Course Name	ITD 2313 – Script Programming
Instructor	Andy Tripp
Student Name	Timothy Obinda
Due date	11/02/2025
Grade	Put grade earned here
Grading Comments	Put instructor comments here

INSTRUCTIONS FOR THE EXERCISE

You should always read the instructions in full. It is best to do a full read through before starting the assignment. Each screenshot needs to be appropriately labeled.

In this instruction, you are given information to execute specific examples in the text. You are given the Section, Subsection, and a page number to identify a set of steps. On each page listed, there will be 1 or more numbered tasks to perform. These numbered tasks will be what you are to type in, execute, and then grab the screen shots of. Those screenshots will then go into your submission document.

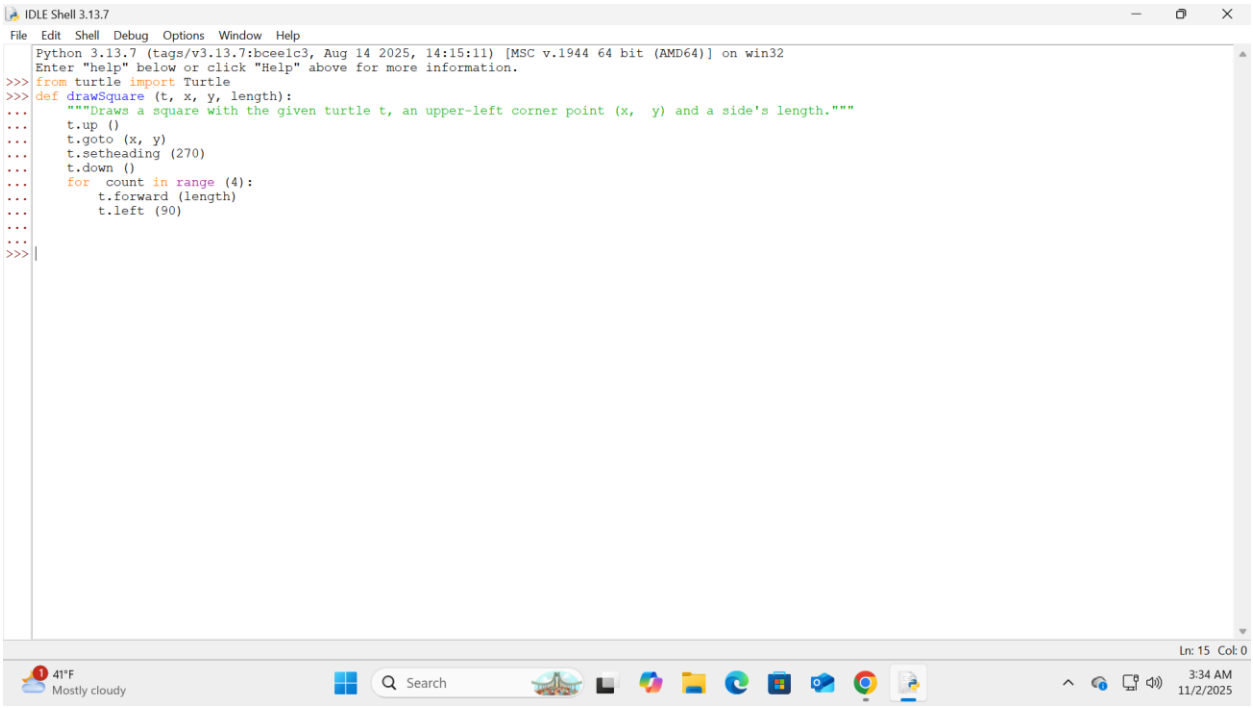
Some advice, copy this instruction set into your submission document and then put the screen shots under each numbered task. Each individual book page in the instructions should be in a different screen shot. For any single book page, you may have all the numbered tasks on that page to be in a single screen shot.

Simple Graphics

Turtle Operations

Page 191

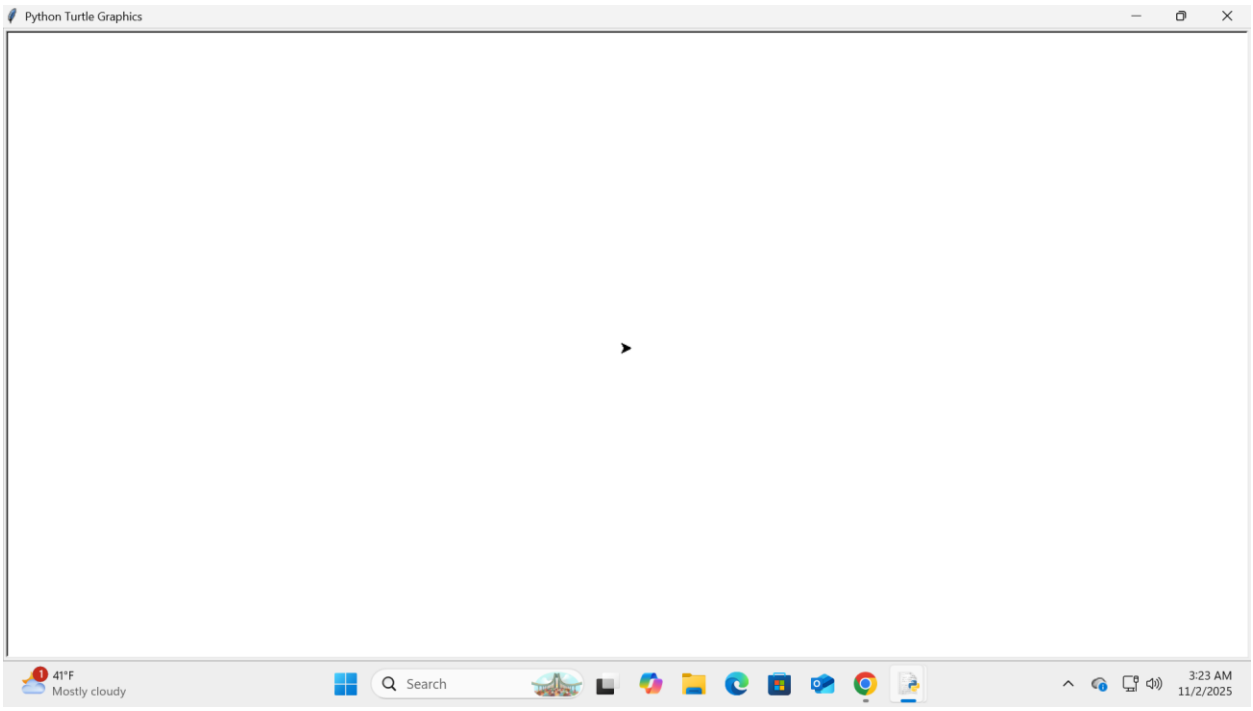
1. The middle of the page has the draw square function code example block does spill over to the top of the next page. Create an example that utilizes the function and grabs a screen shot of the results.



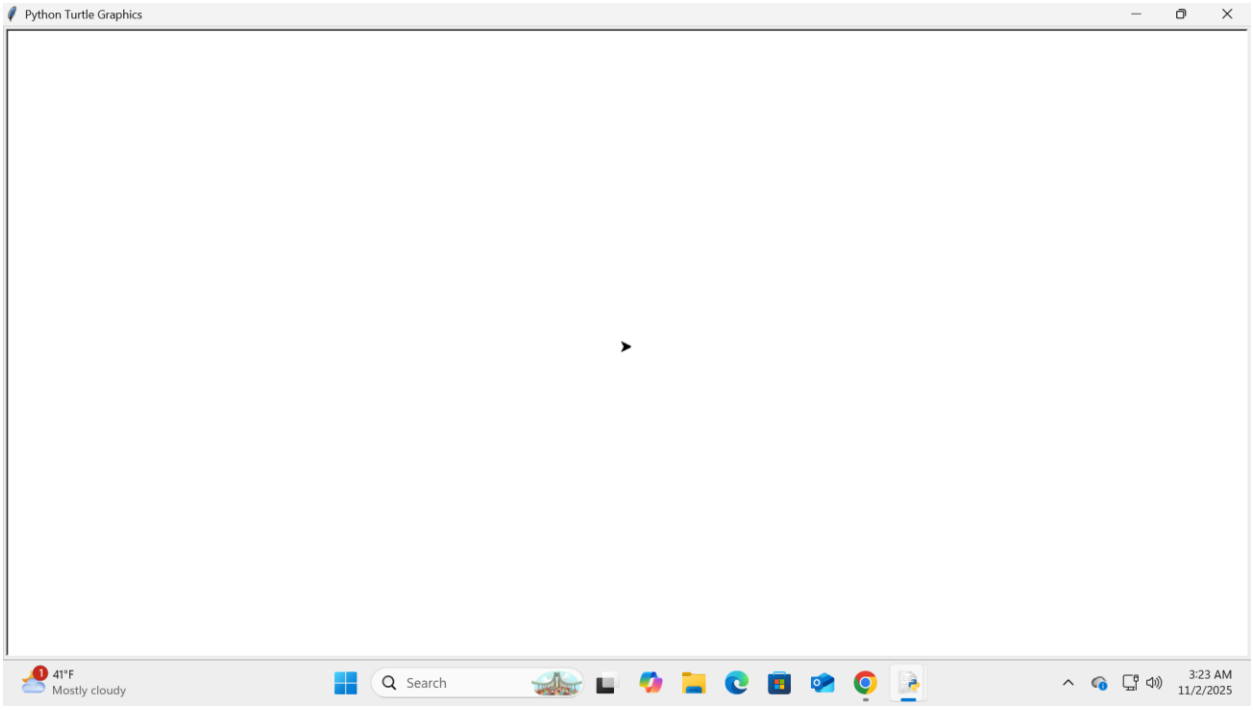
Object Instantiation and *turtle* module

Pages 192 – 193

1. You will need to create a python program file for this one for best results but you can enter it into the interactive if you want. On page 192, there are 2 single line code example blocks that set up the turtle object. Those will need to be entered before doing the code on page 193.



2. The steps in the middle of the page should build the image at the bottom of the page. Do the steps and implement them.

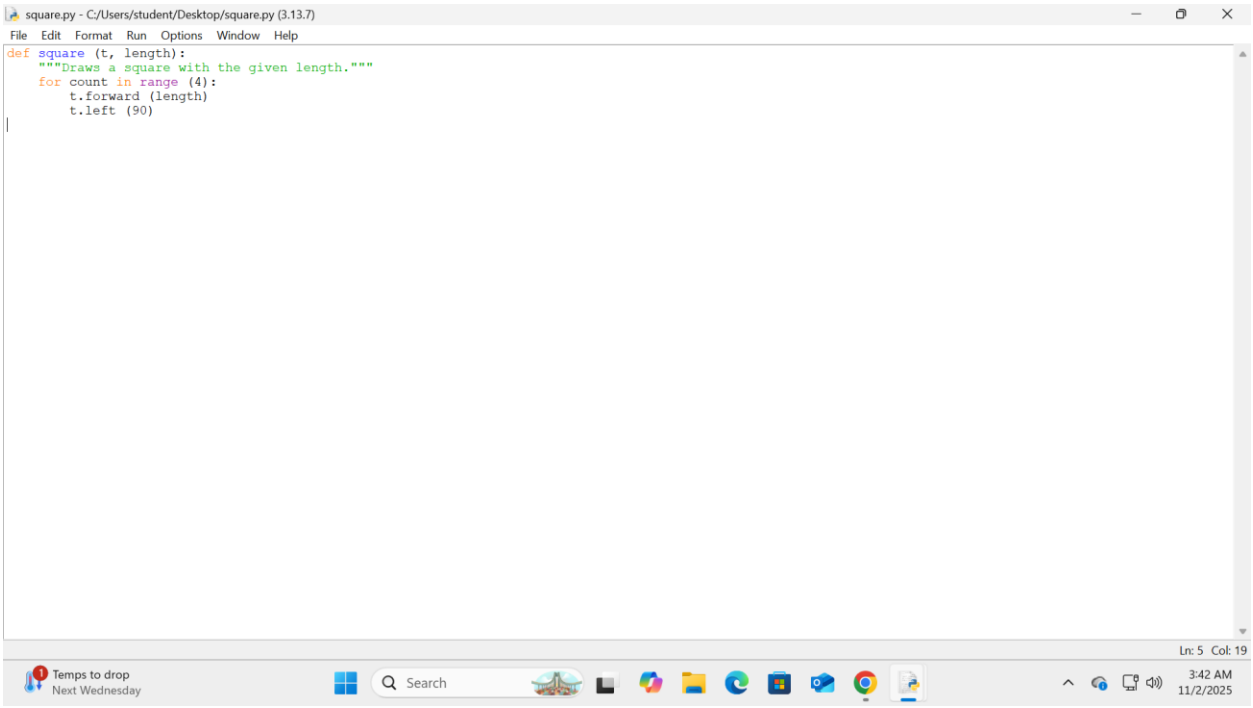


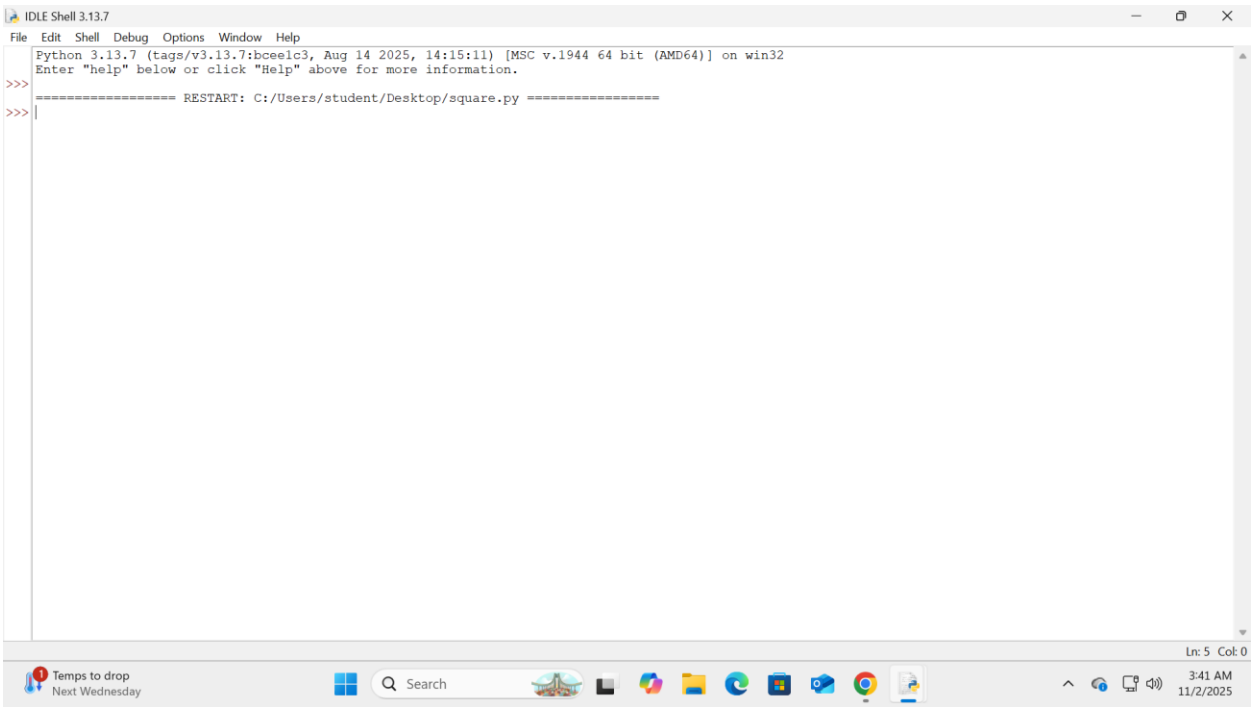
3. You may need to review the pages preceding pages to set up the turtle module.

Drawing two-dimensional object

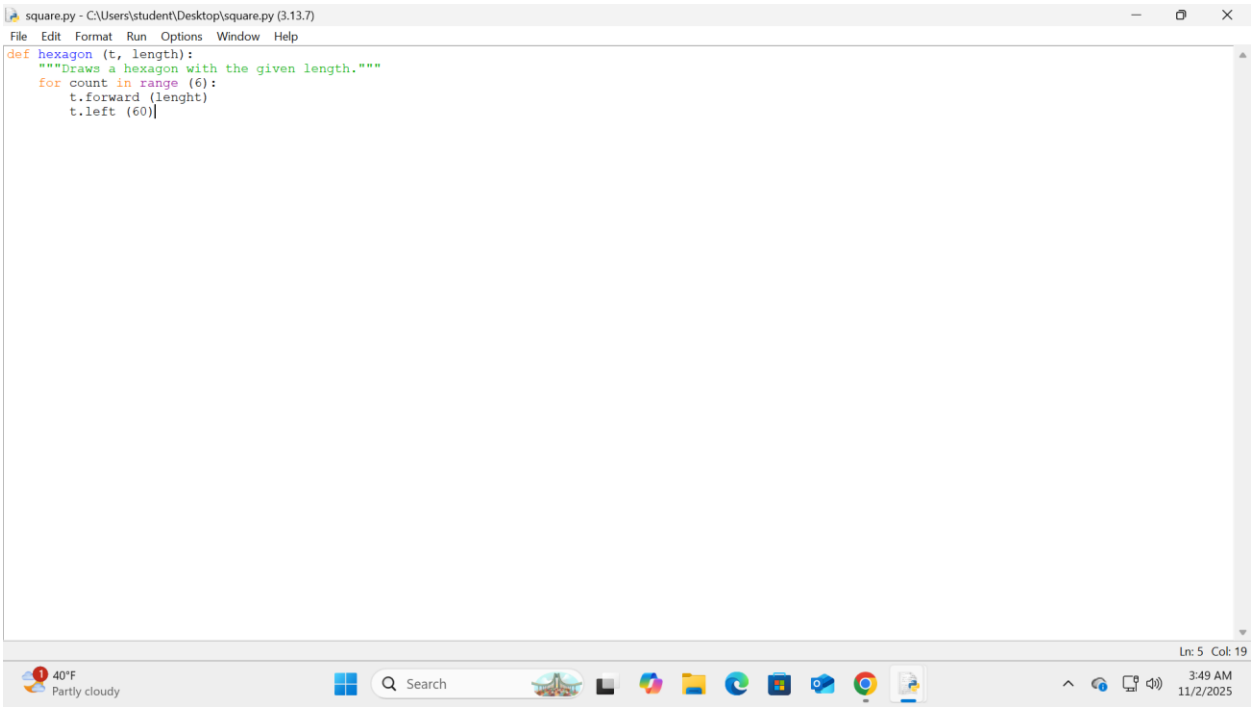
Page 194

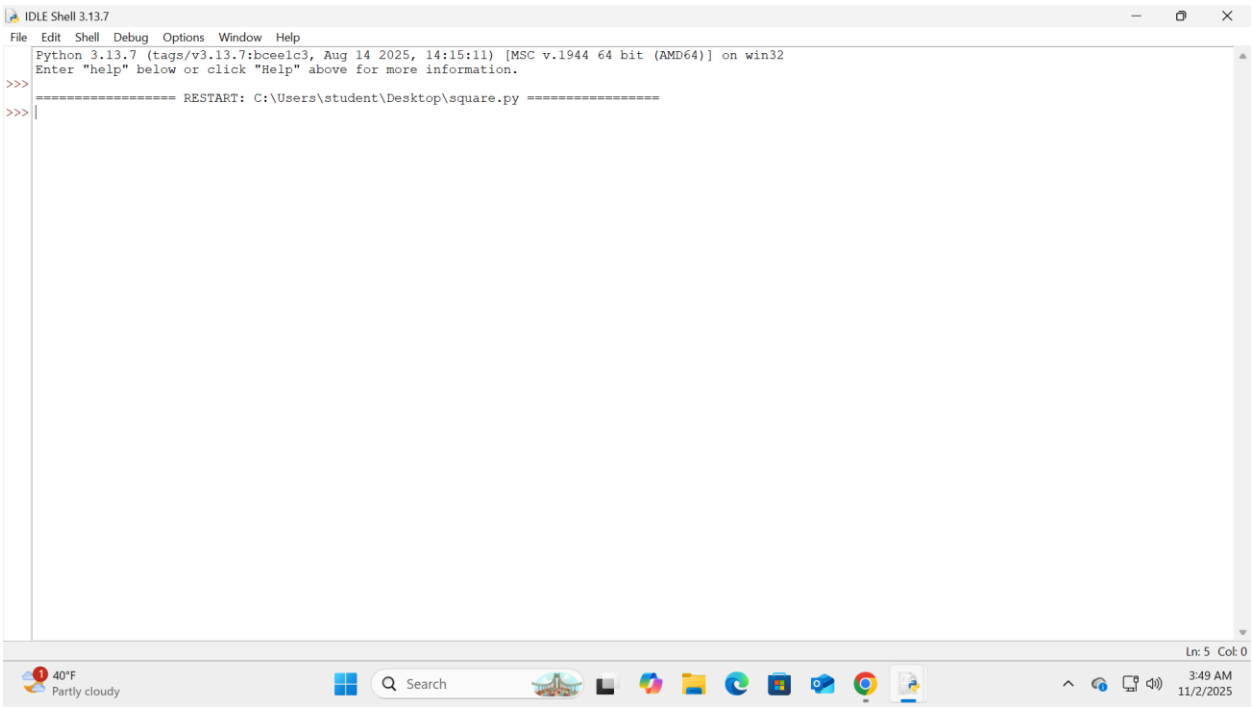
1. There is a square function, and a hexagon function code example blocks on this page. Create the code that will utilize those functions once you have them entered. It may be easier to accomplish this using a python program file instead of interactive mode.





2. Draw the square separately from the hexagon. One screen shot showing a square drawn.

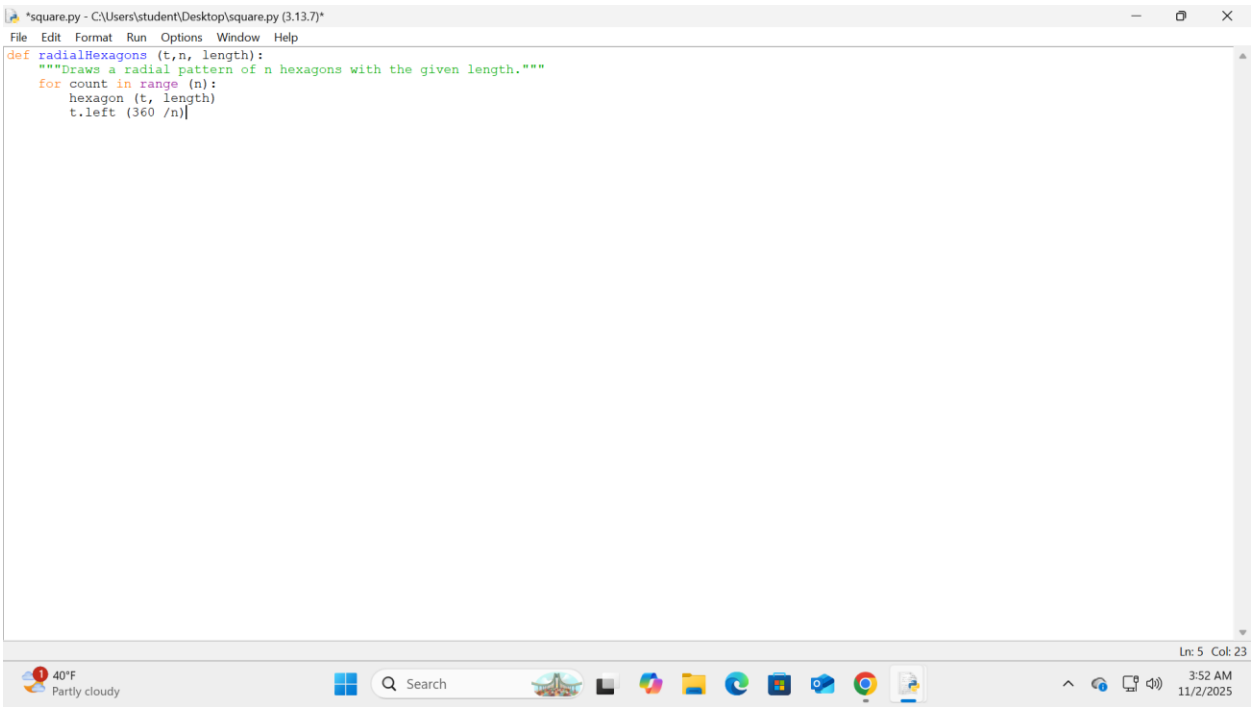


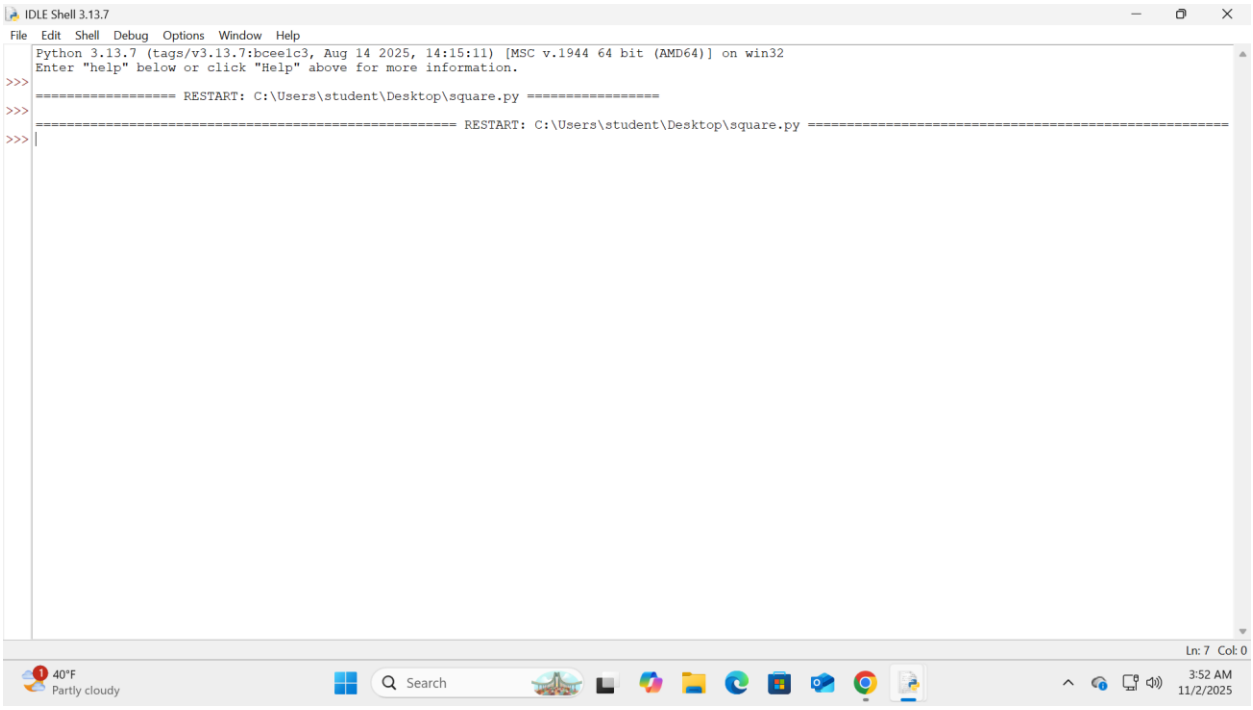


3. The second screen shot shows the Hexagon being drawn.

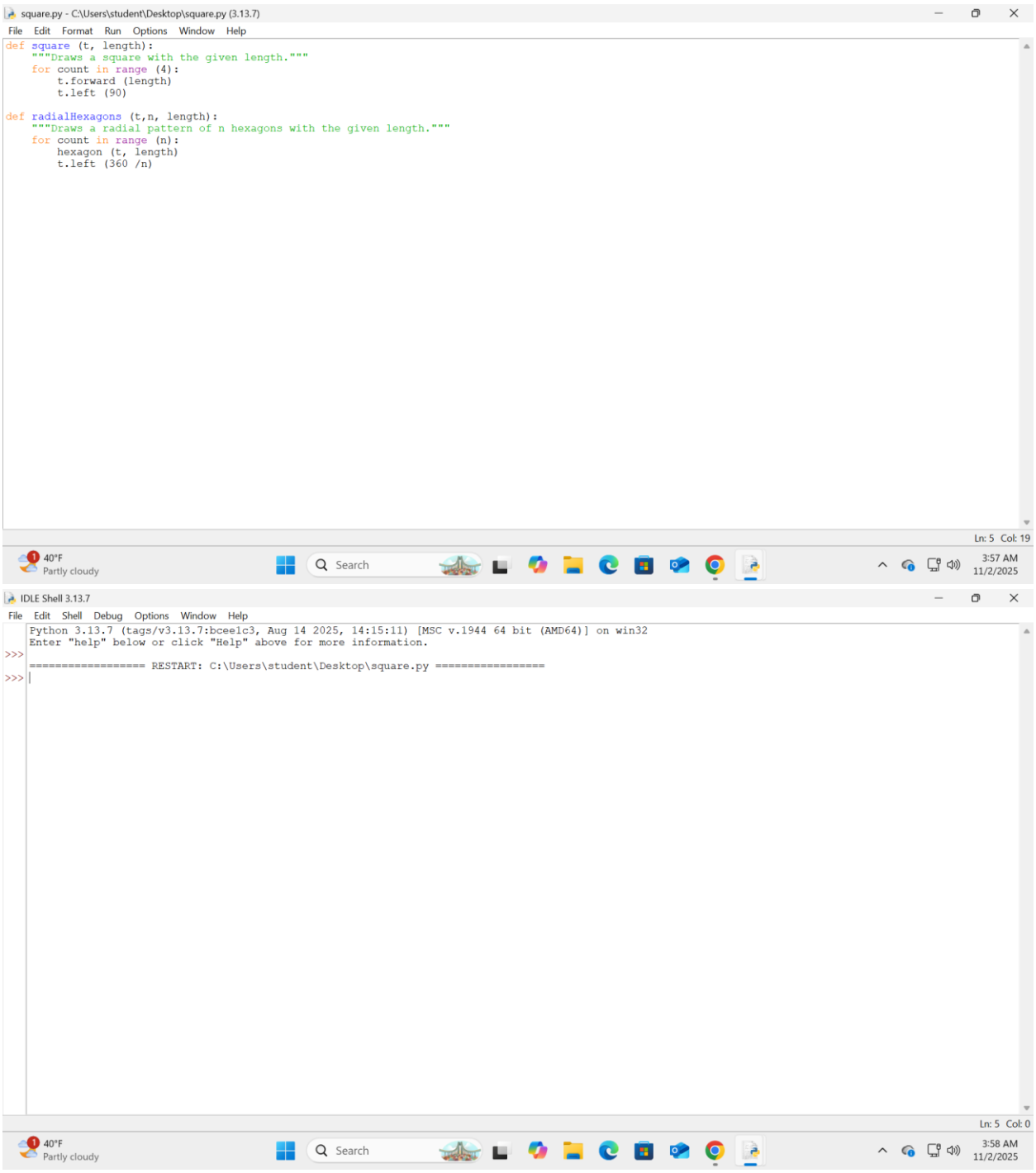
Page 194 – 195

1. Now do the RadialHexagons code and grab the screen shot. It starts at the bottom of page 194.

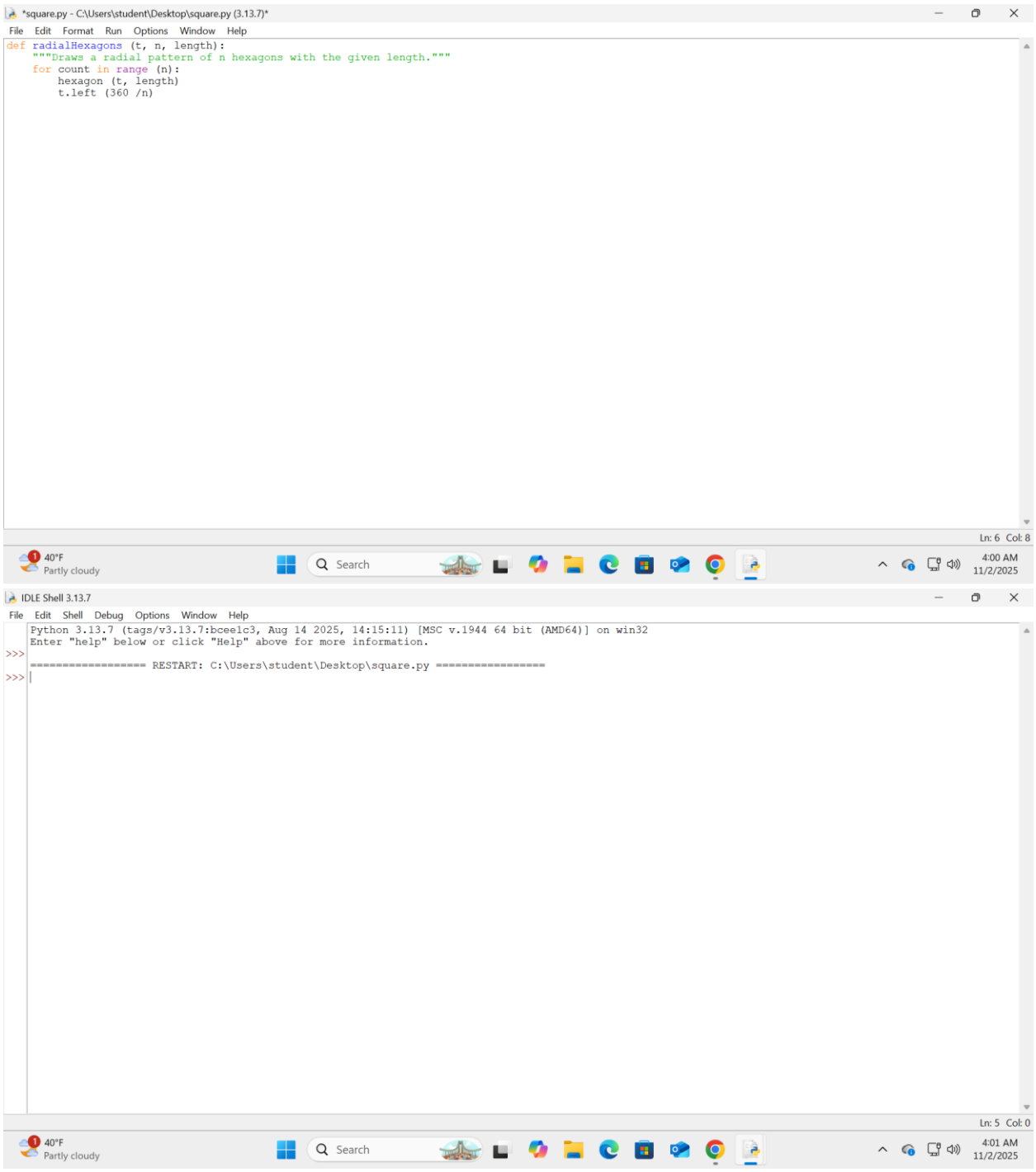




2. Use the function at the top and then the steps below that for the radial hexagon image



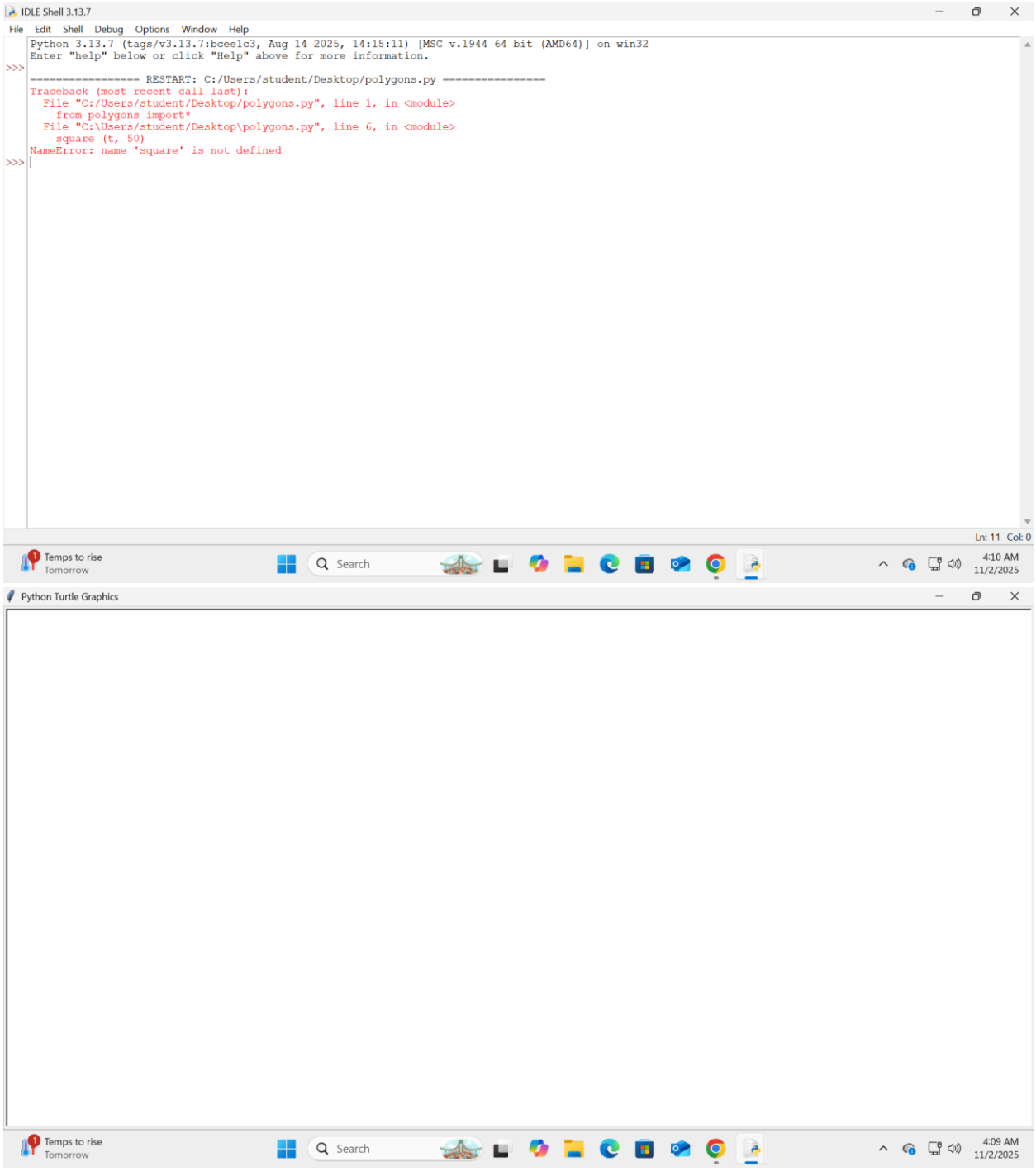
3. Finish the subsection by doing the radial patterns function and examples near the bottom of the page.



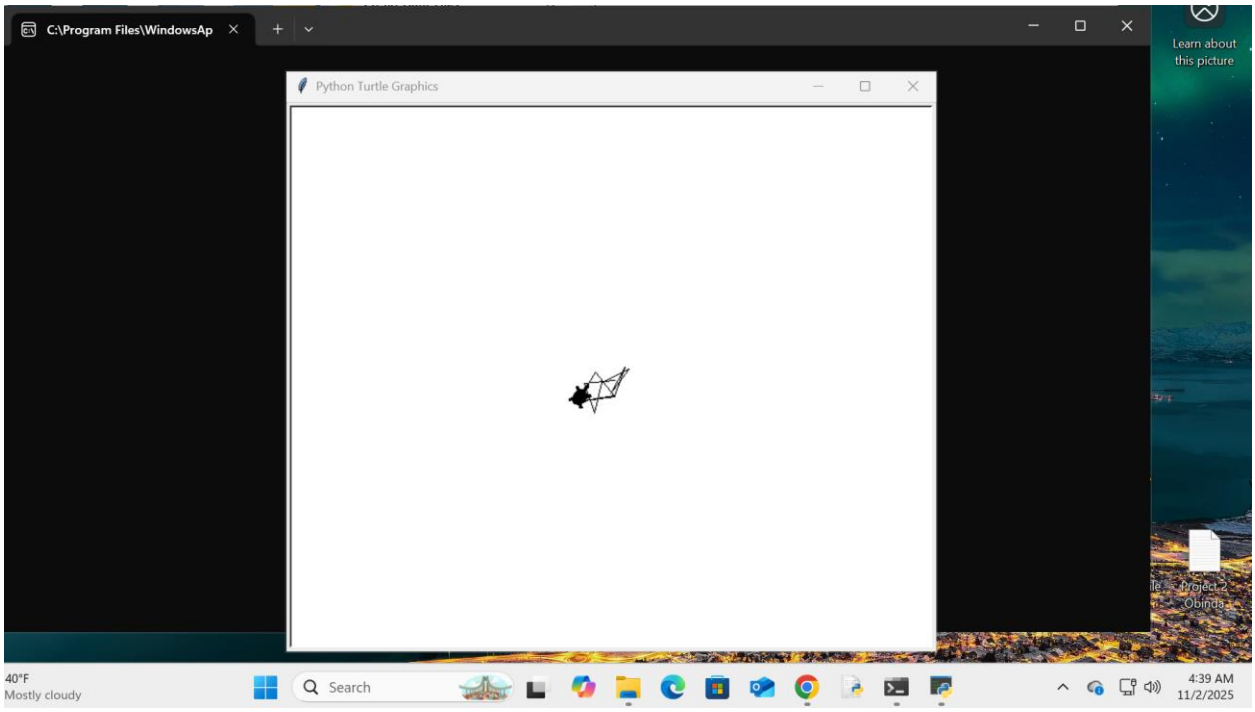
Examining a Object's Attributes

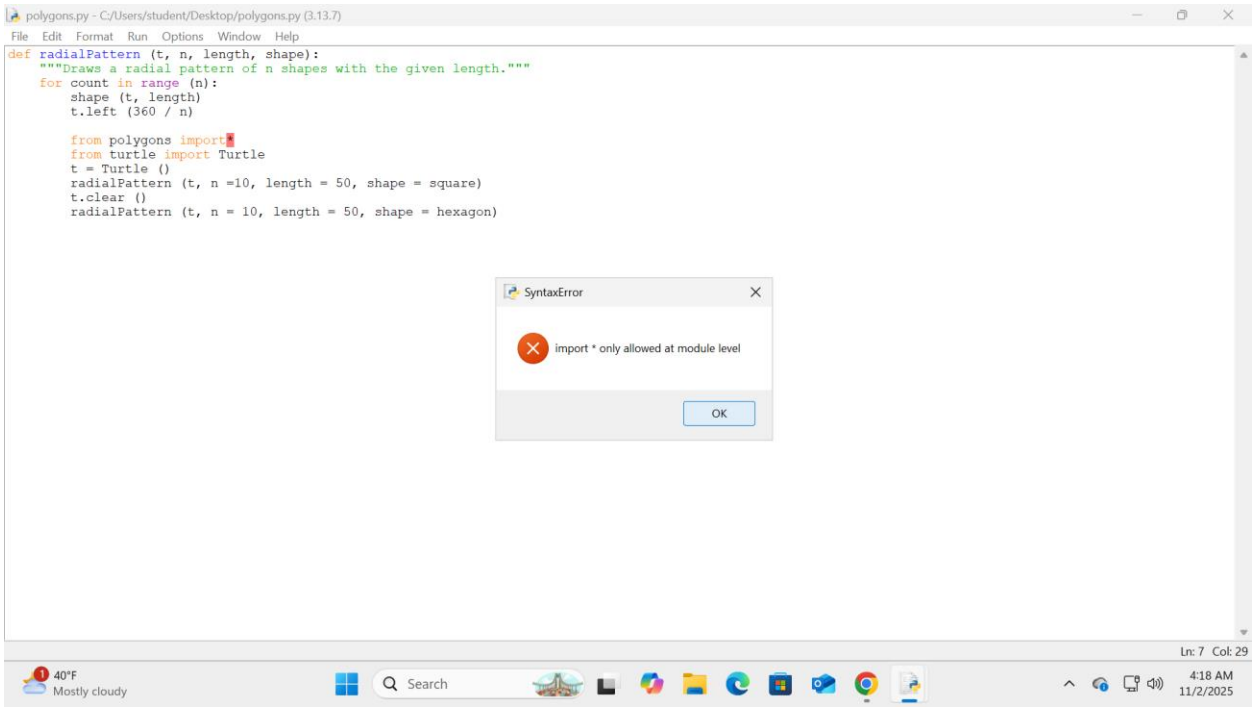
Pages 195-197

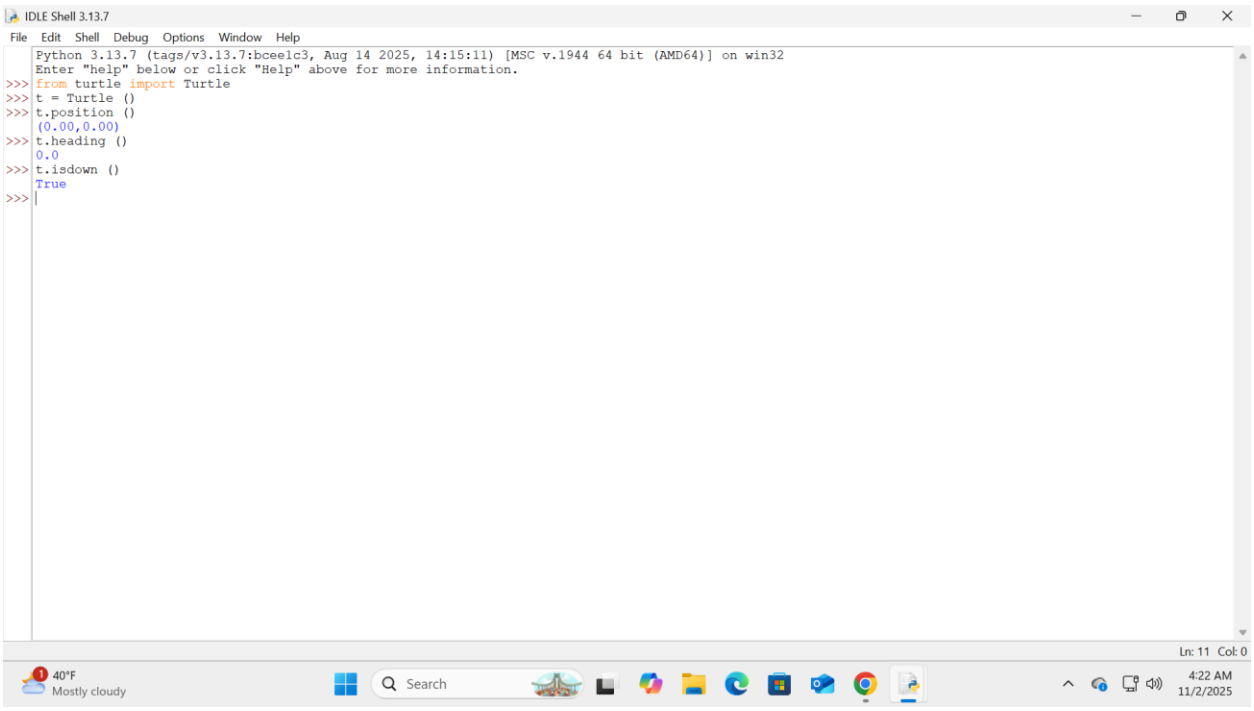
1. On page 195, there are some examples of how to use the attributes, and you may not see any results in the turtle screen.

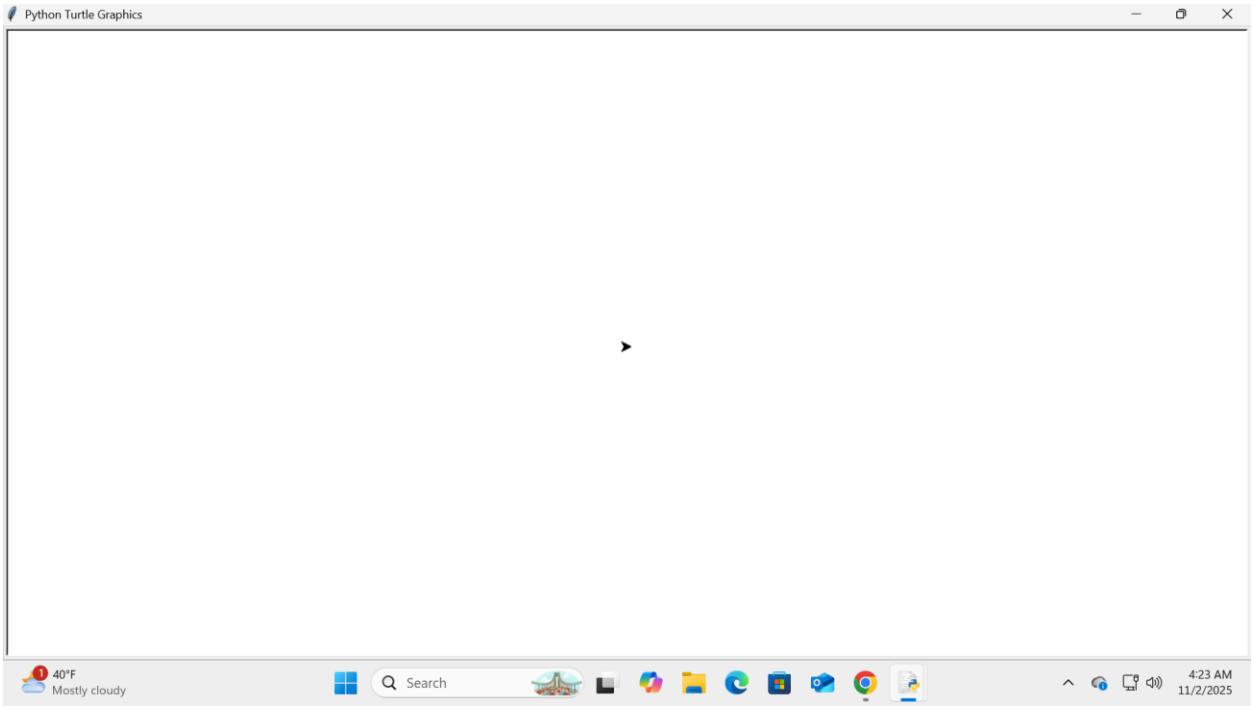


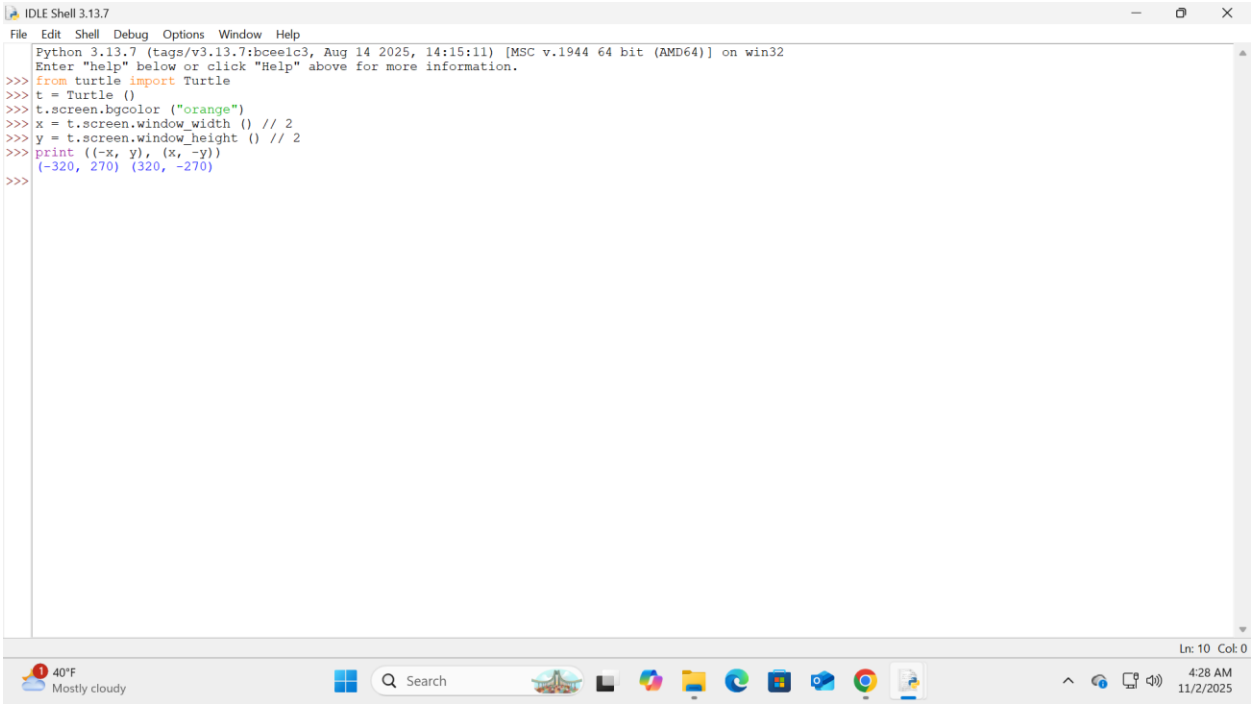
2. For the screen shot, work with the code example block that does the random walk and grab the screen shot of the resulting walk.

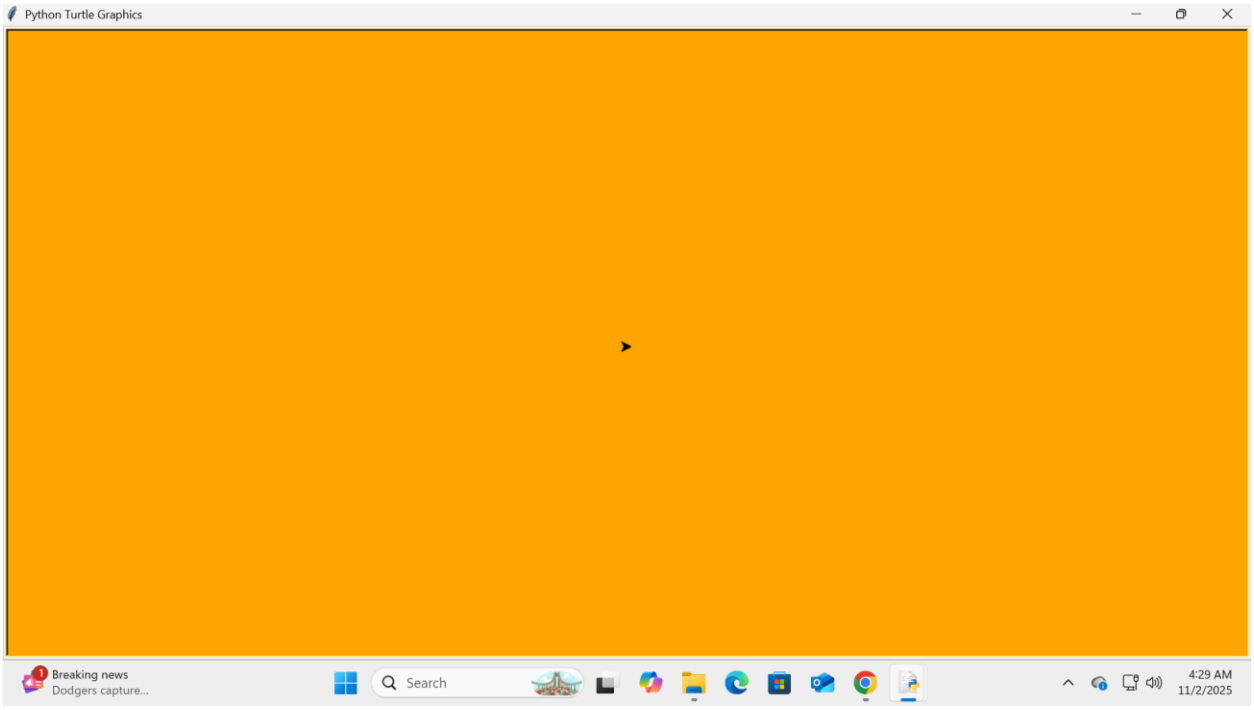





IDLE Shell 3.13.7
File Edit Shell Debug Options Window Help
Python 3.13.7 (tags/v3.13.7:bcee1c3, Aug 14 2025, 14:15:11) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>> from turtle import Turtle
>>> t = Turtle ()
>>> t.position ()
(0.00,0.00)
>>> t.heading ()
0.0
>>> t.isdown ()
True
>>>
Ln: 11 Col: 0
40°F
Mostly cloudy
Search
4:22 AM
11/2/2025


Python Turtle Graphics
40°F
Mostly cloudy
Search
4:23 AM
11/2/2025





It would benefit you experiment with the code example bloc

k on pages 198 - 199. It should be part of the download for this chapter. Experiment it and make some changes and observe the results, but you do not need to take any screen shots of the results.

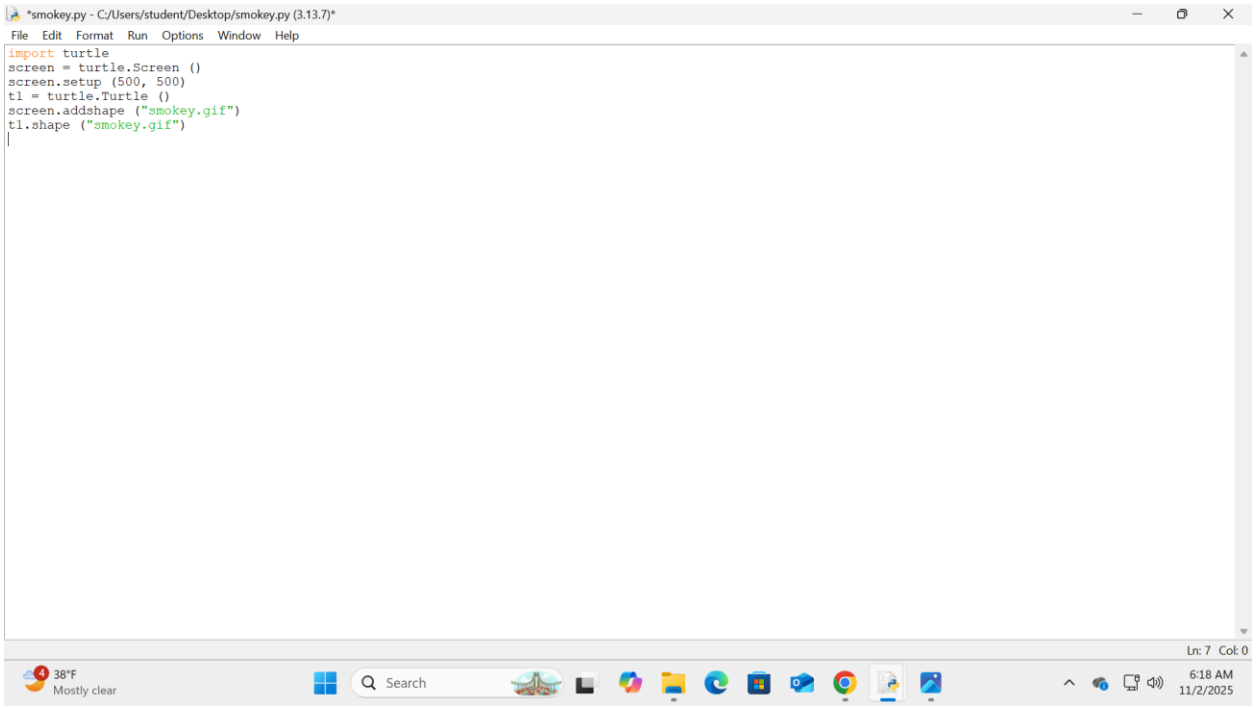
The case study will not be captured as part of this assignment either but would benefit you to review the case study.

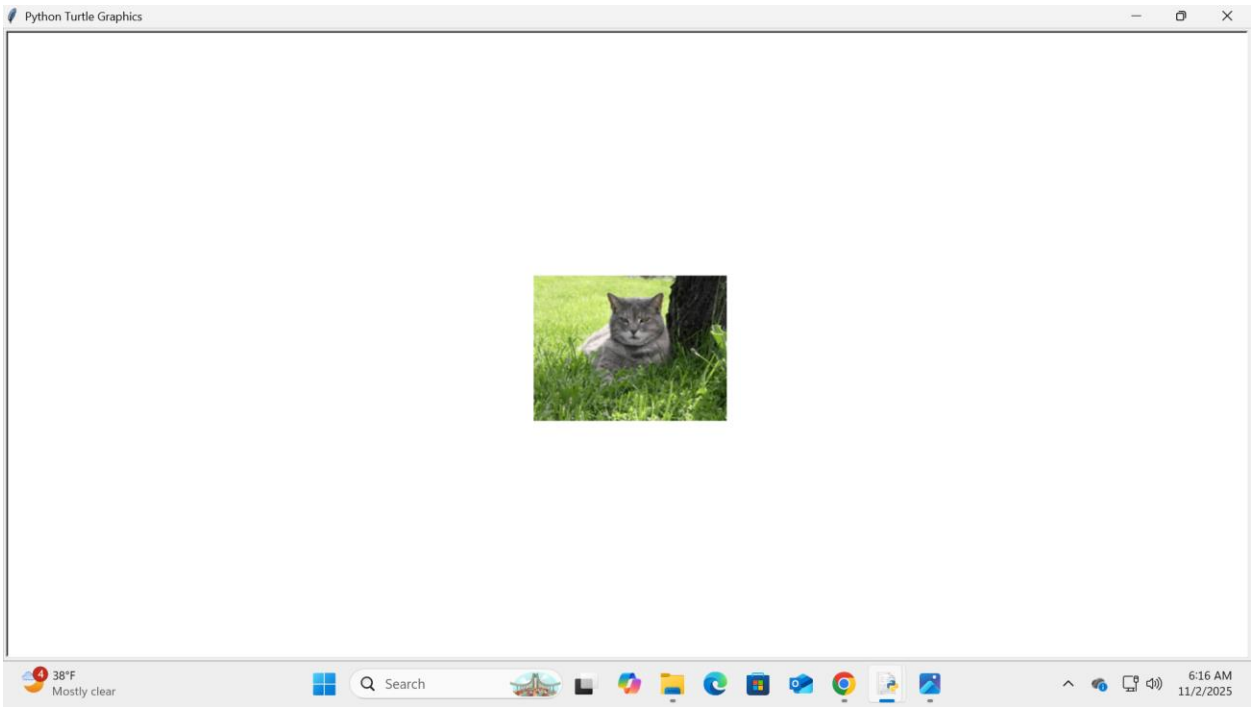
Image Processing

The *images* module

Pages 206

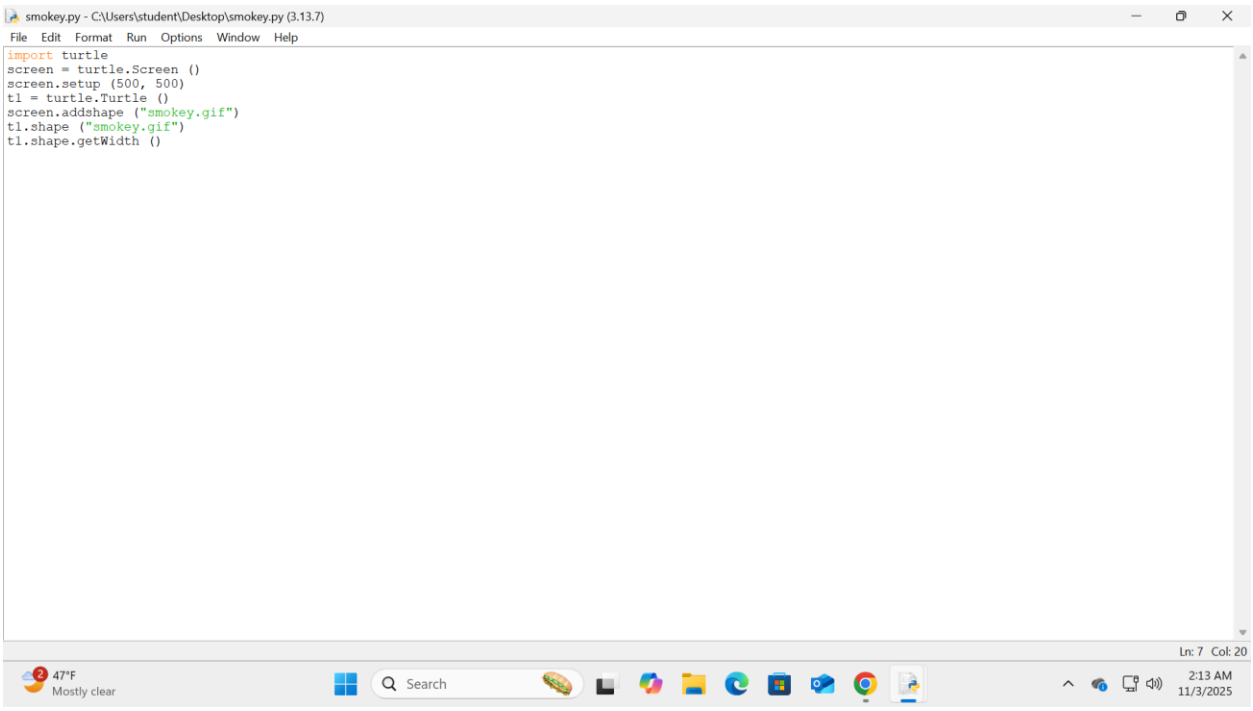
1. On the very bottom of the page is the Smokey image display code example block

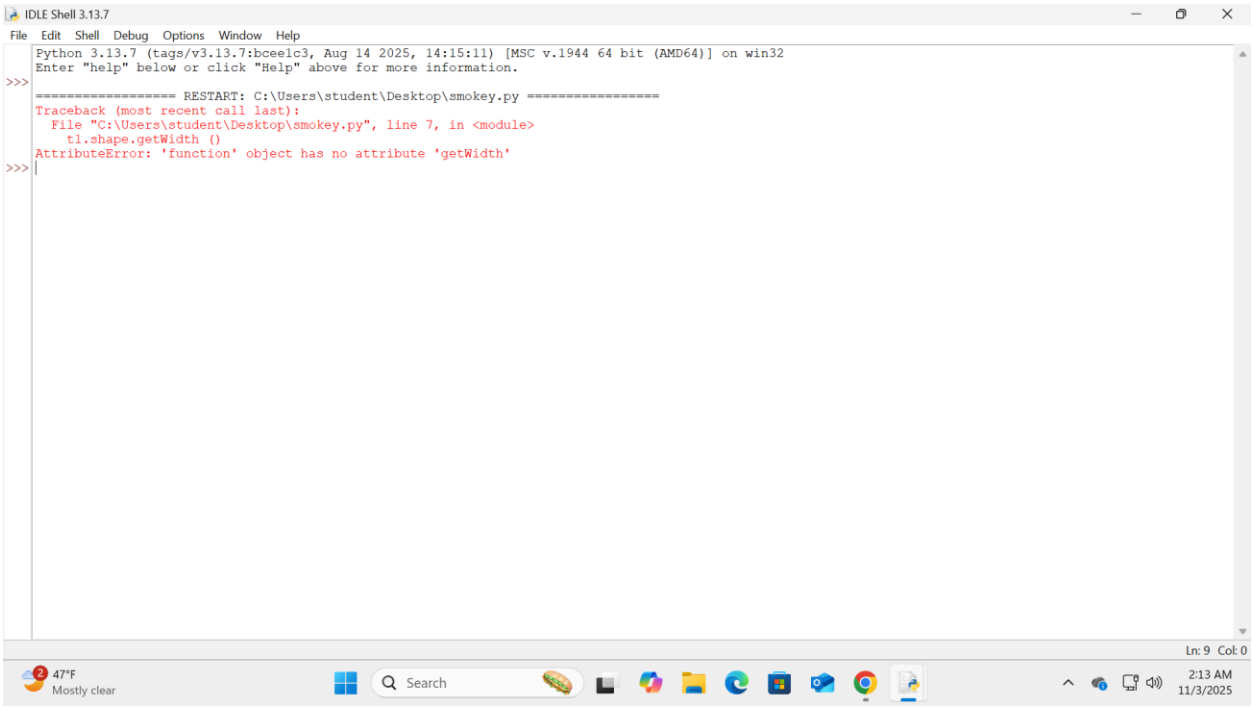




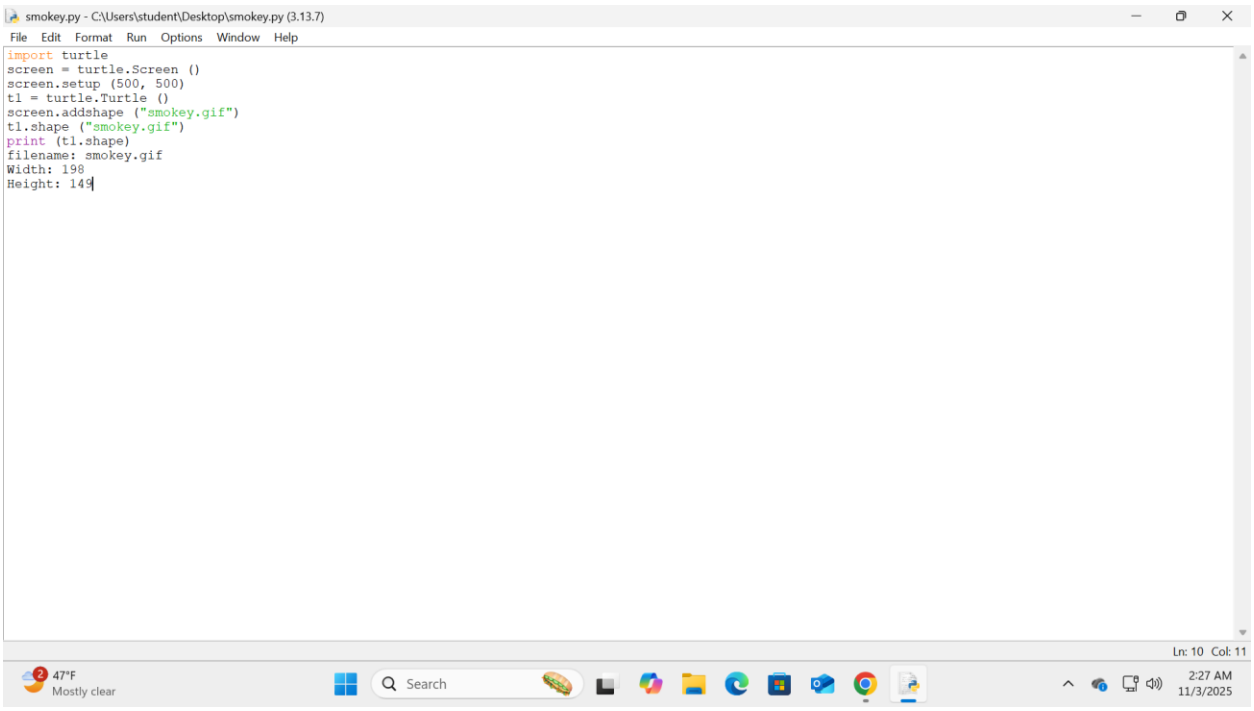
Page 207

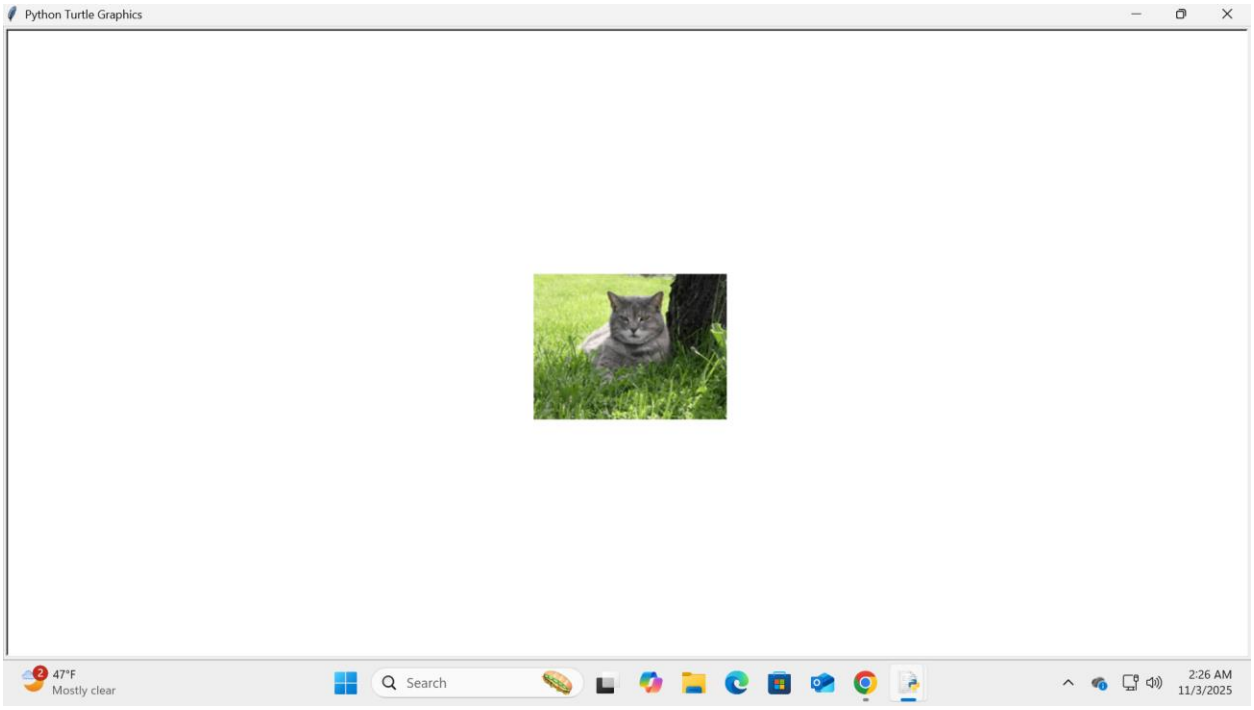
1. The first code example blocks at the top of the page and is obtaining width and height info for an image



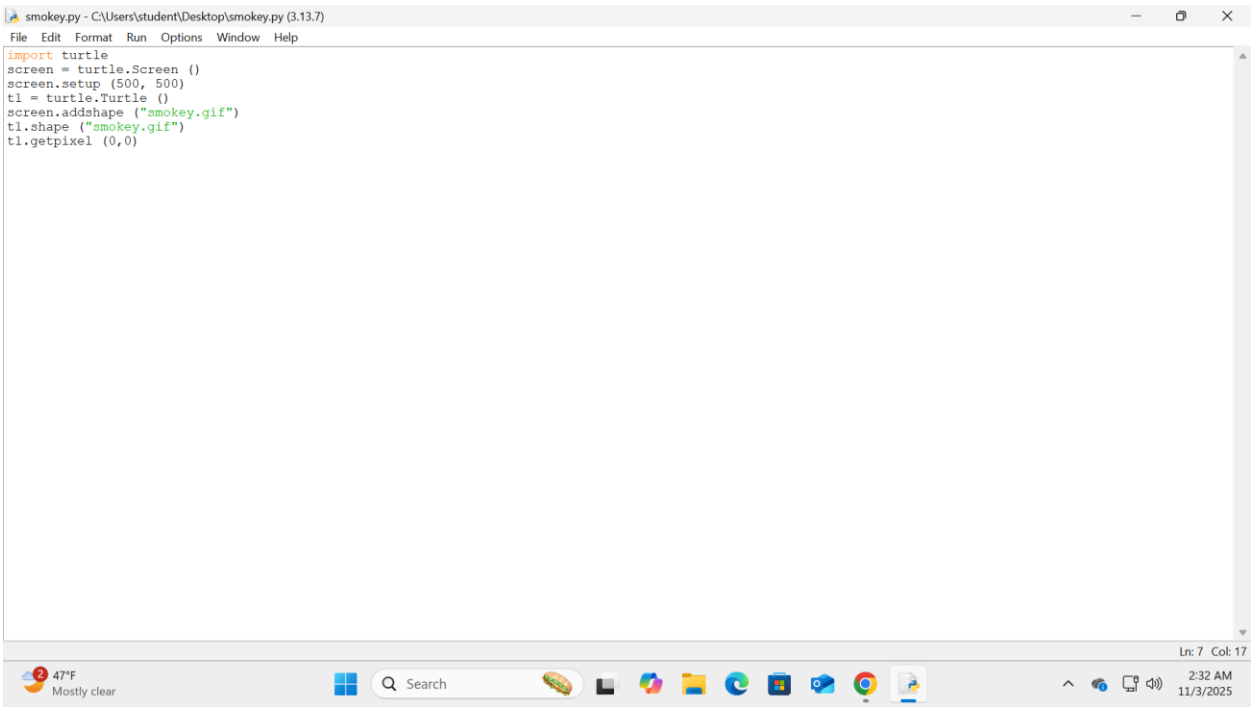


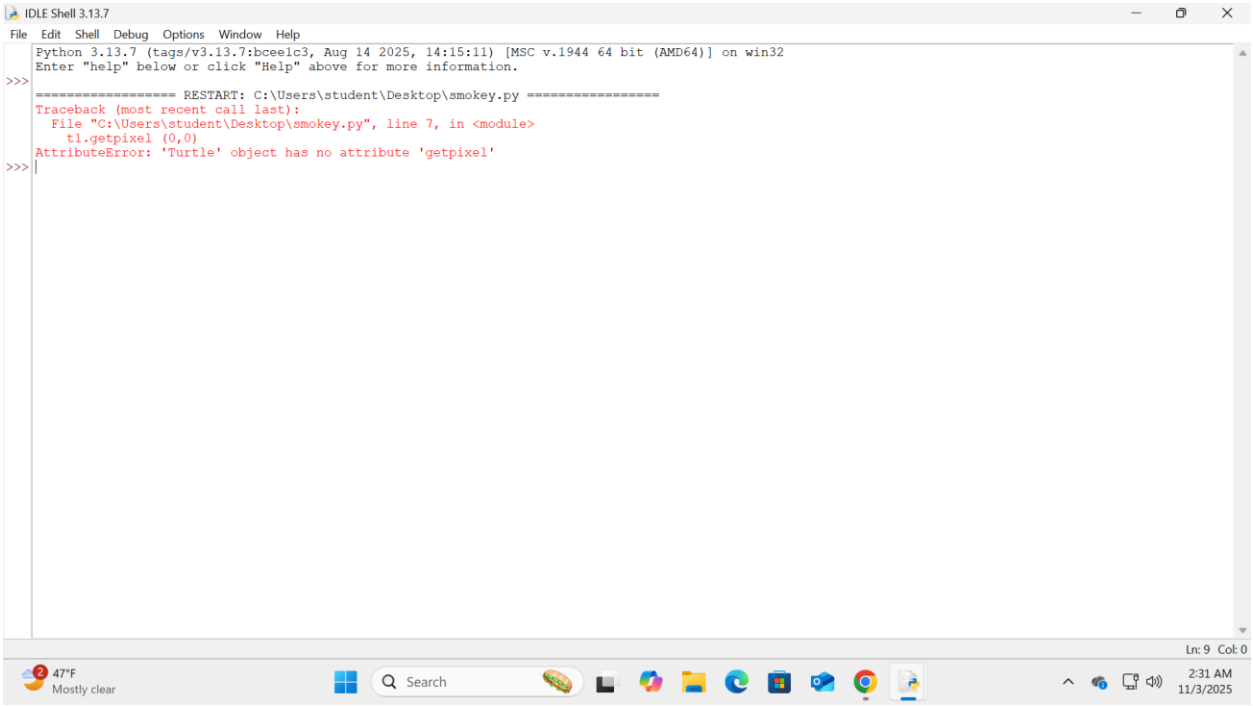
2. Just under that is another code example block that prints some of the attribute information



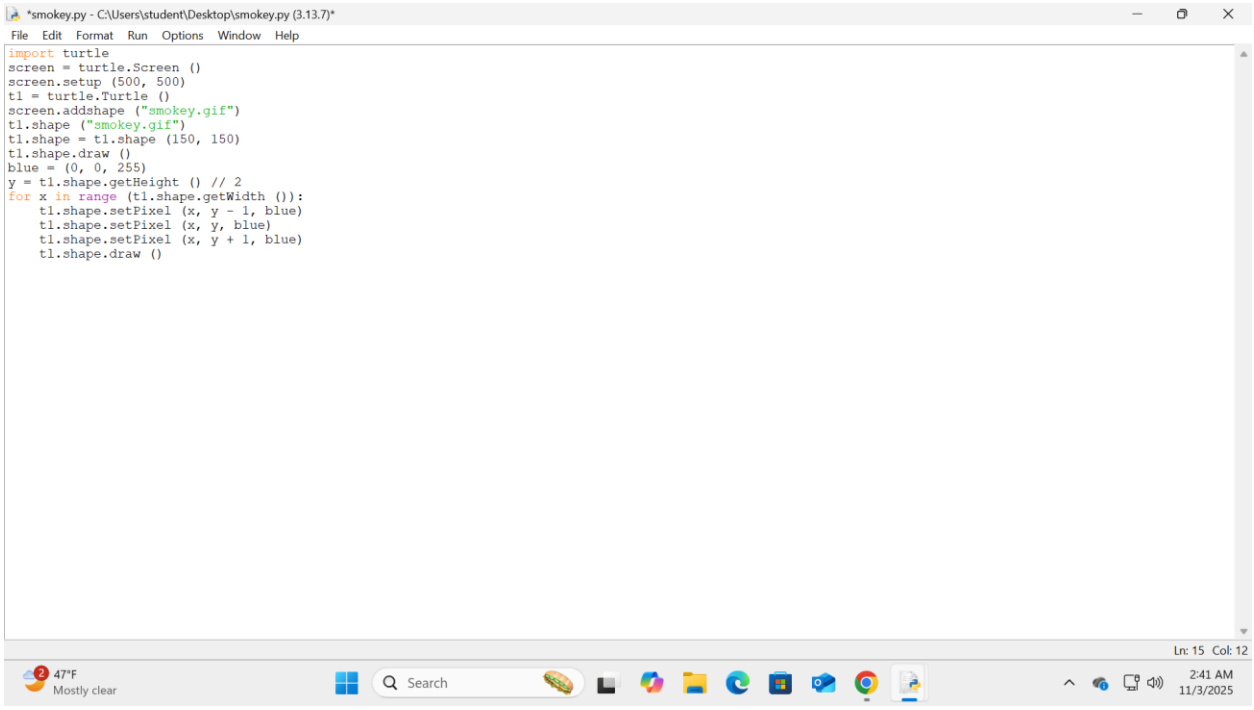


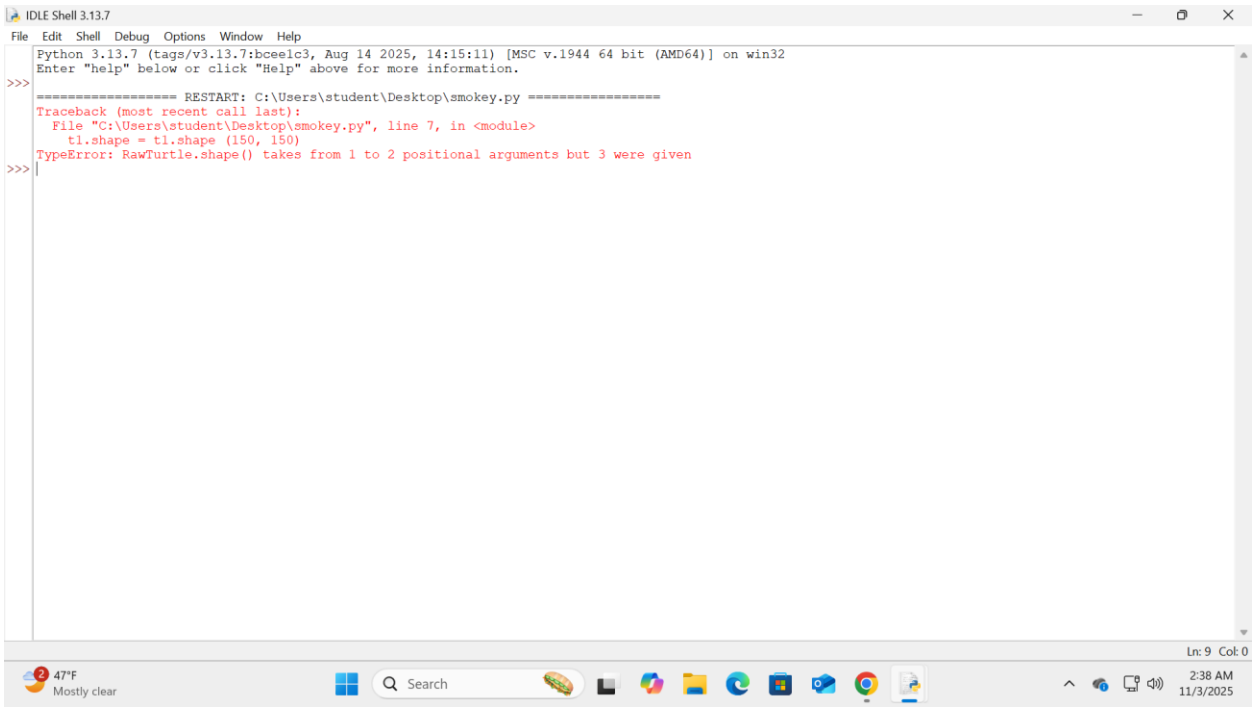
3. The next code example block on this page is about 1/2 down on the page and gets pixel information





4. The next code example block on this page is about 3/4 down that does a straight line on an image canvas.

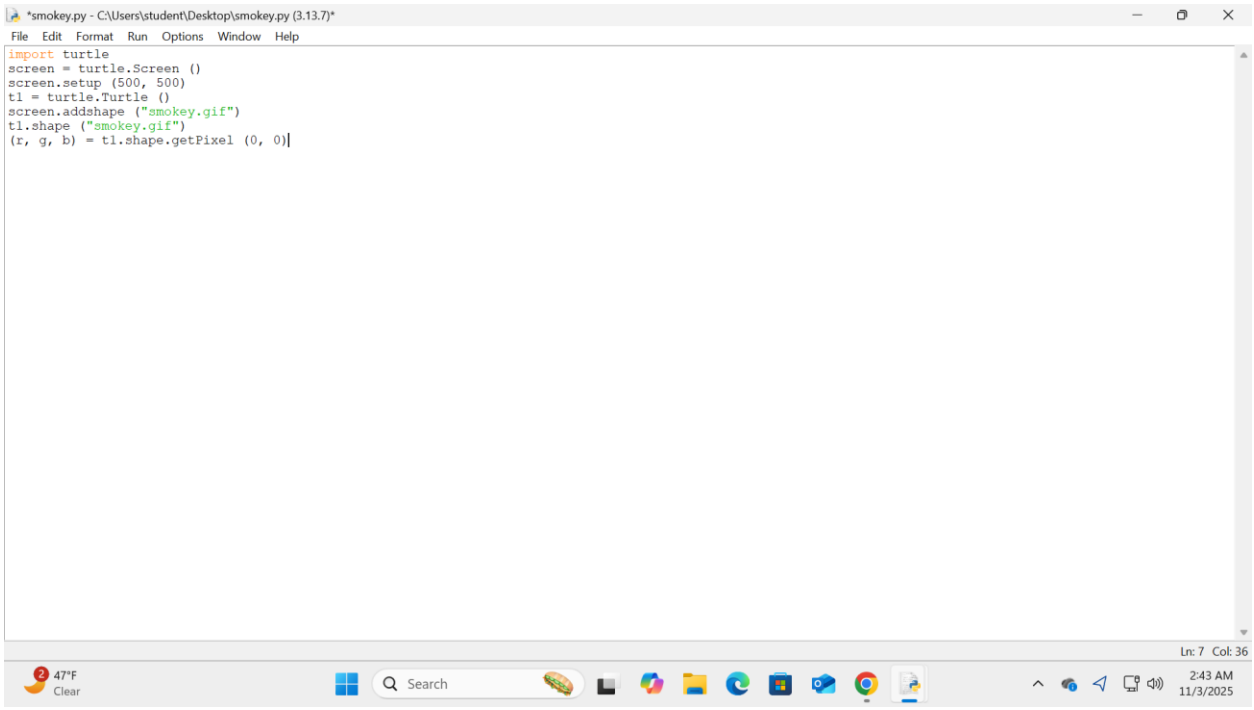

smokey.py - C:\Users\student\Desktop\smokey.py (3.13.7)
File Edit Format Run Options Window Help
import turtle
screen = turtle.Screen ()
screen.setup (500, 500)
t1 = turtle.Turtle ()
screen.addshape ("smokey.gif")
t1.shape ("smokey.gif")
t1.shape = t1.shape (150, 150)
t1.shape.draw ()
blue = (0, 0, 255)
y = t1.shape.getHeight () // 2
for x in range (t1.shape.getWidth ()):
t1.shape.setPixel (x, y - 1, blue)
t1.shape.setPixel (x, y, blue)
t1.shape.setPixel (x, y + 1, blue)
t1.shape.draw ()
Ln: 15 Col: 12
47°F
Mostly clear
Search
2:41 AM
11/3/2025

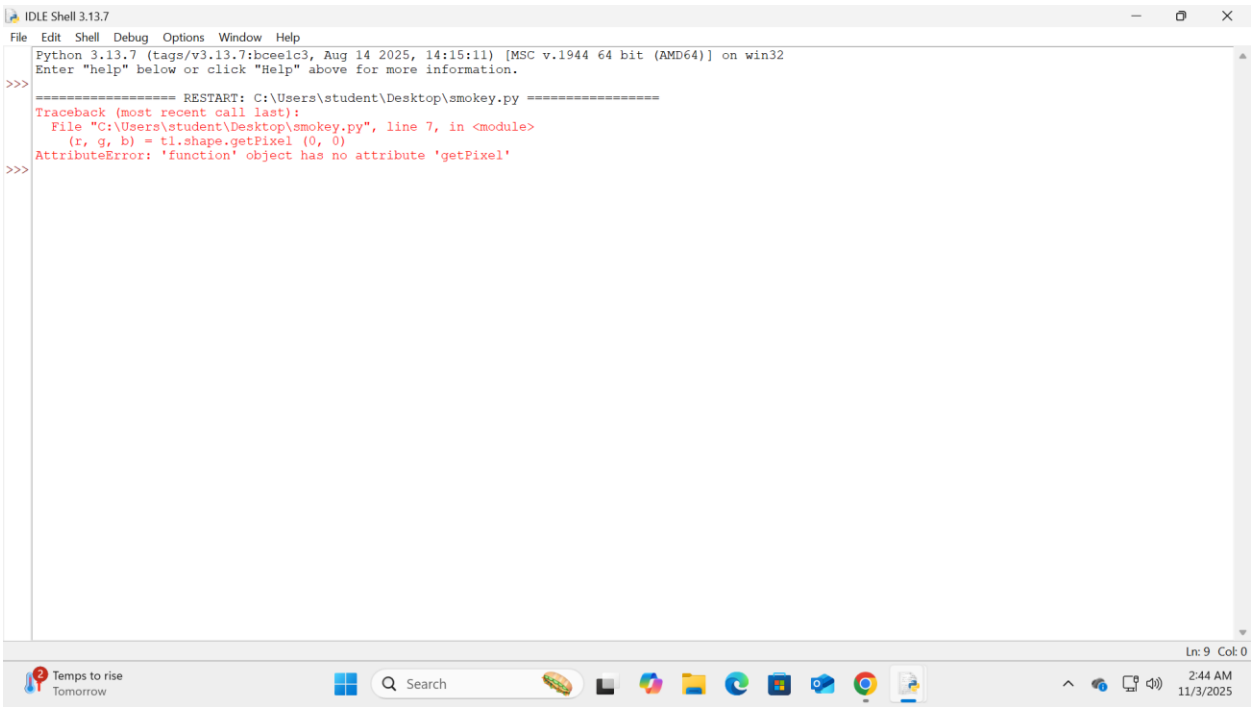

IDLE Shell 3.13.7
File Edit Shell Debug Options Window Help
Python 3.13.7 (tags/v3.13.7:bcee1c3, Aug 14 2025, 14:15:11) [MSC v.1944 64 bit (AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>>
========== RESTART: C:\Users\student\Desktop\smokey.py ==========
Traceback (most recent call last):
File "C:\Users\student\Desktop\smokey.py", line 7, in <module>
t1.shape = t1.shape (150, 150)
TypeError: RawTurtle.shape() takes from 1 to 2 positional arguments but 3 were given
>>>
Ln: 9 Col: 0
47°F
Mostly clear
Search
2:38 AM
11/3/2025

A word on tuples

Page 209

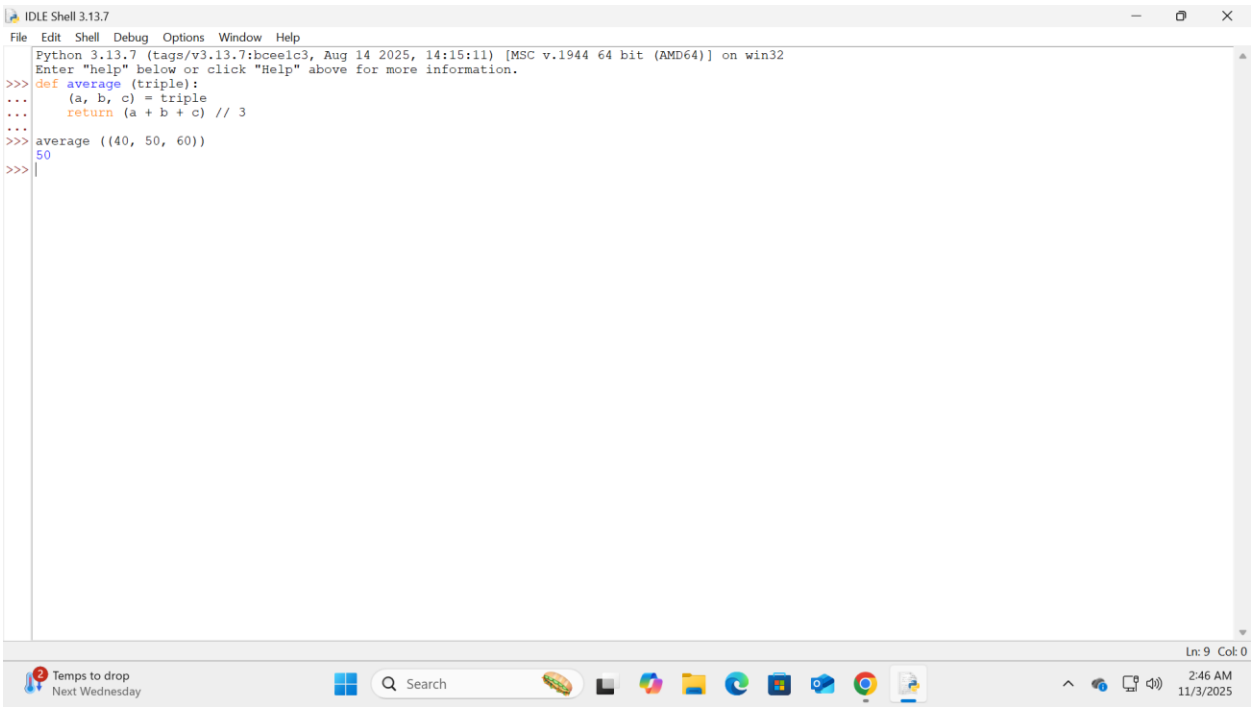
1. The first code example block on this page gets some r,g,b information from the Smokey image followed by displaying that information.





2. The second code example block is setting a specific pixel to a color.

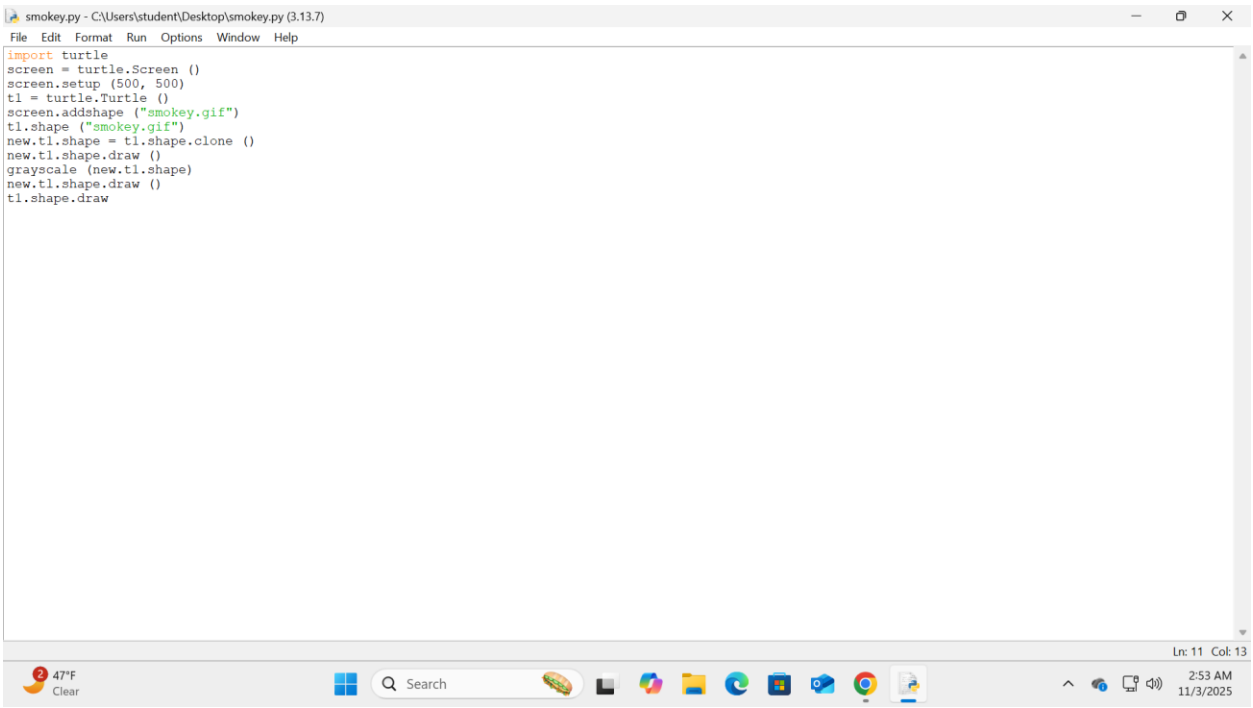
3. The last code example block on this page is the doing the average over 3 numbers.



Copying an Image

Page 211

1. Going to make a copy of the Smokey image with that code at the bottom of this page.



There is a lot of image manipulation in this chapter that you should experiment with yourself. This includes the blurring of the image and the resizing of the image.