50)
    coin=random.randint(0,2)
    if coin==0:
        t.left(90)
    else:
        t.right(90)
turtle.mainloop()
```



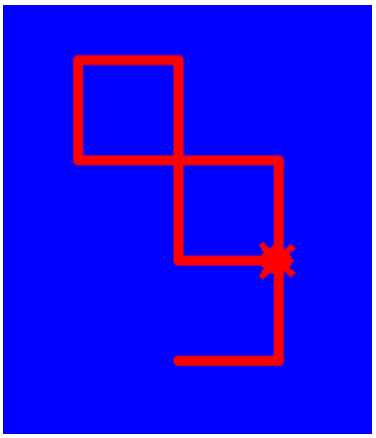
```
import turtle
from turtle import*
import random
t=Turtle()
t.shape("turtle")
t.color("red")
t.pensize(5)
t.speed(10)
wn=turtle.Screen()
wn.bgcolor("blue")

def isInScreen(wn,t):
    xmin=-wn.window_width()/2
    xmax=wn.window_width()/2
    ymin=-wn.window_height()/2
    ymax=wn.window_height()/2

    x=t.xcor()
    y=t.ycor()

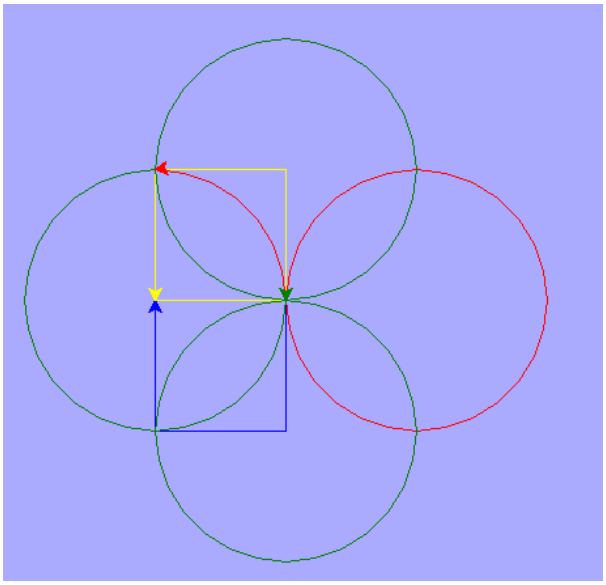
    if x < xmin or x > xmax:
        return False
    if y < ymin or y > ymax:
        return False
    return True


while isInScreen(wn,t):
    t.fd(50)
    coin=random.randint(0,2)
    if coin==0:
        t.left(90)
    else:
        t.right(90)
turtle.mainloop()
```



```
import turtle
loadWindow = turtle.Screen()
loadWindow.bgcolor("#AAAAFF")
turtle1=turtle.Pen()
turtle1.color("red")
turtle2=turtle.Pen()
turtle2.color("green")
turtle3=turtle.Pen()
turtle3.color("blue")
turtle4=turtle.Pen()
turtle4.color("yellow")

for x in range(100):
    turtle1.circle(100)
    turtle1.left(90)
    turtle2.circle(100)
    turtle2.right(90)
    turtle3.forward(-100)
    turtle3.left(90)
    turtle4.forward(-100)
    turtle4.right(90)
turtle.exitonclick()
```



```
import turtle
import random
loadWindow = turtle.Screen()
loadWindow.bgcolor("#AAAAFF")
turtle1=turtle.Pen()
turtle1.shape("turtle")
turtle2=turtle.Pen()
turtle2.shape("circle")
turtle3=turtle.Pen()
turtle3.shape("square")
turtle4=turtle.Pen()
turtle4.shape("triangle")

turtle1.left(90)
turtle2.forward(-50)
turtle2.left(90)
turtle3.forward(50)
turtle3.left(90)
turtle4.forward(100)
turtle4.left(90)

for x in range(100):
    t1=random.randint(-5,30)
    t2=random.randint(-5,30)
    t3=random.randint(-5,30)
    t4=random.randint(-5,30)
    turtle1.forward(t1)
    turtle2.forward(t2)
    turtle3.forward(t3)
    turtle4.forward(t4)

turtle.exitonclick()
```