**Lab 1 Report**

The code makes use of methods to draw specific figures by making use of plot points provided recursively by said method. There is a separate method to draw each figure, and to simplify the implementation of creating the plot points for the binary tree and square figures. The inputs used were chosen based on the closest estimate to the number of repetitions required to draw the figures in the lab instructions.

**Experimental Results**

|  |  |  |
| --- | --- | --- |
| FIGURES | INPUTS | RESULTS |
| SQUARES | Weight: 0.5  Radius: 500  Recursive n: 2 |  |
| Weight: 0.5  Radius: 500  Recursive n: 3 |  |
| Weight: 0.5  Radius: 500  Recursive n: 4 |  |
| GROWING CIRCLES | Center: 100, 0  Radius: 100  Weight: 0.5  Recursive n: 10 |  |
| Center: 100, 0  Radius: 100  Weight: 0.9  Recursive n: 50 |  |
| Center: 100, 0  Radius: 100  Weight: 0.95  Recursive n: 100 |  |
| BINARY TREE | Center: 500, 500  Δx: 500  Recursive n: 3 |  |
| Center: 500, 500  Δx: 500  Recursive n: 4 |  |
| Center: 500, 500  Δx: 500  Recursive n: 7 |  |
| CONCENTRIC CIRCLES | Center: 100, 100  Radius: 100  Weight: 0.333  Recursive n: 2 |  |
| Center: 100, 100  Radius: 100  Weight: 0.333  Recursive n: 4 |  |
| Center: 100, 100  Radius: 100  Weight: 0.333  Recursive n: 5 |  |

**Conclusion**

Dividing the work in tasks that can be implemented by methods enables repetitive work to be done in a much simpler way with the use of recursion.

**Source Code Appended on GitHub**

I certify that this project is entirely my own work. I wrote, debugged, and tested the code being presented, performed the experiments, and wrote the report. I also certify that I did not share my code or report or provided inappropriate assistance to any student in the class.

\_\_\_\_\_\_\_\_\_\_\_\_Hugo Chavez\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_