Hurricane Irma Tracker

Write a program that uses turtle programming to track Hurricane Irma on a map, using data from a CSV file. A file is provided to you as a starting point. Complete the code in the function Irma.

The CSV file contains the date, time, latitude, longitude, wind, and pressure readings that were captured as the hurricane approached Florida, provided by Weather Underground. You will use this data to provide visualization that indicates the hurricane's position and category as provided by the data in the CSV file.

Requirements

Download the Prog2StarterFile.zip, and unzip to the directory of your choice.

Extract the starter zip file. You will see a Python file named irma.py. In this file you will fill in the code to use the turtle module to create an animation of hurricane Irma's path. In the file are 2 functions, `irma_setup` and `irma`. You are **NOT** allowed to modify the `irma_setup` function. Your code is to be limited to the `irma` function.

In the `irma_setup`, the following are done for you:

- Creating the screen and turtle
- The turtle's shape is changed to that of a hurricane
- Loading a background image of the Atlantic
- Setting the world coordinates of the screen to match the latitude and longitude on the map

In the starter zip file there is a file named irma.csv in the data directory. This data was scraped from https://www.wunderground.com/hurricane/atlantic/2017/hurricane-irma, last access 9/14/2017. This file contains data about hurricane Irma. Each line contains 6 columns separated by commas (thus the .csv file extension). The file can be opened in Excel for a columnar view. The first line of the file describes what each column is. Here are the first 3 lines of the file, separated into their columns:

Date	Time	Lat	Lon	Wind	Pressure
30-Aug	15:00 GMT	16.4	-30.3	50	1004
30-Aug	21:00 GMT	16.4	-31.2	60	1001

The only columns relevant to your code are Lat (the latitude), Lon (the longitude), and Wind (the wind speed in miles per hour).

Using the data in irma.csv, your irma function must show hurricane Irma's path. Your solution must include the following:

1. Correctly show each point in the data file (together with lines between each point)
2. At each point, you must display what category the storm is, if it has hurricane strength winds, otherwise, draw no text.
3. Color code the hurricane strength:
    - Red for Category 5
    - Orange for Category 4
    - Yellow for Category 3
    - Green for Category 2
    - Blue for Category 1
    - White if not hurricane strength
4. The thickness of the line should change in proportion to the hurricane category.

Hints:

To read from the csv file (replace the path with the path that your file is saved to):

```
file = open("J:\StarterFiles\data\irma.csv", 'r')
for line in file:
    print( line, end='' )
f.close()
```

Use the line.strip() and line.split(',') to save the values into different variables.

line.strip() removes extra blank characters from the value before and after the line, like a line break

line.split(',') breaks the string up into individual variables assigning the values between the commas.

For example:

```
Date, Time, Lat, Lon, Wind, Pressure = line.split(',')
```

Demo

https://youtu.be/c2uRG42M_nc

What to Submit

Submit your `irma.py` file to this Canvas assignment.