CS112: Discovering Computer Science

Individual Project 2: Turtle Drawing

1 Overview

The purpose of this assignment is to gain skills using turtle drawing objects. This is an individual project; you should work on this project without any help from other students.

You will draw an image to the screen using turtle graphics. The shape and size of the image will be your own design. Below are some guidelines for your project to follow.

2 Criteria

This project is divided into two parts. The first part is required while the second part is optional. Completion of the first part will earn a score of up to 85 points (depending upon quality). The second part of the project may earn you up to an additional 15 points (for a total of 100).

2.1 Part 1

You are to draw an image similar to Figure 3.8 on Page 83 of our textbook. Here is a checklist of things to consider.

- You must create a basic ”shape”. The book example draws flowers. In class, we draw ”stars”. You are to create your own shape to draw. You might choose something that reflects your interests, but it is up to you. Work on making your shape visually stimulating.
- You are to use python turtle graphics.
- You must use iteration somewhere in the program.
- You must encapsulate your shape into a function. Design the function with the appropriate interface (right parameters) to make it most useful.
- You must use different colors.
- You must be able to vary the ”size” of your basic shape and demonstrate multiple sizes in your image.
- You must create multiple copies of your shape on the screen for the final image.
- You must set the speed of your turtle to 0. I will be grading 48 of these and I want the turtles to all draw quickly!

- Follow proper guidelines for organizing your program. Follow appropriate commenting conventions.

2.2 Part 2

In addition to the basic requirements above, you may optionally add one or more of the following components to earn additional points.

- Multiple Shapes: You may have two or more basic shapes and weave them together creatively in your final image. Each shape should have its own function(s).
- Randomization: Follow the example on Page 84 to add randomization to your program. You can create random locations, sizes, colors or some combination of these.

3 Logistics

Be sure your code is all in one file. Be sure your program runs correctly before you submit. Submit your program in notebowl under the project assignment.