Lab 13 – 20 pts

1) Name the screenshot of the outputs **and** the source file of the exercise yourname_cs110_lab13 and submit both to Canvas.
2) Name the source file yourname_cs110_lab13.py and submit it to Canvas.

[20 pts] Task 1

[15 pts] Define a class ShapeInteractionManager with the following attributes and methods:

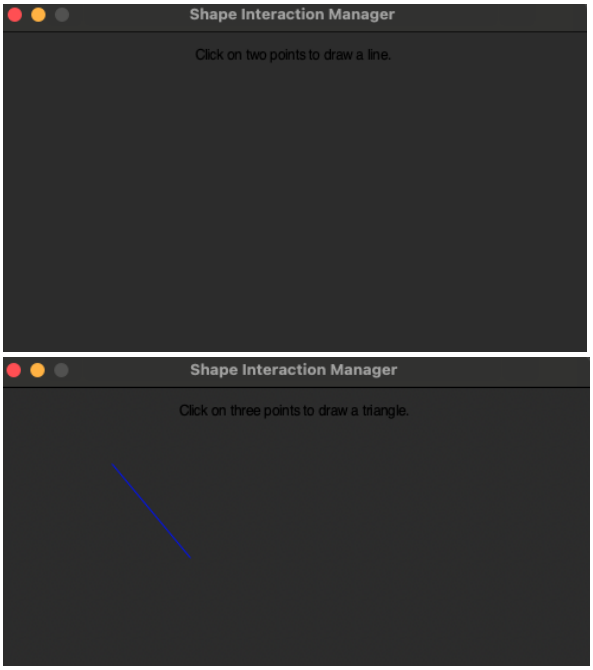
1. **Attributes:**
    a. shapes: A list to store all graphical objects, such as lines, circles, rectangles, and polygons.
    b. win: A GraphWin object to display the shapes and handle interactions.
    c. message: A Text object for prompts and instructions in the window.
2. **Methods:**
    a. add_colorline(point1, point2, color):
        i. Takes two points and a color as input.
        ii. Draws a colored line between the two points and adds it to the shapes list.
    b. add_triangle(points, color):
        i. Takes three points (mouse clicks) and a color as input.
        ii. Creates and draws a triangle (polygon) using the points and adds it to the shapes list.
    c. add_text_input(location, prompt):
        i. Displays an editable Entry box at the specified location.
        ii. Displays the provided prompt above the box.
        iii. Returns the text entered in the box when the function is called.

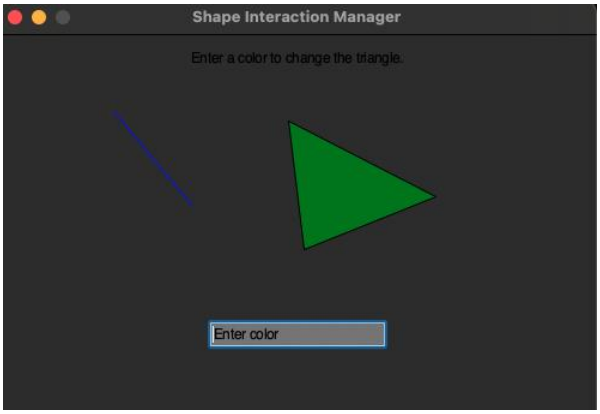
[5 pts] Implement the following in the main program:

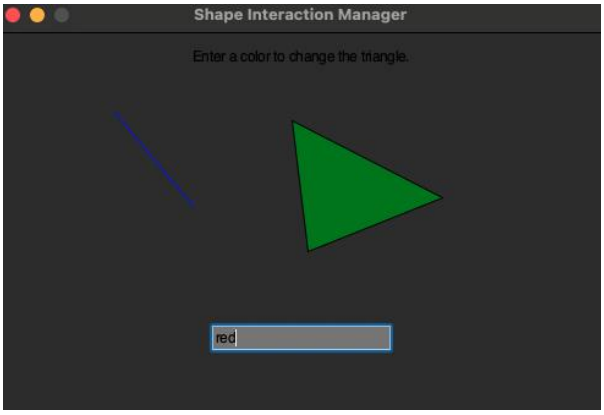
1. Create a GraphWin titled "Shape Interaction Manager" with dimensions 500x500 pixels.
2. Display an initial prompt: "Click on two points to draw a line."
    a. Add a line between two points based on mouse clicks(get mouse clicks points with getMouse()).
    b. Change the prompt to: "Click on three points to draw a triangle."

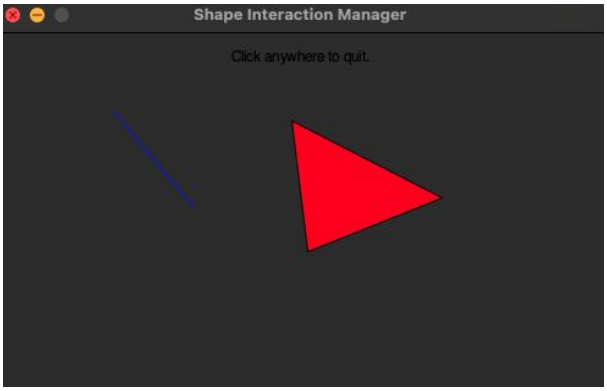
3. After the triangle is drawn, prompt the user with: "Enter a color to change the triangle."
    a. Use an Entry box to get the color input and update the triangle's color.
4. Finally, display: "Click anywhere to quit." and close the window upon a mouse click.

Expected Interaction




Shape Interaction Manager
Enter a color to change the triangle.
Enter color


Shape Interaction Manager
Enter a color to change the triangle.
red


Shape Interaction Manager
Click anywhere to quit.