Task 1.

+ 2 point

Group Discussion

1st group: What is the most important element in video games?

2nd group: What games do you know using 2d graphics?

3rd group: What libraries of modules in Python do you know?

Lesson topic:
Drawing shapes. Pygame.draw Module

Lesson objectives:

learn other pygame modules;
draw different shapes.

KWL Chart

Name _____

Date _____

Topic: _____

Know	Wonder	Learned
Before you read, write what you think you know about the topic.	Before or during your research, record questions about the topic.	After you finish reading, write what you learned about the topic.

Task 2.

+ 3 point

Work in Groups

1st group

PyGame Drawing Basics

2nd Group

Creating a rectangle and a circle.

3rd Group

Creating a polygon and a line.

Pygame.draw Module

pygame.draw.rect	draws a rectangular shape on the Surface
pygame.draw.polygon	draws a shape with any number of sides
pygame.draw.circle	draws a circle around a point
pygame.draw.ellipse	draws a round shape inside a rectangle
pygame.draw.line	draws a straight line segment
pygame.draw.lines	draws multiple contiguous line segments
pygame.draw.arc	draws a partial section of an ellipse

The Draw class has 9 methods for drawing geometric shapes, which have the following general parameters:

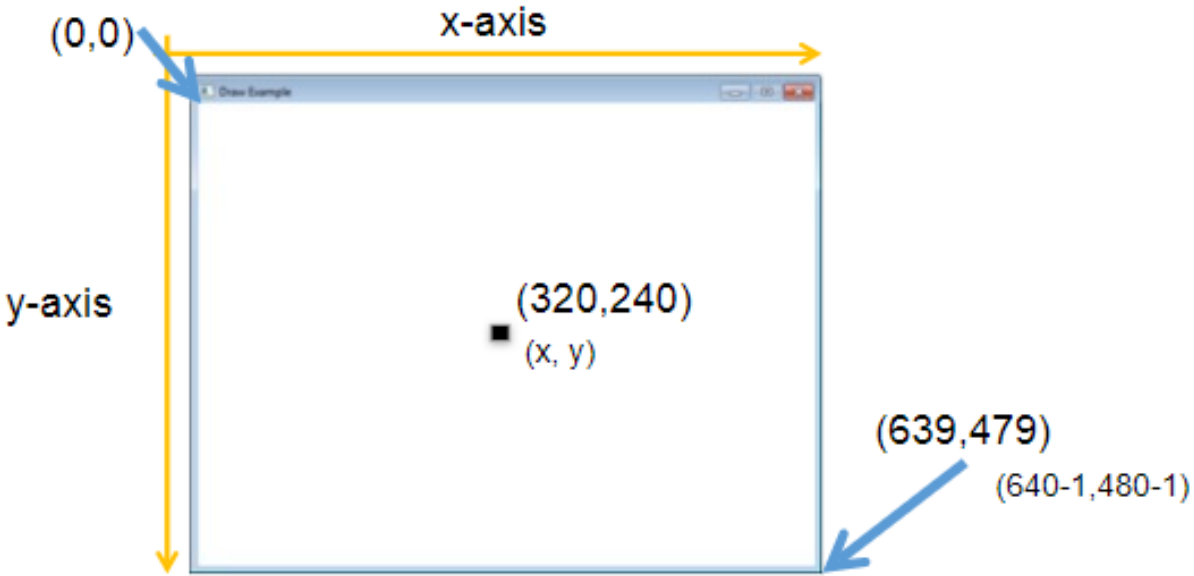
Surface is the drawing surface, in our case it is the screen object.

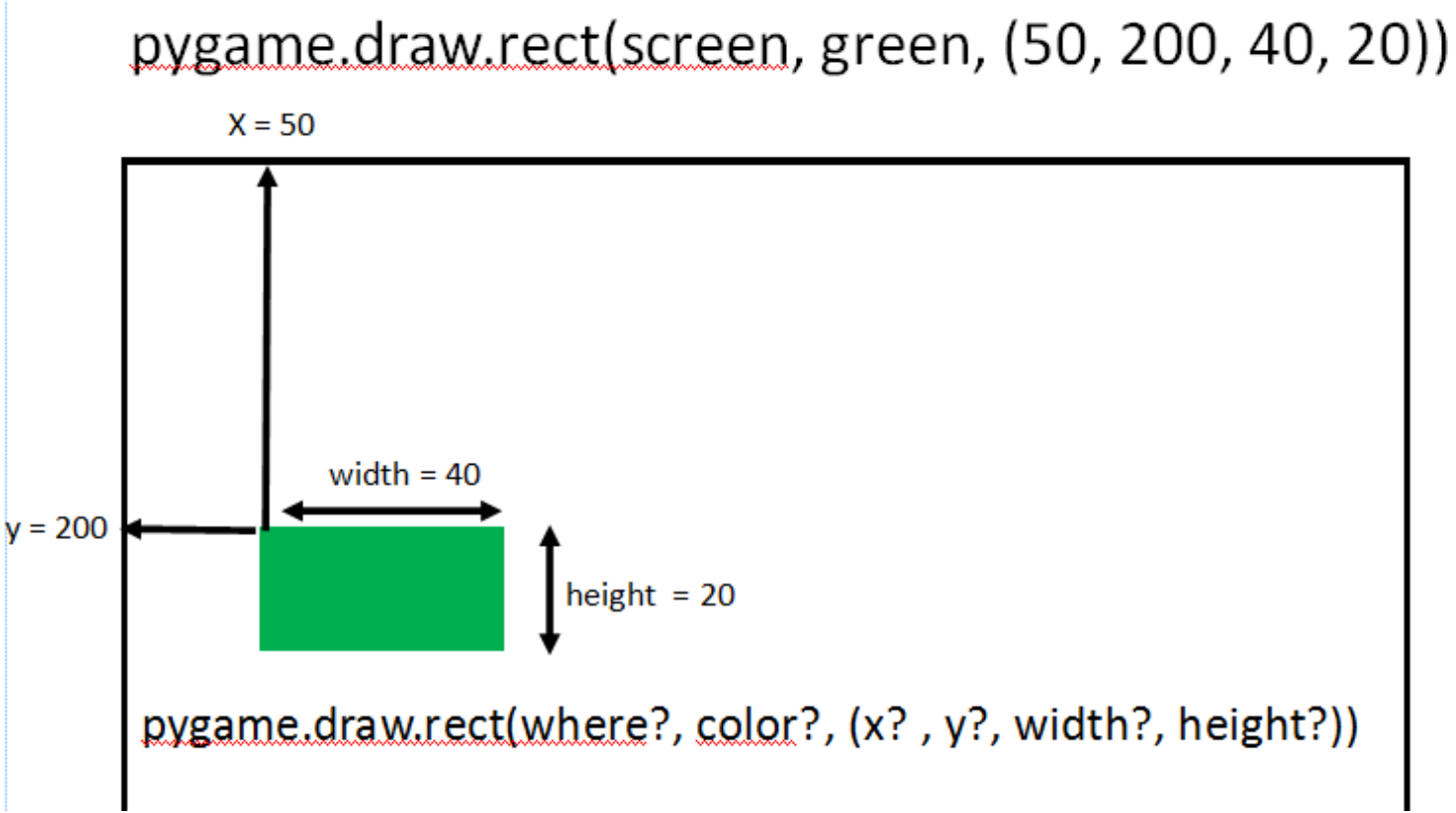
Color is the color of the shape, it is an RGB tuple, for example, RED = (255, 0, 0).

Rect - a rectangular area in which the shape will be drawn. Specified by the Rect(x, y, w, h) tuple, x, y are the coordinates of the upper left corner, w, h are the width, height, width is the line thickness, if width=0, then a filled figure is drawn.

Screen Coordinates

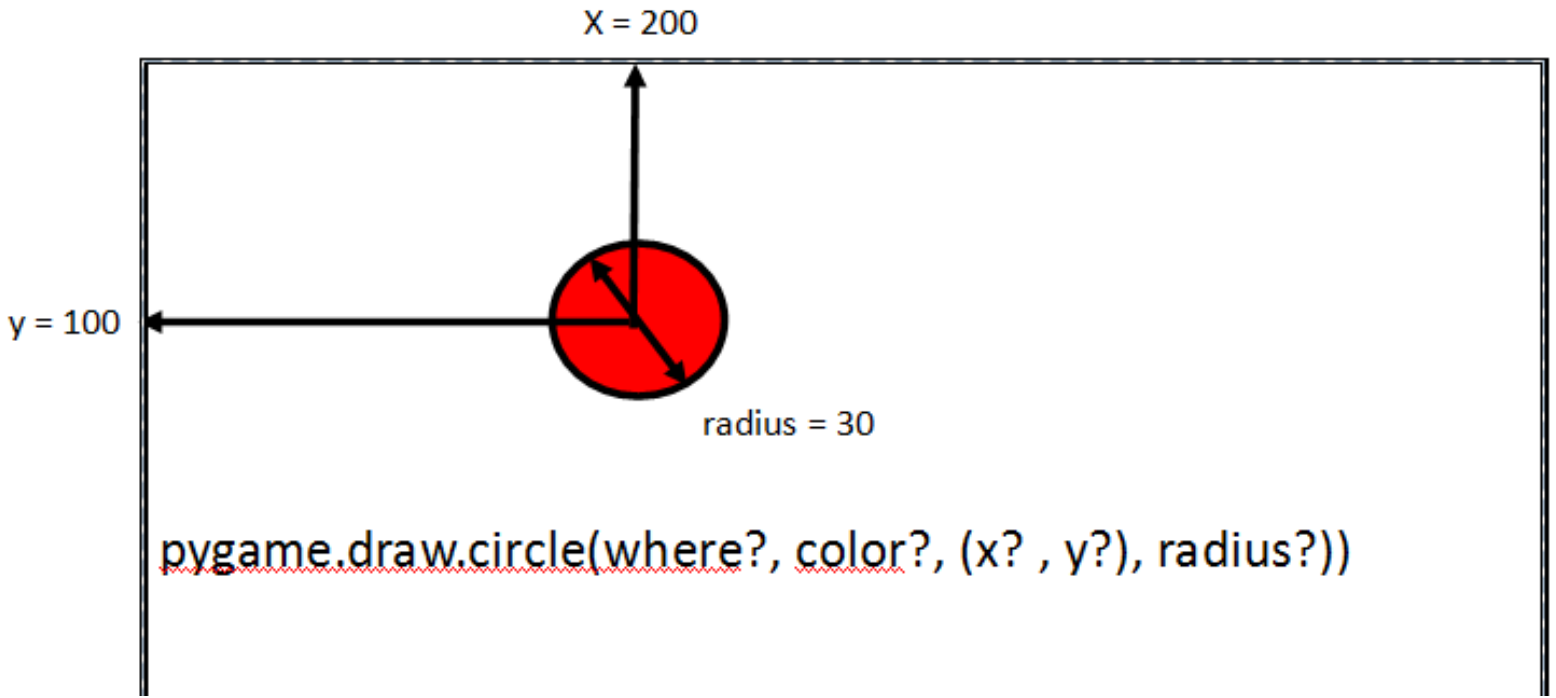
The screen has pixel coordinates starting from (0, 0) in the top-left, and moving across and down.



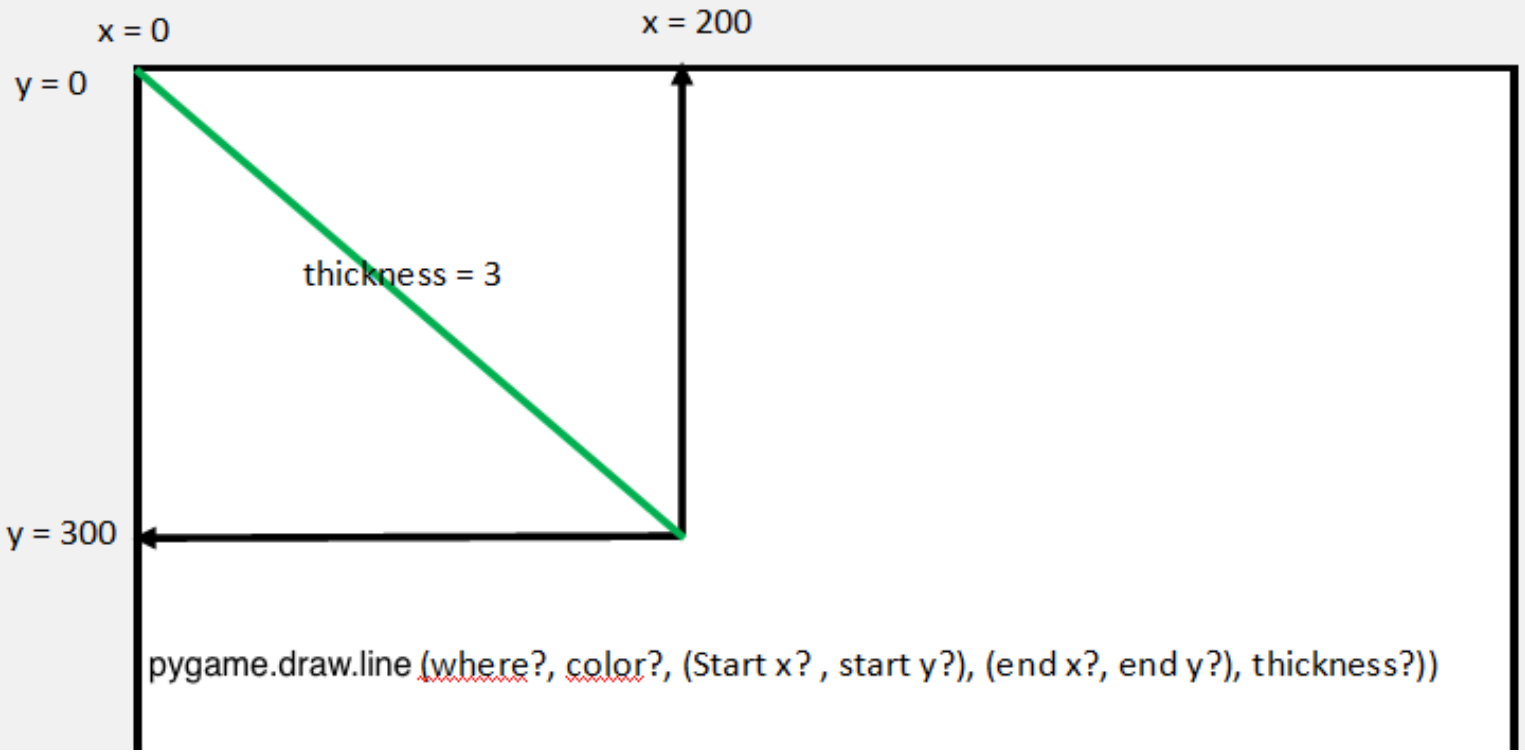


https://youtu.be/53ucZ6_7_t4
(1.13-2.25)

pygame.draw.circle(screen, red, (200, 100), 30)



pygame.draw.line (screen, green, (0, 0), (200,300), 3)



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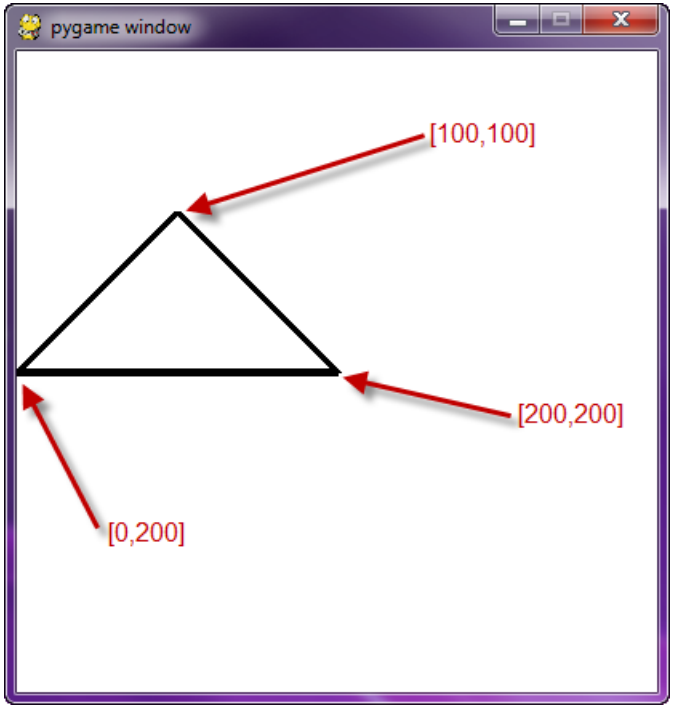
# This draws a triangle using the polygon command
pygame.draw.polygon(screen, BLACK, [[100,100], [0,200], [200,200]], 5)
```



Task 3.

Practical work

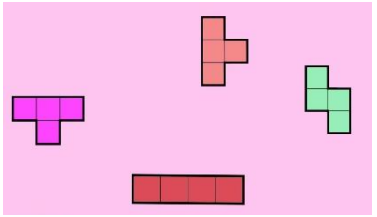
+ 3 point

1st group

Draw a tree from Minecraft.

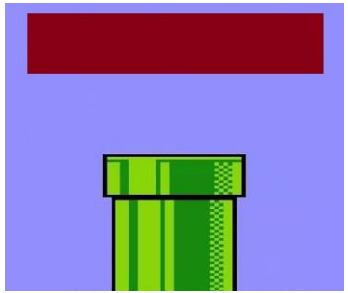
2nd group

Draw the shapes from Tetris.

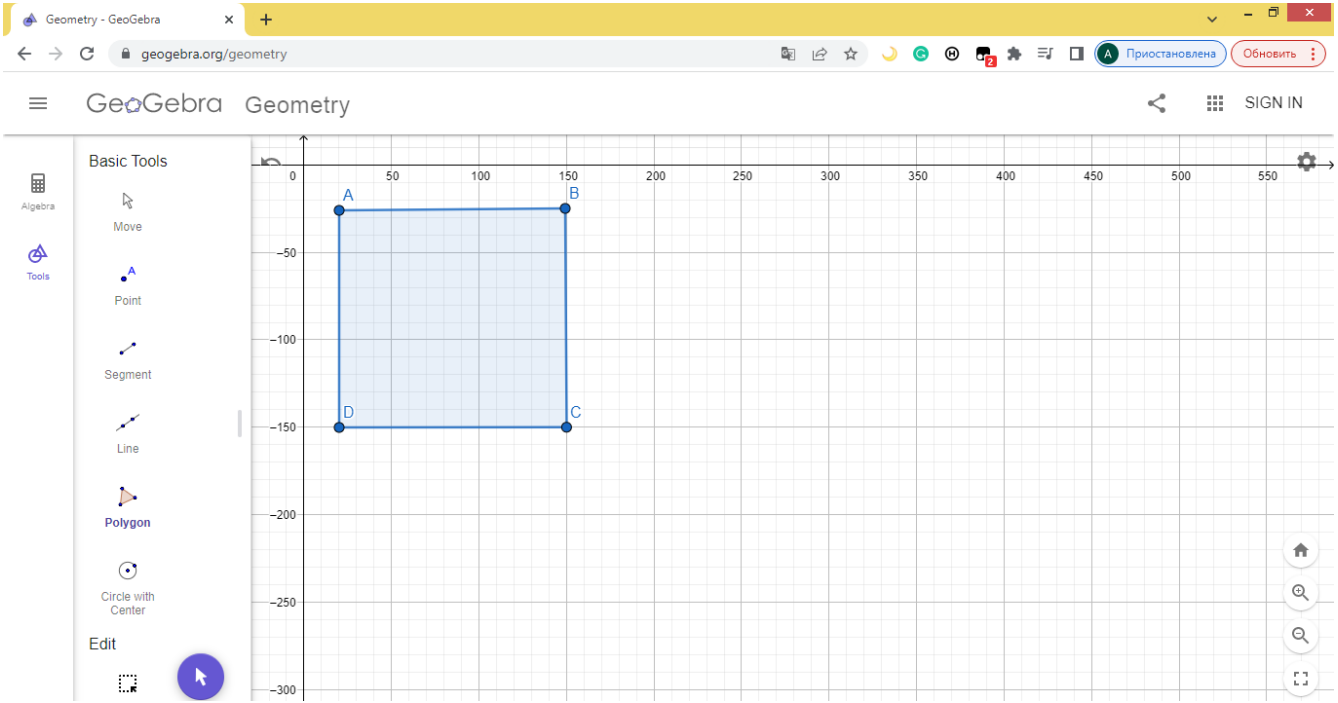


3rd group

Draw background elements from Super Mario.



If you need to determine the coordinates of a figure, you can use the geogebra math program: https://www.geogebra.org/geometry



Task 4.

wizer.me

+ 5 point

PIN for task: 9RVPD4