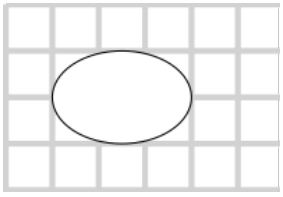
CS 246
Lab 0 Exercise

Consider the following problem

You want to produce "Hello, Graphics!" stationary. The stationary will be square and have a background design consisting of Rectangles and Ellipses. Each shape in the background can have a different color for the border and the fill. You can specify the drawing with draw commands such as:
drawRect(rect, lineColor, fillColor)
drawOvalInRect(rect, lineColor, fillColor)
A rect (short for rectangle) has 4 values associated with it
x – the x coordinate of the upper left hand corner
y – the y coordinate of the upper left hand corner
width – the width of the rectangle
height – the height of the rectangle

Once the background is created text can be put onto the stationary with the following commands
print(text) – types the text onto the stationary one character at a time (including spaces) **without** a carriage return
println(text) – types the text onto the stationary one character at a time (including spaces) **with** a carriage return
Your tasks:

1. Find a partner
2. You and your partner will each take turns drawing or specifying the commands based on the drawing. (1 person will draw. The other will specify the commands.)
3. First decide together on what you want your background to look like.
4. Use the graph paper and markers provided to create a background using rectangles that are bordered by lines in the graph paper and ovals that are defined by 4 points of the oval touching the lines of the graph paper.



r = rect(1,1,3,2)
oval(r,black,white)

5. Your partner should write down grid coordinates and colors as you draw each shape.
6. After getting halfway through the drawing, you should switch with your partner.

7. Once you have drawn the background, you should place the text "Hello, Graphics!"
8. Writing the text is not as simple as giving graph coordinates, since the only commands you have are print commands that type the text onto the stationary with typewriter text. So, you'll probably want to estimate the commands that will be needed. Then refine during the implementation phase.
9. To move your starting location for your text you can use println("") to go down one line, and print(" ") with any number of spaces between the quotes. Remember that you need to go down before you go to the right, and you can't go right to left or down to up, it's just like a typewriter.
10. When you have finished with your drawing and writing your commands, you will have an algorithm for creating the stationary that you designed on your graph paper.
11. You will use this algorithm for the second part of Lab 0.