

ES 102 Computing Course

PROJECT REPORT:

TURTLE PROGRAMMING

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Section 8

Overview: My whole project is based on turtle module of Python which I learned from Youtube tutorials and GEEKSforGEEKS website.

Design and Implementation: I used similar design as shown in tutorials and in geeksforgeeks also I did some changes from my side, like taking user input, for number of sides of shape, length of shape, colour of turtle, and also some other to create new patterns and some used patterns also.

You will get a list with shapes and number mentioned just enter the desired number and in some case inputs also then switch to turtle graphics from taskbar (if not opens automatically).

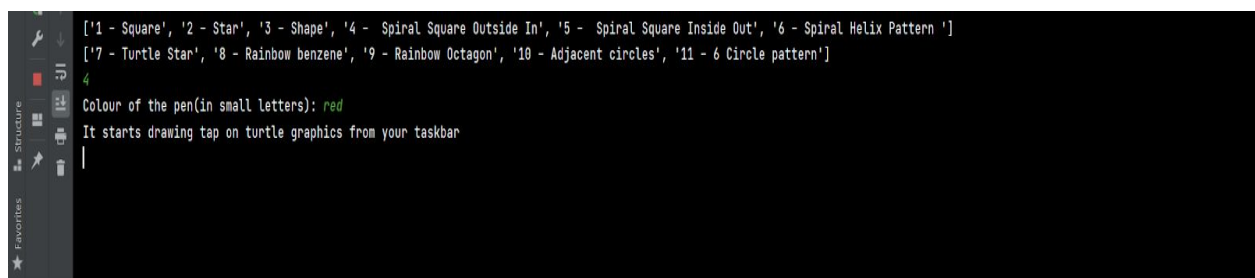
For logic you can just see the attached table and and basic steps for turtle to run.

Challenges and Problems: It was easy project and I am looking forward so that I can create some more like that. First I decided to create GAMA OF LIFE but found that more complicated than my level so decided to drop that idea and I came up with this idea that I saw while finding libraries for GAME OF LIFE. Now I am looking forward to learn program so that I can easily create GAME OF LIFE and other complicated games.

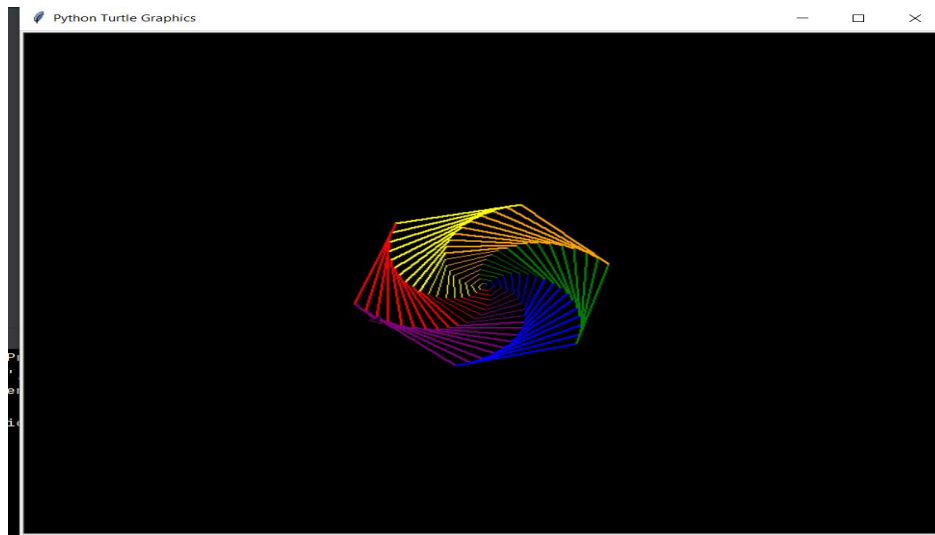
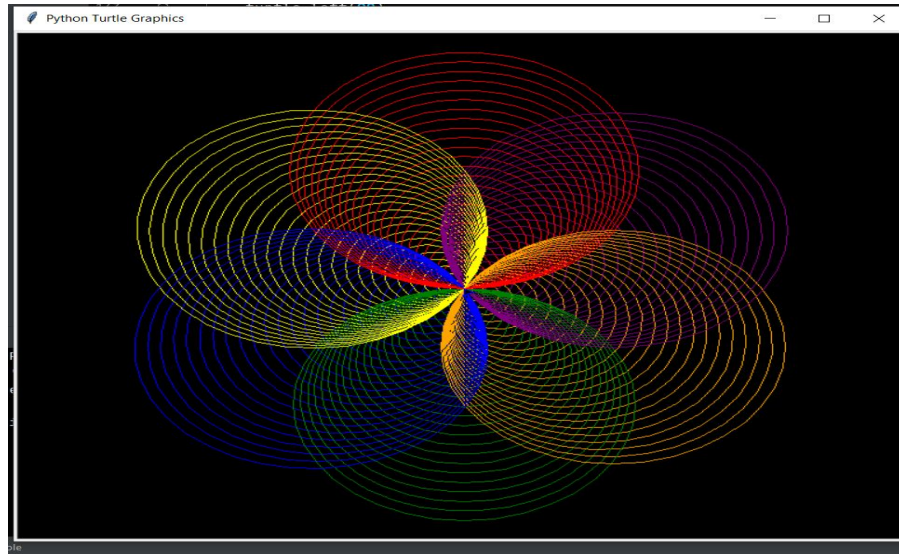
Hope you like my project

Sources: **Youtube:** <https://youtu.be/pxKu2pQ7ILo>

Another playlist: <https://youtu.be/kpueya-s888>



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[ '1 - Square', '2 - Star', '3 - Shape', '4 - Spiral Square Outside In', '5 - Spiral Square Inside Out', '6 - Spiral Helix Pattern ' ]  
[ '7 - Turtle Star', '8 - Rainbow benzene', '9 - Rainbow Octagon', '10 - Adjacent circles', '11 - 6 Circle pattern' ]  
4  
Colour of the pen(in small letters): red  
It starts drawing tap on turtle graphics from your taskbar  
|
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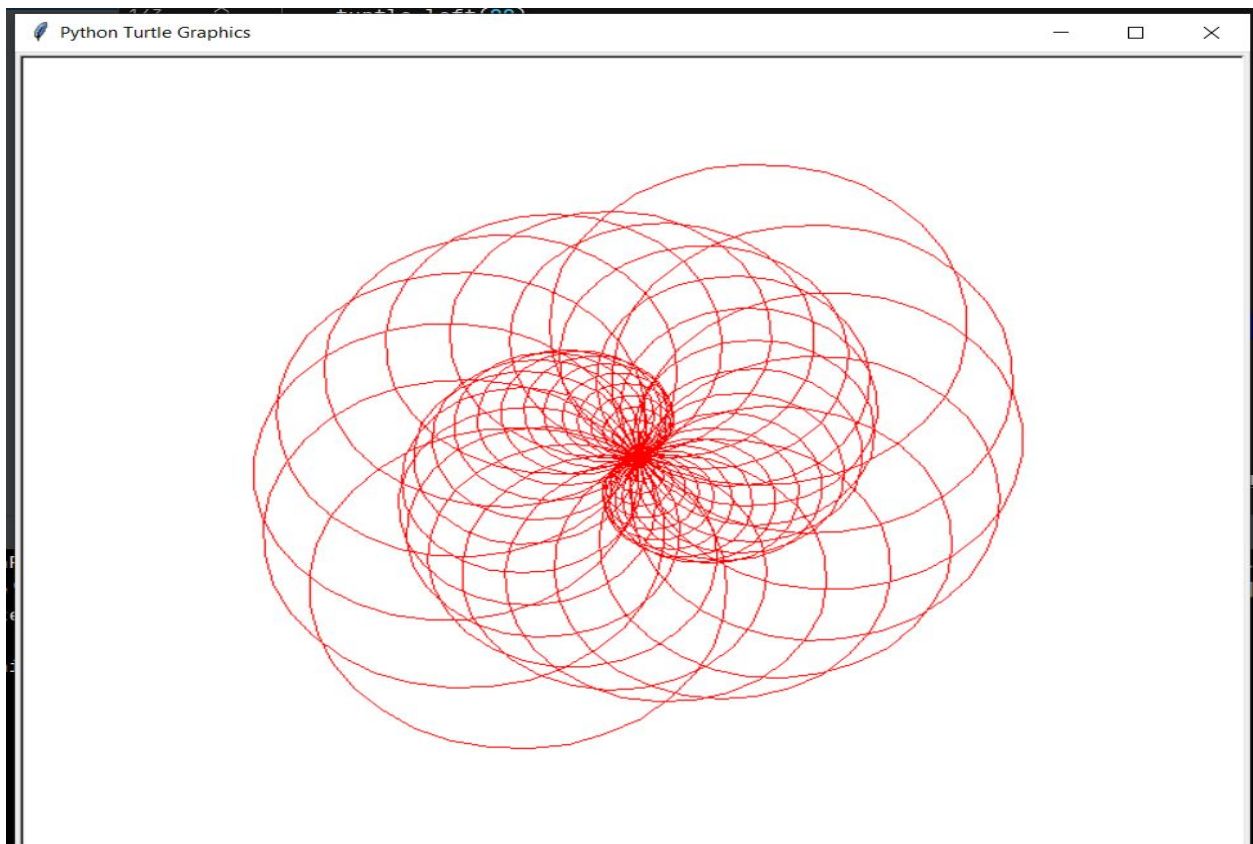


Turtle Programming

This program is based on the Turtle library of Python.

I learned the library from some Youtube tutorials and from GeeksforGeeks site.

We can use this program as a tool in elementary schools for students, for their better understanding and visualization of shapes and patterns.



Some parameters that I learnt about this library from sources are mentioned below:

<i>METHOD</i>	<i>PARAMETER</i>	<i>DESCRIPTION</i>
turtle()	None	Creates and returns a new turtle object
forward()	amount	Moves the turtle forward by the specified amount
backward()	amount	Moves the turtle backward by the specified amount
right()	angle	Turns the turtle clockwise
left()	angle	Turns the turtle counter clockwise
penup()	None	Picks up the turtle's Pen
pendown()	None	Puts down the turtle's Pen

up()	None	Picks up the turtle's Pen
down()	None	Puts down the turtle's Pen
color()	color name	Changes the color of the turtle's pen
fillcolor()	color name	Changes the color of the turtle will use to fill a polygon
heading()	None	Returns the current heading
position()	None	Returns the current position
goto()	x, y	Move the turtle to position x,y
begin_fill()	None	Remember the starting point for a filled polygon
end_fill()	None	Close the polygon and fill with the current fill color
dot()	None	Leave the dot at the current position
stamp()	None	Leaves an impression of a turtle shape at the current location
shape()	shapename	Should be 'arrow', 'classic', 'turtle' or 'circle'

Roadmap for executing the turtle:

1. Import the turtle module
2. Create a turtle to control.
3. Draw around using the turtle methods.
4. Run turtle.done().

To import turtle use:

Use “ Import turtle” or “ from turtle import * ”

Set the screen then try various methods on turtle by taking one or two examples and changing values to check what is the function of the variable.