

# **SI 201 Discussion 2**

## **Turtles**

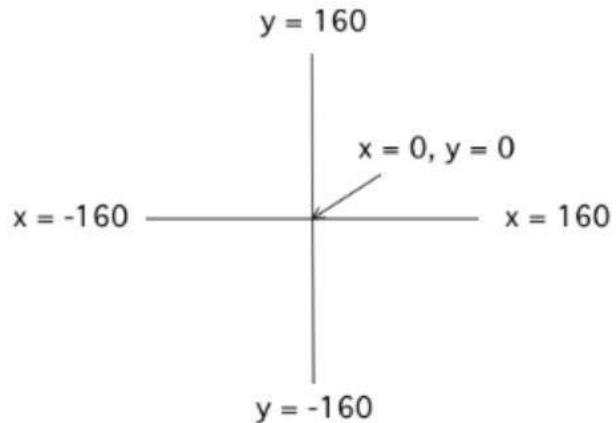
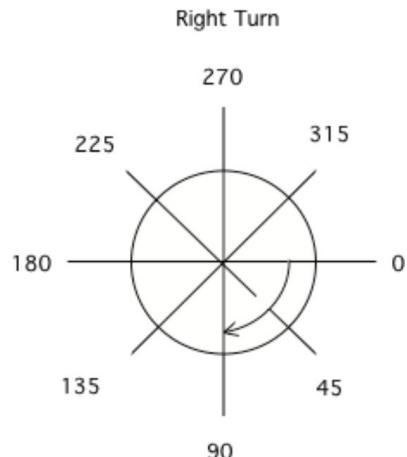
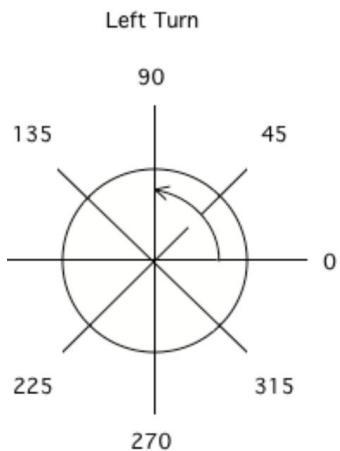
# General Reminders

- Please submit .py files we can run!
- Discussion assignments are due at the end of discussion. If you have problems make sure to talk to your GSI/IA

# Turtle Library in Python

- The Turtle library in Python enables us to draw any shapes or designs
- Almost like drawing with your own pen, just give 'directions' to your turtle object using Python!

The space that the turtle draws in is 320 by 320 pixels. The center of the space is at  $x=0, y=0$ .



# Turtle Methods

- **forward(amount)** and **backward(amount)** - move the turtle by the specified amount
- **color('colorname')** - sets the pen color
- **goto(x,y)** – moves the turtle to position x,y
- **pendown()** - puts down the turtle's tail (pen) so that it can draw
- **penup()** - picks up the turtle's tail (pen) so that it doesn't draw
- **pensize(width)** - set the width of the pen
- **left(angle)** and **right(angle)** (angle in degrees) – turn the turtle by specified angle
- **setheading(angle)** - turns the turtle to face the given heading (0: east, 90: north, 180: west, 270: south)
- **fillcolor('color')** - sets the fill color of a shape
- **begin\_fill()**, and **end\_fill()** - all instructions between begin\_fill() and end\_fill() are filled with the fill color
- **circle(radius)** - draws a circle with the specified radius

For more in depth explanations - Python documentation: <https://docs.python.org/3/library/turtle.html>

# Screen Methods

- **screensize(width, height):** changes the screen size
- **bgcolor(color):** changes the background color
- **exitonclick() :** stops the program from exiting until the drawing window is closed
  - This is very helpful so that you can see your complete drawing to troubleshoot your design

# Let's get started!

## Draw an emoji!

1. Write functions to draw different shapes (circle, rectangle, etc.)
2. Use these functions to draw your favorite or frequently used emoji.
3. **Call these functions in main** to execute your drawing

```
def main():
    """
    Make sure to create a Screen object, a Turtle object,
    and call draw_emoji.

    Also, make sure to call the .exitonclick() method on your Screen instance
    to stop the program from exiting until you close the drawing window.

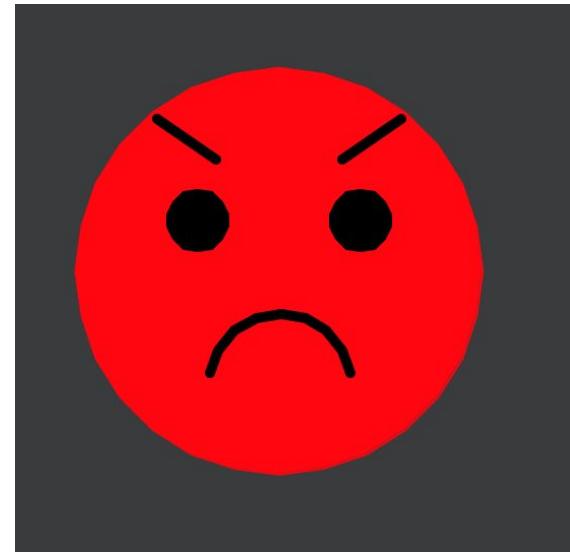
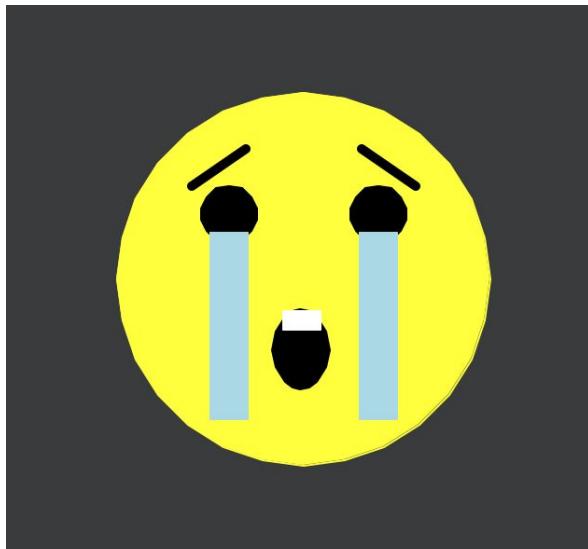
    TIP: You can call the .bgcolor() method on your Screen instance to change
    the background color.

    """

    space = Screen()
    space.bgcolor("#3A3B3C")
    t = Turtle()
    draw_emoji(t)
    space.exitonclick()

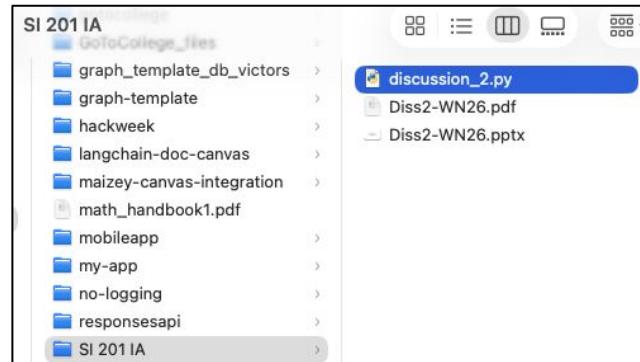
if __name__ == '__main__':
    main()
```

# Example Outputs

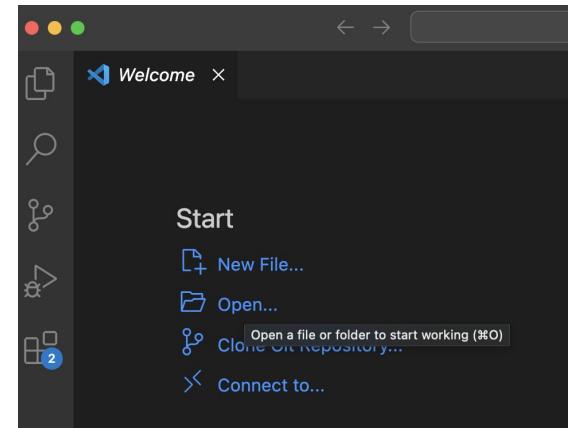


# Best Way to Get Started

1. Download starter code and save to your SI 201 Folder (Go to Canvas > Files > Discussions > Discussion 2)
2. Open VS Code
3. Select Open... file or folder
4. Select your SI 201 Folder > discussion\_2.py
5. Start Coding!



SI 201 001 WN 2026 > Discussions > Discussion 2					
	Name	Created	Last Modified	Modified By	Size
	discussion_2.py	Jan 2, 2026	8:42am		573 bytes



# When you are done!

When Completed Upload a screenshot of your emoji on  
<https://tinyurl.com/diss2-WN26>