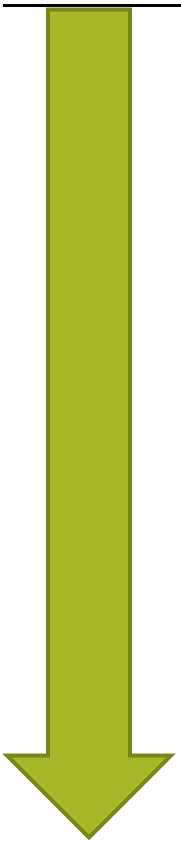
Assignment #02 – TURTLE GRAPHICS [PYTHON ONLY]
(Worth 15 points)

RESOURCES NEEDED TO COMPLETE ASSIGNMENT:

1. ☐ **Read Chapter 2 Turtle Graphics, pp. 81-109 of the required textbook.**
2. ☐ **See handout on turtle graphics located under Week #04 contents**
3. ☐ **See LINKS & VIDEOS under CONTENT LINK FOR WEEK #02**
4. ☐ Download and open the sample turtle graphics python file located under the drop box or under Week #02. This sample document illustrates where the introduction, body of program and ending comments should be places.

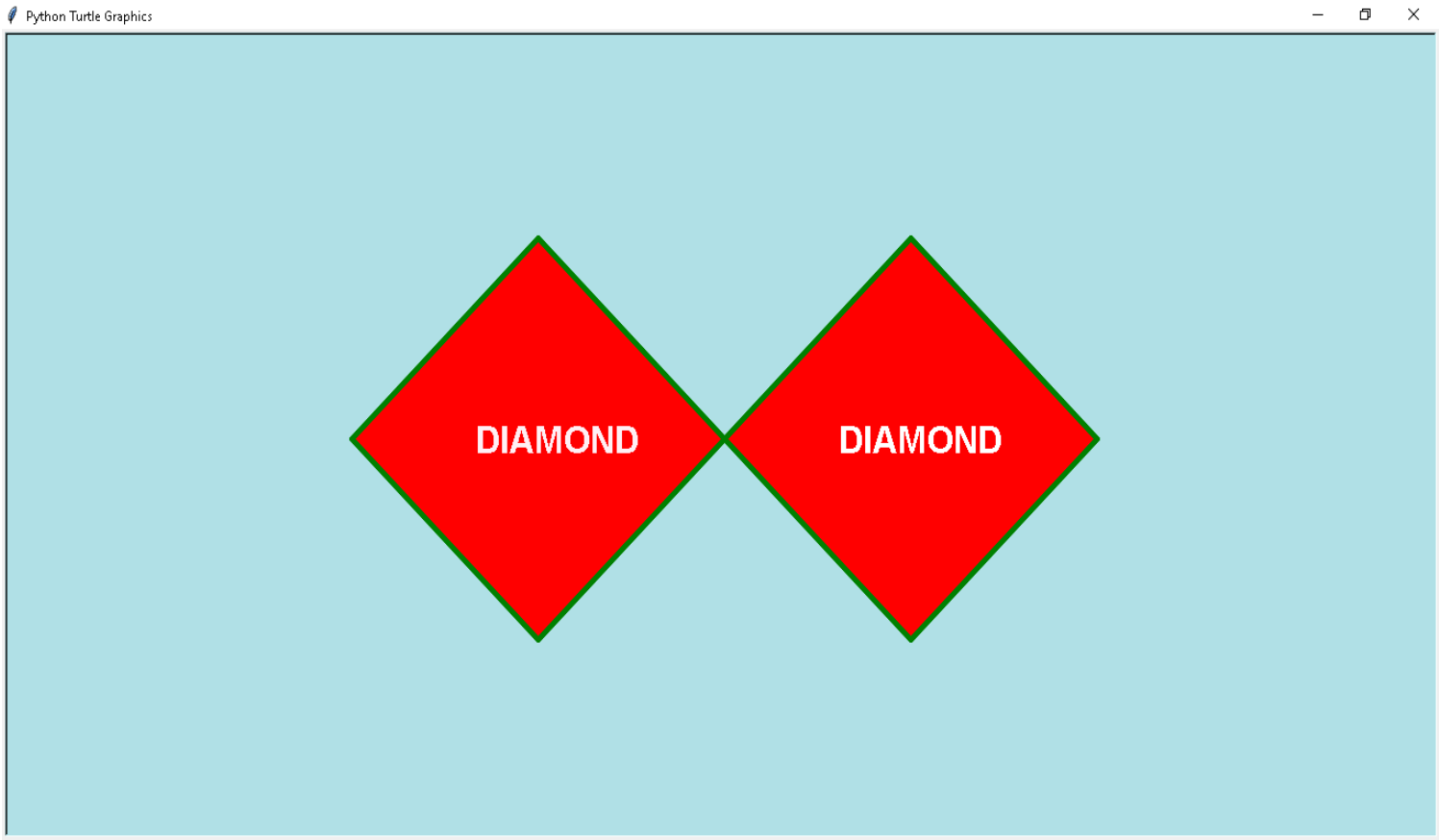
Description for Assignment #02– Please create TWO (2) of the turtle graphics designs using Python. BE SURE TO type in the File Editor and DO NOT type in the Shell as was described in the textbook. Your work must be done in the File (new File) editor versus to submit the code so that I may run / execute your program.

See the following Sample turtle Graphics program



```
#-------------------------------------------------------------------------------------------
# PROGRAMMER:       Prof. Parham
# PROGRAM NAME:     Creating double Diamond shapes
# DATE WRITTEN:     enter current date
# PURPOSE:          Design double diamonds and write text inside each diamond
#-------------------------------------------------------------------------------------------
import turtle; # make the turtle graphics system available in Python

turtle.shape("turtle");         # changes the default cursor from shrevron to
                                # circle shape (turtle, square, arrow, circle)

turtle.speed(10);               # changes drawing speed
turtle.bgcolor("powder blue");  # change color
turtle.pensize(5);              # change the width of the pen / line to 5
turtle.pencolor("green");       # change pen / line color

turtle.fillcolor("red");        # fill color of object
turtle.begin_fill();
#-------------------------------------------------------------------------------------------
# Draw 1st simple Diamond
turtle.left(-45);               # -45 degree angle change
turtle.forward(250);            # draw line which is 250 pixels long
turtle.left(90);                # turns cursor 90 degrees left
turtle.forward(250);            # draw line which is 250 pixels long
turtle.left(90);                # turns cursor 90 degrees left
turtle.forward(250);            # draw line which is 250 pixels long
turtle.left(90);                # turns cursor 90 degrees left
turtle.forward(250);            # draw line which is 250 pixels long
#-------------------------------------------------------------------------------------------
# Draw 2nd Diamond
turtle.forward(250);            # draw line which is 250 pixels long
turtle.right(90);                # turns cursor 90 degrees left
turtle.forward(250);            # draw line which is 250 pixels long
turtle.right(90);                # turns cursor 90 degrees left
turtle.forward(250);            # draw line which is 250 pixels long
turtle.right(90);                # turns cursor 90 degrees left
turtle.forward(250);            # draw line which is 250 pixels long

turtle.hideturtle();            # hides the cursor

turtle.end_fill();              # completes the fill color process

#-------------------------------------------------------------------------------------------
# display text "DIAMOND" in left Diamond shape
turtle.penup();                 # pen moves up
turtle.goto(-235, -20);         # moves the pen to positions -235 for x axis, -20 for y axis
turtle.pencolor("lavender blush");
turtle.write("DIAMOND", font = ("Times New Romans", "25", "bold"))
#-------------------------------------------------------------------------------------------
# display text "DIAMOND" in right Diamond shape
turtle.penup();                 # pen moves up
turtle.goto(110, -20);          # moves the pen to positions 110 for x axis, -20 for y axis
turtle.pencolor("white");
turtle.write("DIAMOND", font = ("Times New Romans", "25", "bold"))

turtle.done();
#-------------------------------------------------------------------------------------------
# END PROGRAM
```

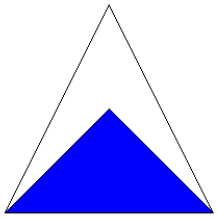
When you run / execute this program, the results display as:



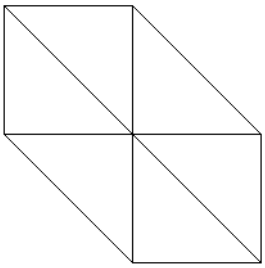
TURTLE GRAPHICS DRAWINGS: (WORTH 15 points)

Programming Exercise # 15, p. 117 Figure 2-40 (Python textbook 5th edition) or Programming Exercise #15, p. 107, Figure 2-40 (Python textbook, 4th edition): Use the Turtle Graphics Library Module to write programs that reproduce any **two** of the designs as shown on p. 117, 5th edition or p. 107, 4th edition, (**Programming Exercise # 15 Figure 2-40**) or create your own design

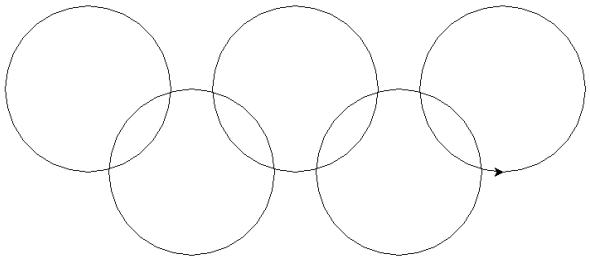
1. ☐ Triangles



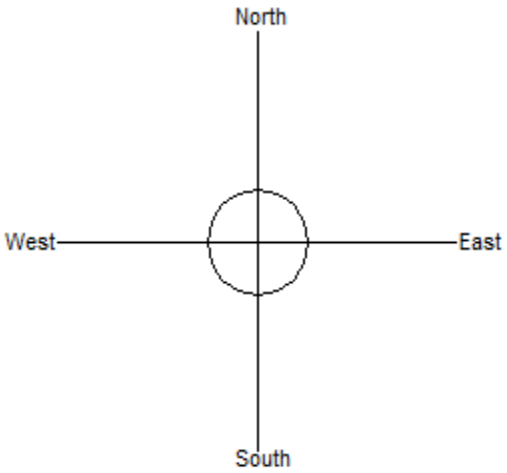
2. ☐ Multi-dimensional rectangle



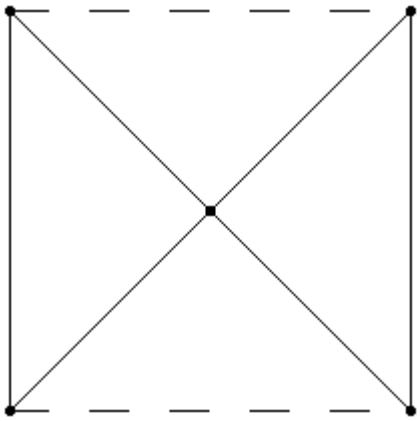
3. ☐ Olympic Rings Logo



4. ☐



5. ☐ Rectangle with dotted lines



☐ Please do not forget to add the intro comments and comments throughout both programs and the #END PROGRAM comment at the end of your python program. [**Worth 3 points**]

6. ☐ Save your drawings as: [**Any TWO Of these designs** NEEDS TO BE DONE]
   a. ☐ yourlastname_firstname_A2_Triangles.py

   b. ☐ yourlastname_firstname_A2_Multi_Dim_Rectangle.py

   c. ☐yourlastname_firstname_A2_Olympic_Rings.py

   d. ☐ yourlastname_firstname_A2_Directions.py

   e. ☐ yourlastname_firstname_A2_Dotted_Rectangle.py

   OR

   f. ☐ Your personal designs may be named as
   Yourlastname_firstname_A2_Your_Design_Name_1… etc
   Yourlastname_firstname_A2_Your_Design_Name_2

   g. ☐ - Submit your choices or your personal designs

7. ☐ SUBMIT ANY OF the TWO DESIGNS OF THE FOLLOWING FILES INSIDE THE DROP BOX FOR ASSIGNMENT #02; [worth 15 points @ 7.5 points each]

yourlastname_firstname_A2_Triangles.py
yourlastname_firstname_A2_Multi_Dim_Rectangle.py
yourlastname_firstname_A2_Olympic_Rings.py
yourlastname_firstname_A2_Directions.py
yourlastname_firstname_A2_Dotted_Rectangle.py

or your **original two designs**.
yourlastname_firstname_A2_YourDesign1.py
yourlastname_firstname_A2_YourDesign2.py
You may also, make a copy of the turtle images and save them to a file along with submitting them.

yourlastname_firstname_A2_Triangle_output etc.

Your design must cover all the features of chapter two. It should not be a simple box or design. Do not merely copy designs from the turtle graphics handout.