

Template Week 7 – Elective assignment

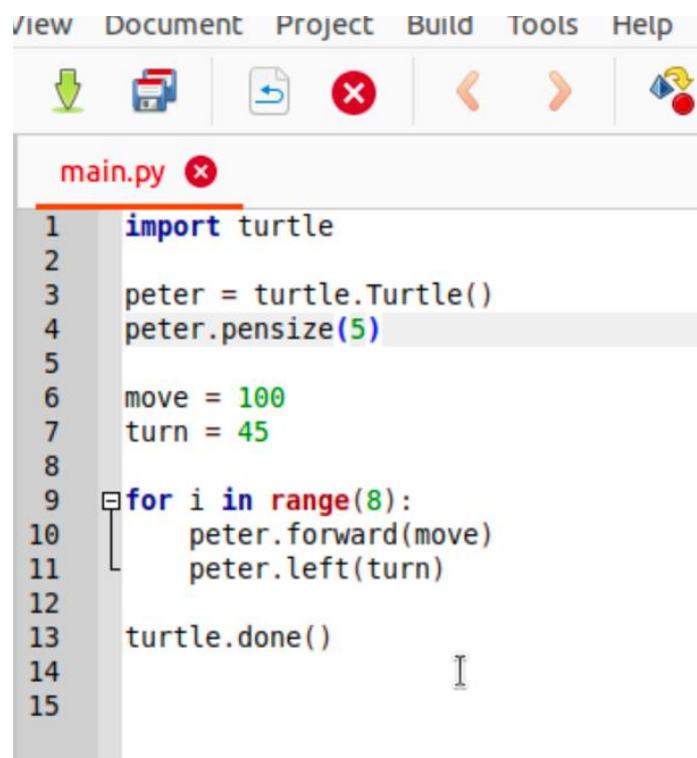
Student number: 552517

Elective assignment: Software Engineering

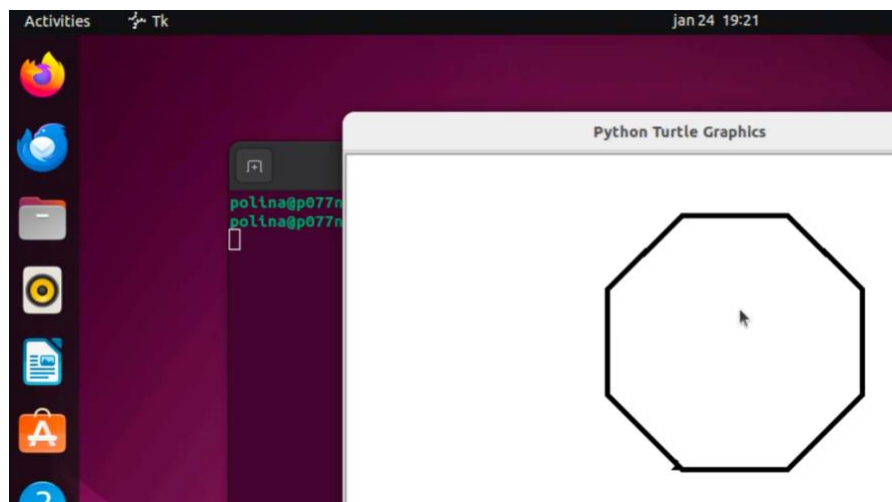
Turtle Graphics

As PyCharm is not compatible with my ARM architecture, I downloaded geany, a software editor where you can also write python code.

The following code draws a simple octagon.

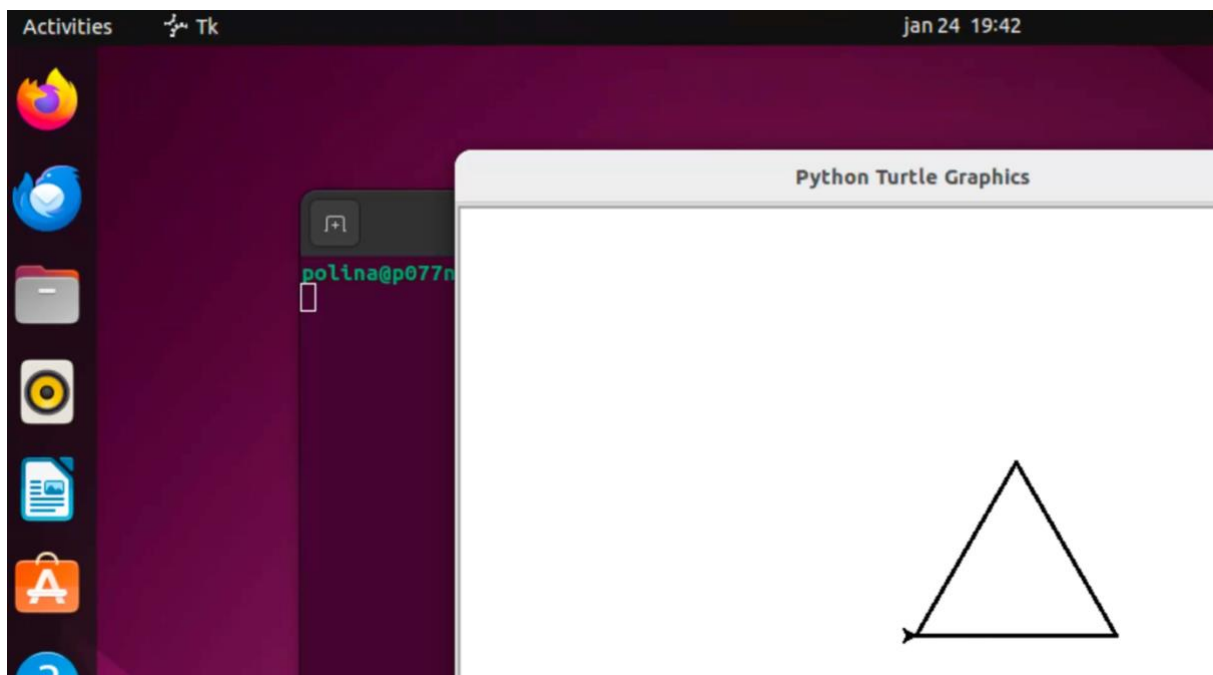


```
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main.py x
1 import turtle
2
3 peter = turtle.Turtle()
4 peter.pensize(5)
5
6 move = 100
7 turn = 45
8
9 for i in range(8):
10     peter.forward(move)
11     peter.left(turn)
12
13 turtle.done()
14
15
```



The following code draws a simple triangle.

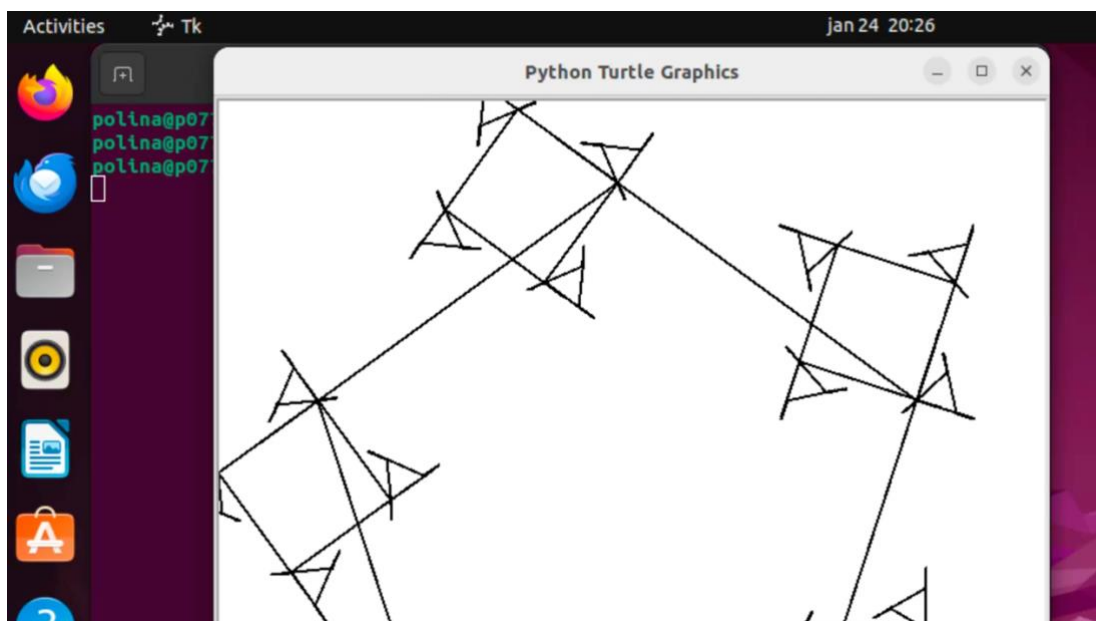
```
main.py ✖  
1  import turtle  
2  
3  peter = turtle.Turtle()  
4  peter.pensize(3)  
5  
6  def drawshape (sides, size, t):  
7      for i in range(sides):  
8          t.forward(size)  
9          t.left(360/sides)  
10  
11 drawshape(3, 140, peter)  
12  
13 turtle.done()  
14
```



Recursive functions

The program has been adjusted.

```
main.py x
1 import turtle
2
3 peter = turtle.Turtle()
4
5 peter.pensize(2)
6 peter.speed(0)
7 peter.penup()
8 peter.setposition(-155, -200)
9 peter.pendown()
10 peter.hideturtle()
11
12 def draw_shape(sides, size, t):
13     if size <= 2:
14         return
15     else:
16         for i in range(sides):
17             t.forward(size)
18             t.back(size / 6)
19             draw_shape(sides - 1, size / 3, t)
20             t.left(360 / sides);
21
22 draw_shape(5, 340, peter)
23
24 turtle.done()
25
```



Python final assignment

A company logo for a new startup.

```
main.py x
1  import turtle
2
3  def draw_colored_star():
4      star = turtle.Turtle()
5      star.color("blue")
6      star.fillcolor("yellow")
7
8      star.right(75)
9      star.forward(100)
10
11     star.begin_fill()
12
13     for _ in range(4):
14         star.right(144)
15         star.forward(100)
16
17     star.end_fill()
18
19     turtle.done()
20
21 draw_colored_star()
22
```

