

Report05

Problem Description

The goal of this project is to create an animated scene using the zelle graphics package. The goal of the project is to practice using lists with a more complex scene all the while keeping the code efficient and to continue to use the idea of abstraction.

Follow Up Questions

1. Does using objects like Rectangle or Polygon make coding easier?
 - a. I've found that using rectangles to build the object you want initially makes building your more complex object easy to make. With polygons in Zelle Graphics it definitely makes the more complex ideas to execute especially when moving them
2. If you have a Rectangle object in the variable box, how would you move it by 3 in x and -3 in y?
 - a. In Zelle graphics if you wanted to move the rectangle over 3x and -3 y you would need to add 3 to x in gr.Point 1 and gr.Point 2 and -3 in the same points. This will cause it to shift over and maintain its shape
3. Defensive programming is a design when writing your program to make sure it is readable, efficient, and makes sure the desired outcome is protected. The code should protect from undesired inputs and side effects
4. Using lists has definitely made coding easier for this project. Being able to access different objects by accessing a different part of the list was incredibly helpful. It definitely beat the alternative of writing a function for every object that needed to be created
5. Fullmetal Alchemist Brotherhood. It's a fantastic series that covers many topics and really pulls at the heart strings at times.

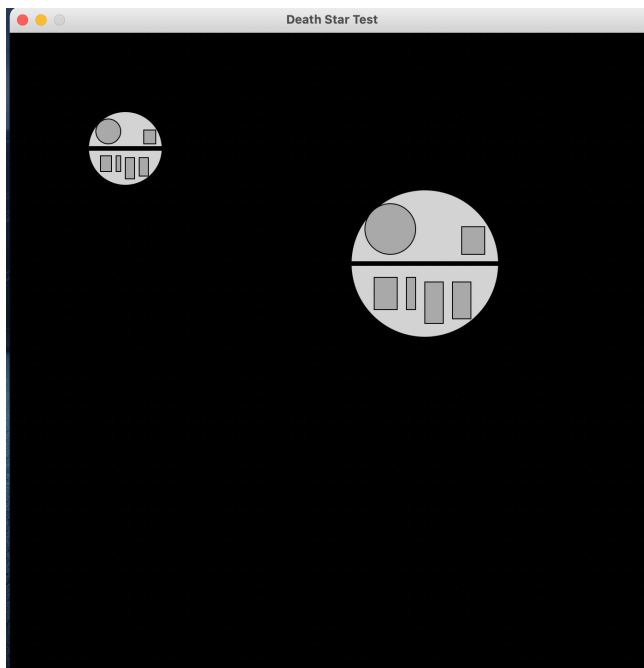
Task Elements

Image#1



I found that directing lines in Zelle graphics is a little bit tougher than turtle graphics. One of the things I do like about zelle graphics is how easy it is to move objects.

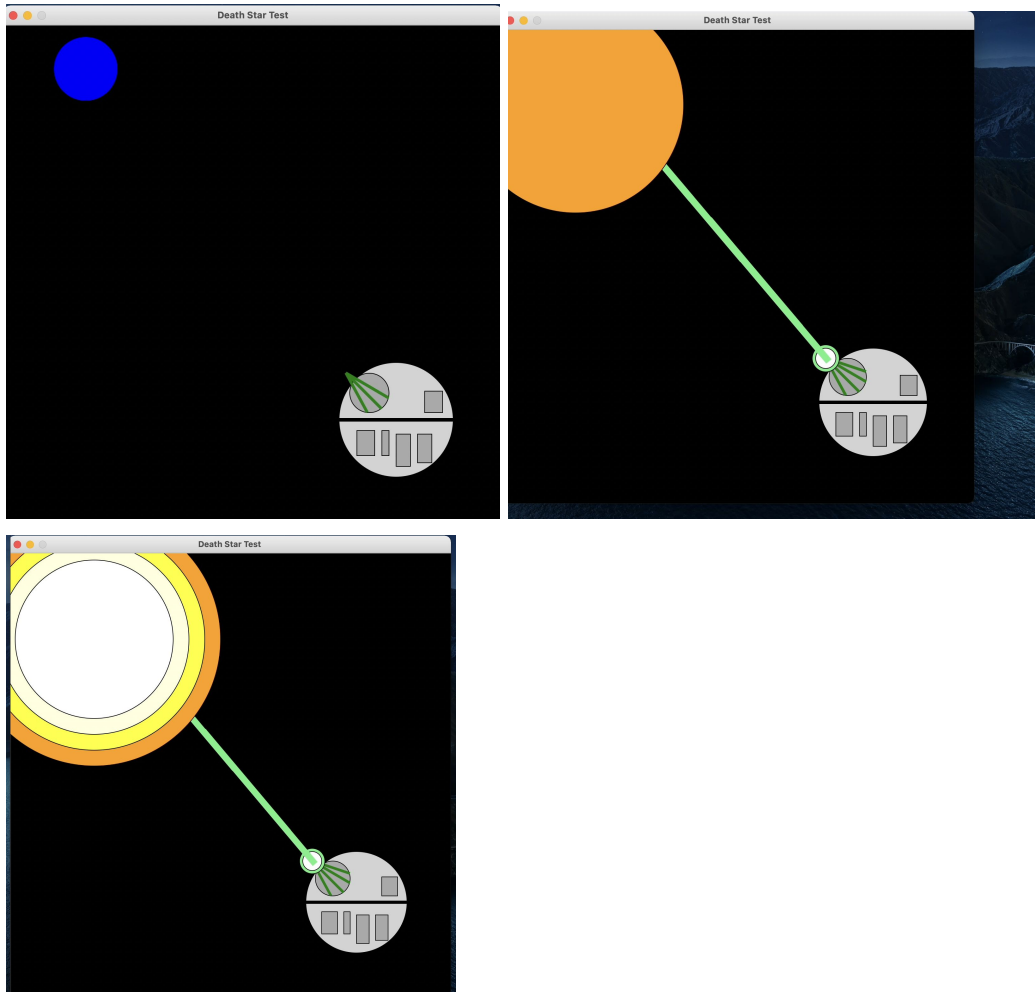
Image#2



I was a bit worried about trying to make a circle look like a death star but after adding a few panels and moving them around and adding the blockade on the death star it looks pretty

decent for a death star. Zelle graphics has definitely made maneuvering those objects around easy, especially when it comes to scaling.

images#3



Once the objects were complete it was a lot of fun trying to animate the objects. This was the first project I felt like I could get close to what I want with programming a scene.

Extensions

- 3 complex objects were made
 - Death Star
 - Death Ray
 - Explosions
- 3 animations
 - Initiation of the rays on the death star
 - largeRay moving across space
 - Alderaan exploding

Reflection

Working on this project I definitely felt more confident accessing and creating lists at a simple level. Also working with the animation section using conditionals to make things move was good practice. Creating some parts of this project definitely came faster than it has in previous projects. There are some things I definitely need to brush up and clean. One thing I couldn't figure out in time was trying to get Alderaan to shake at a certain frame count. I tried an if statement with two conditions but caused the planet to indefinitely move to the left. I definitely want to go back and figure out that issue.

Acknowledgements

- Zelle Graphics documentation
- Professor Maxwell's answer on Piazza on moving the rays
 - Tried the solution but ended up using an alternate solution to grow the largeRay
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