Ball Pit Simulator

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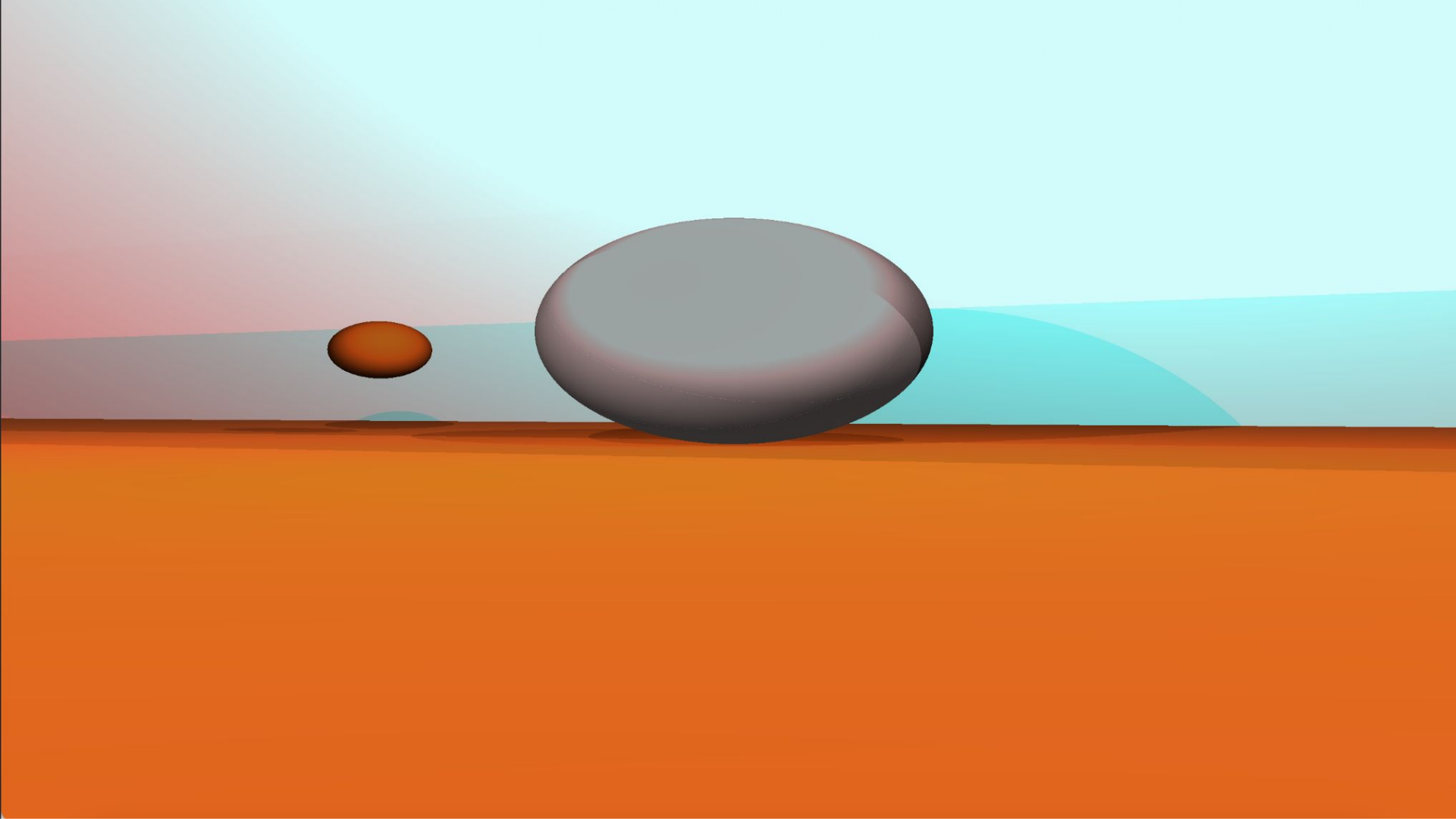
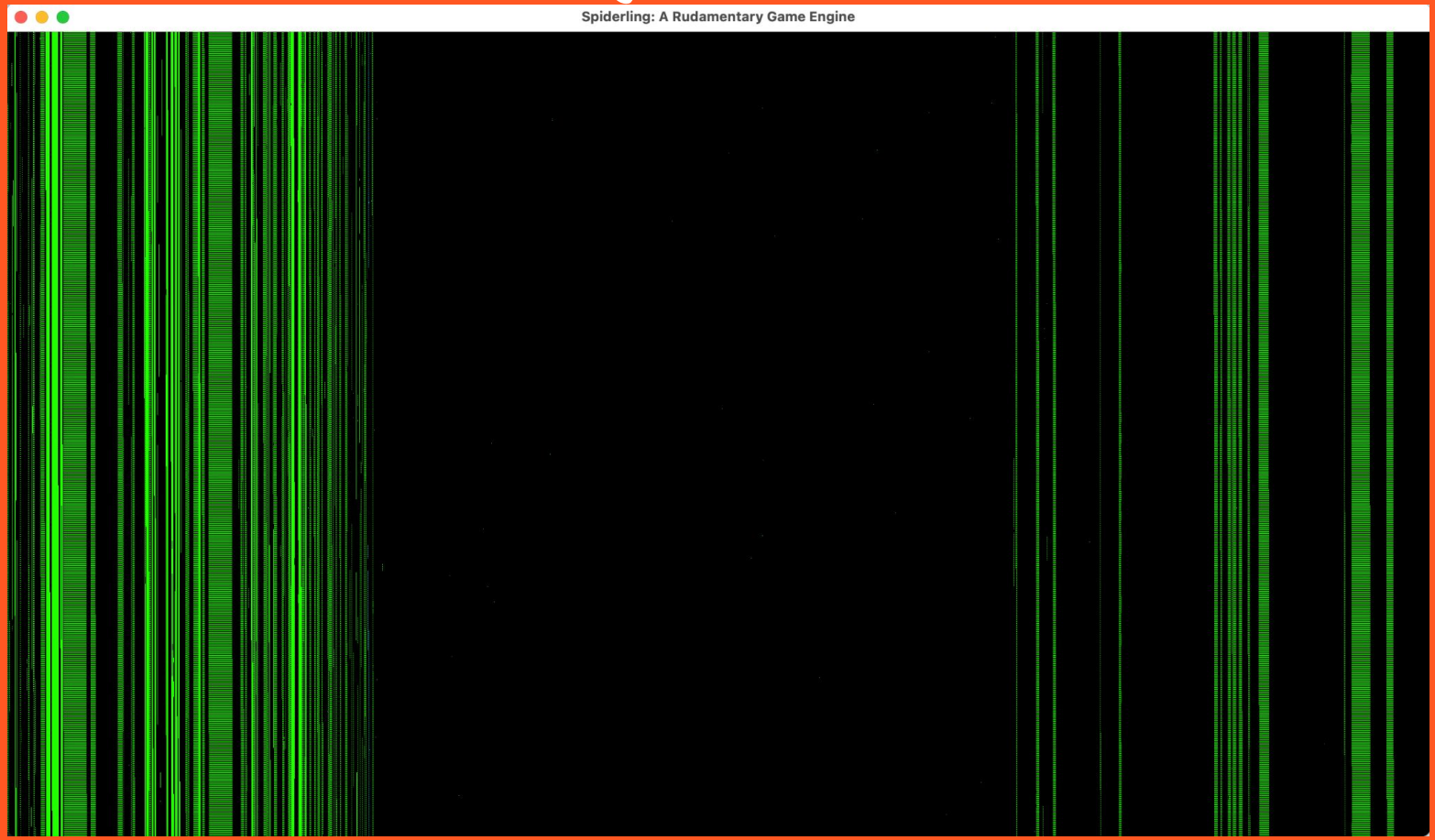


Current State of the Project

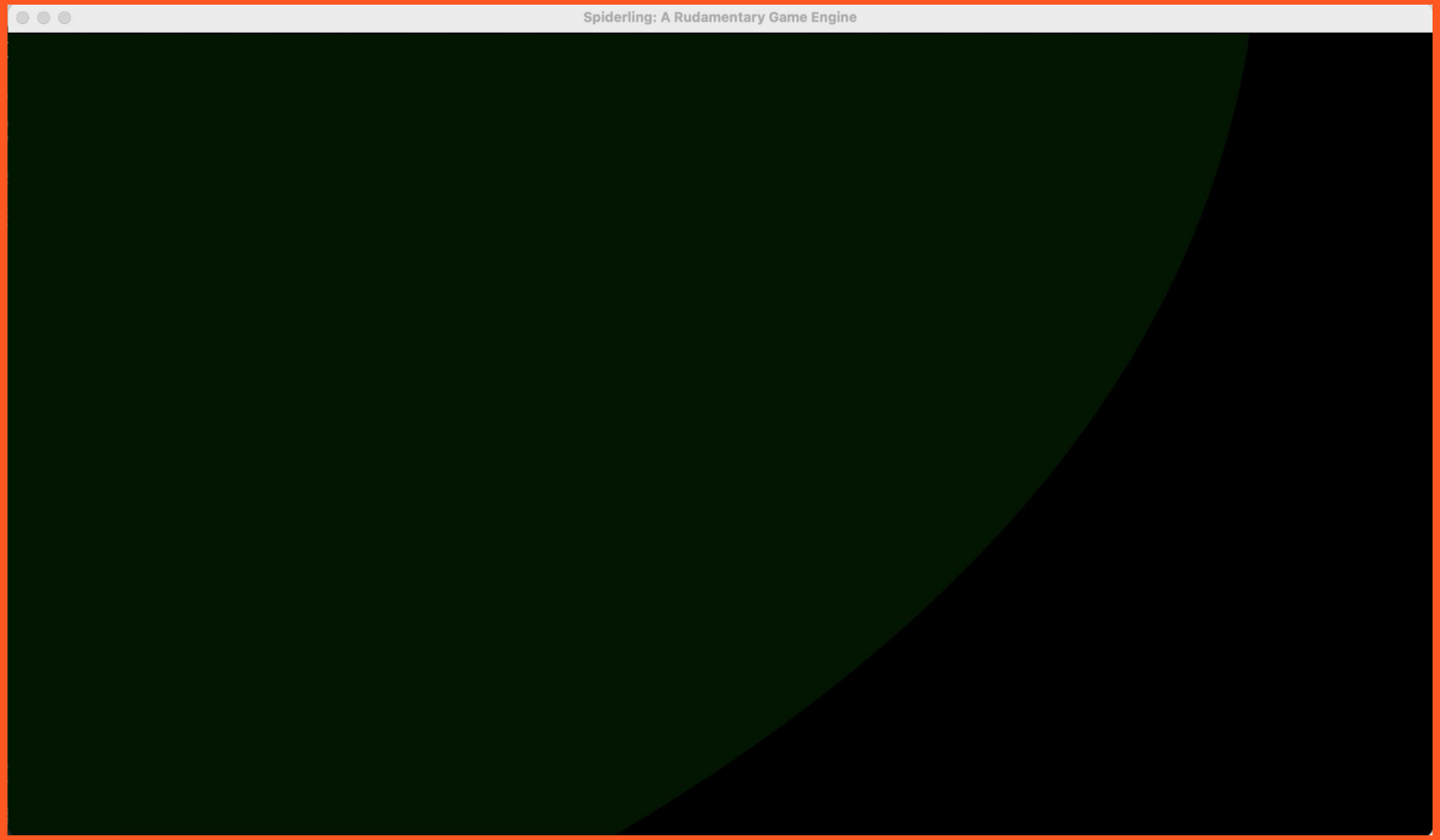
- Generally working ray-tracing program with multiple spheres, lights, shadows, and planes
- Able to change the locations and materials of spheres, planes, and lights

Project Stages

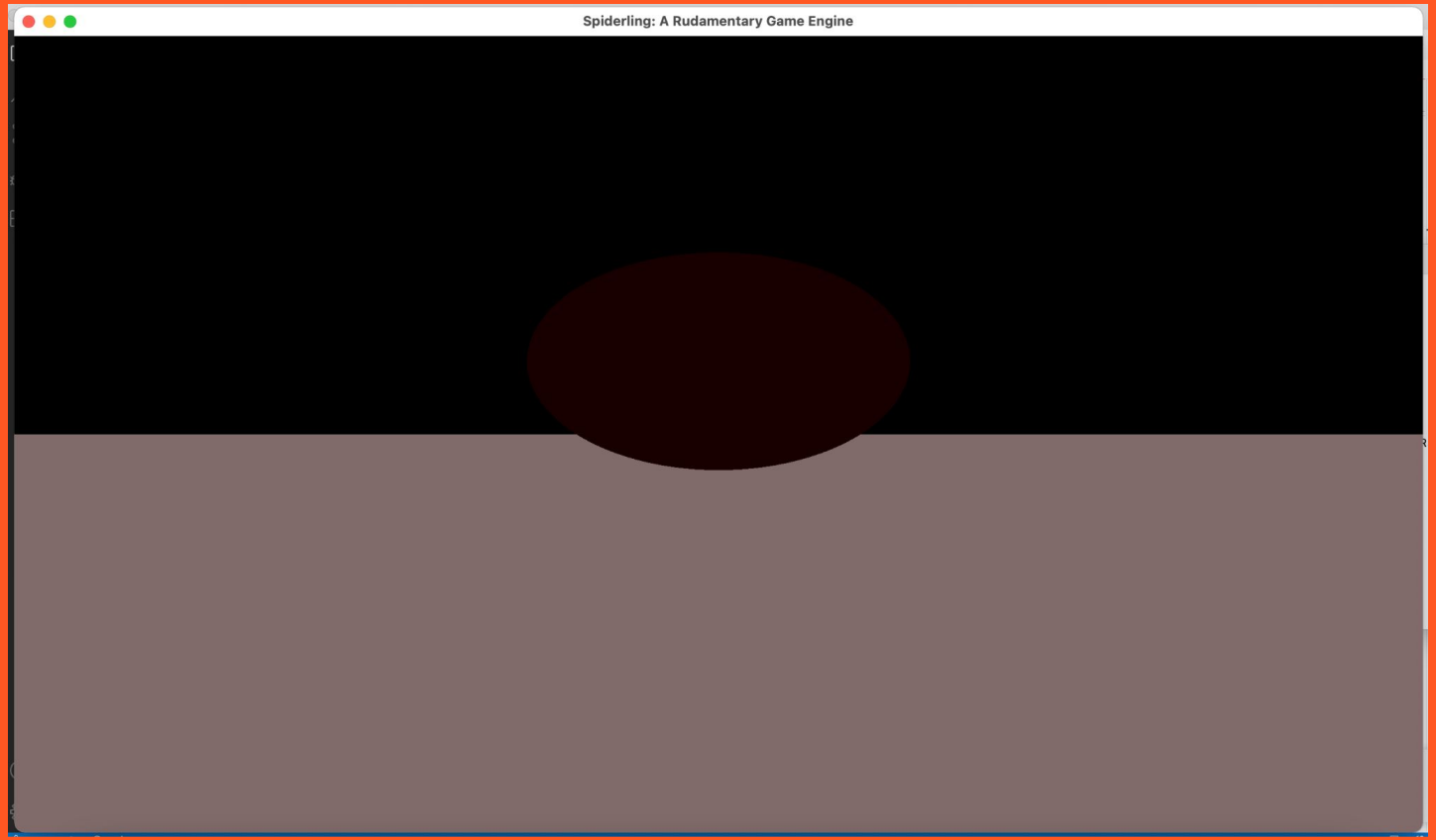
1. Revenge of the Int



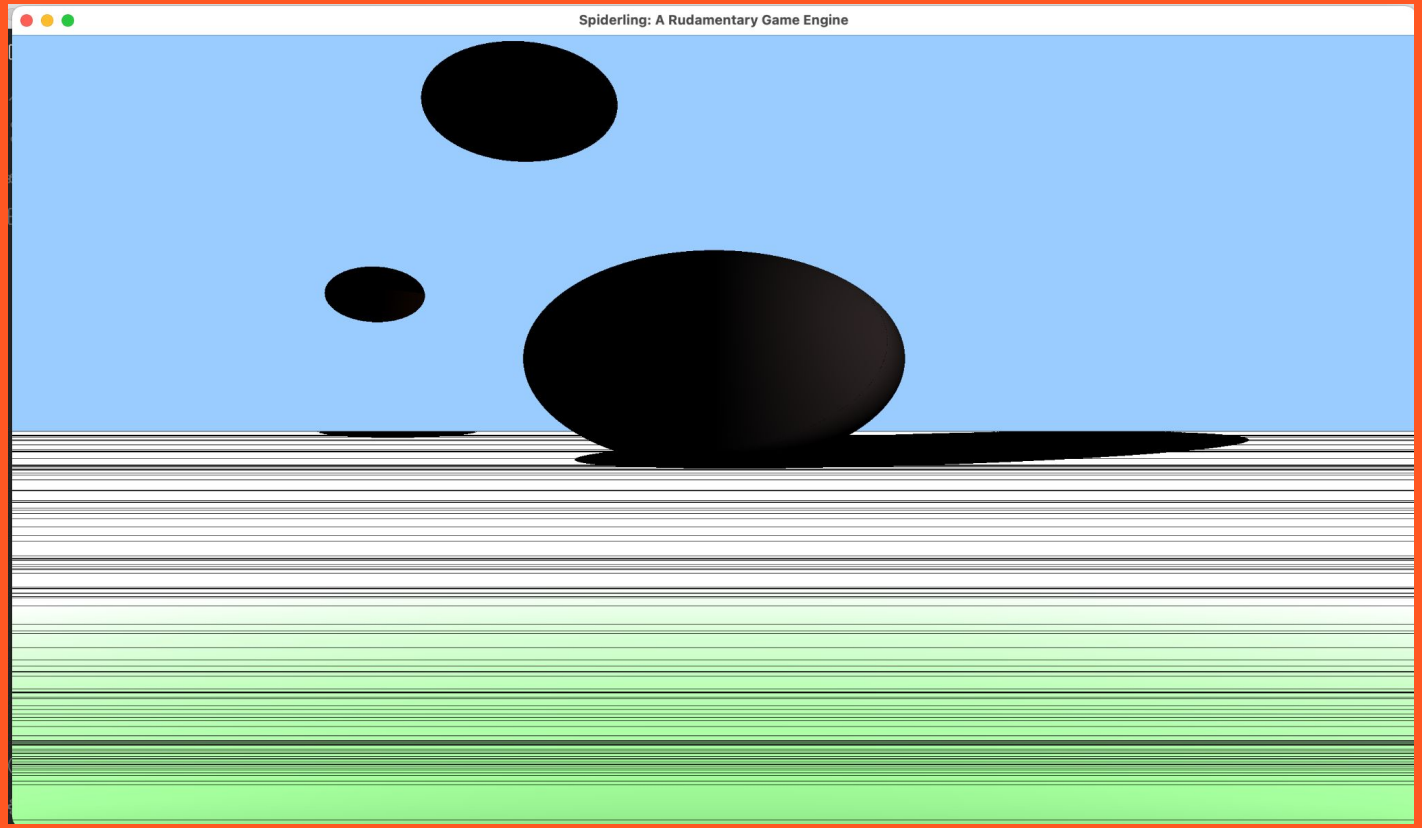
2. The Miracle



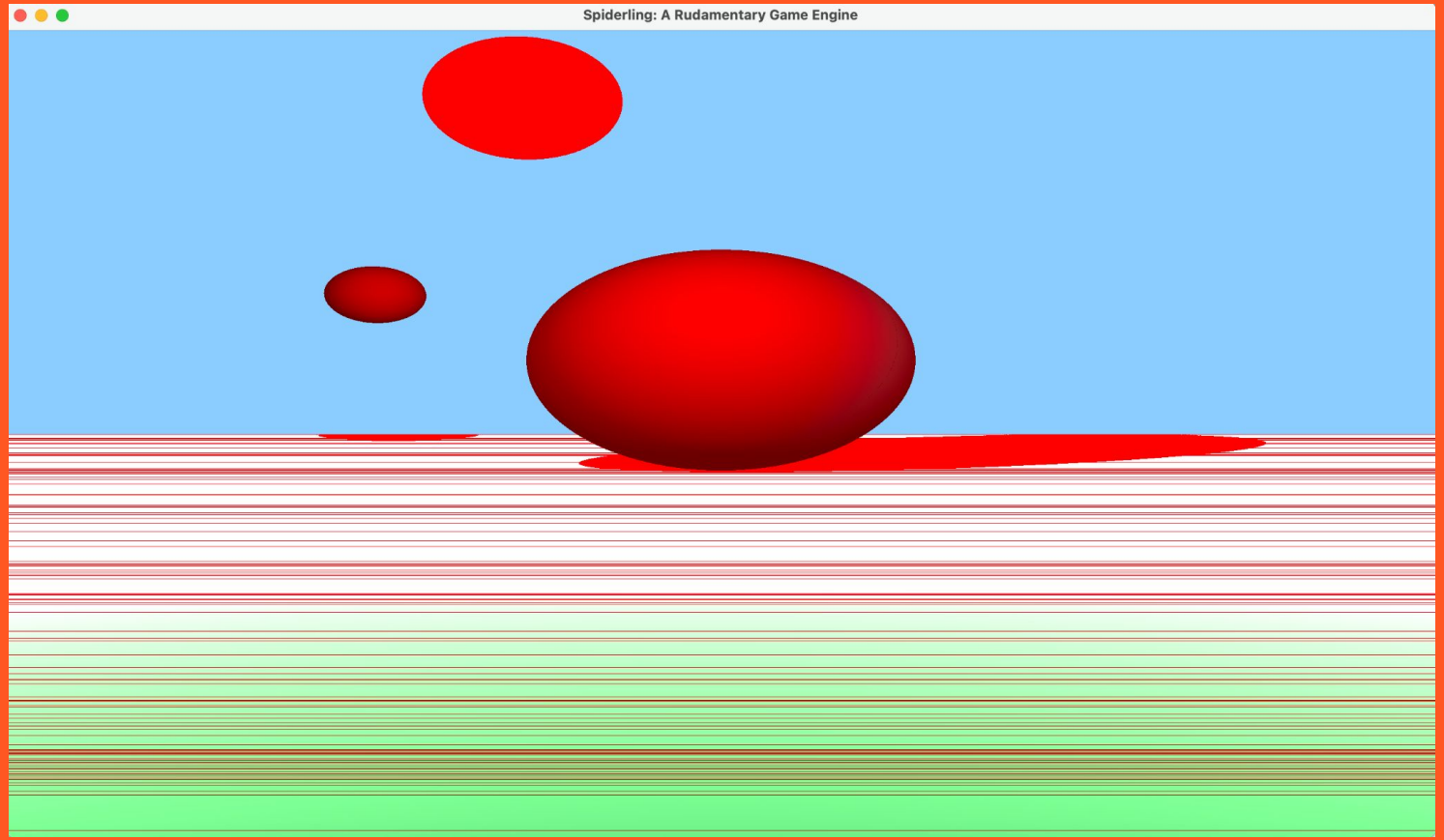
3. A New Hope



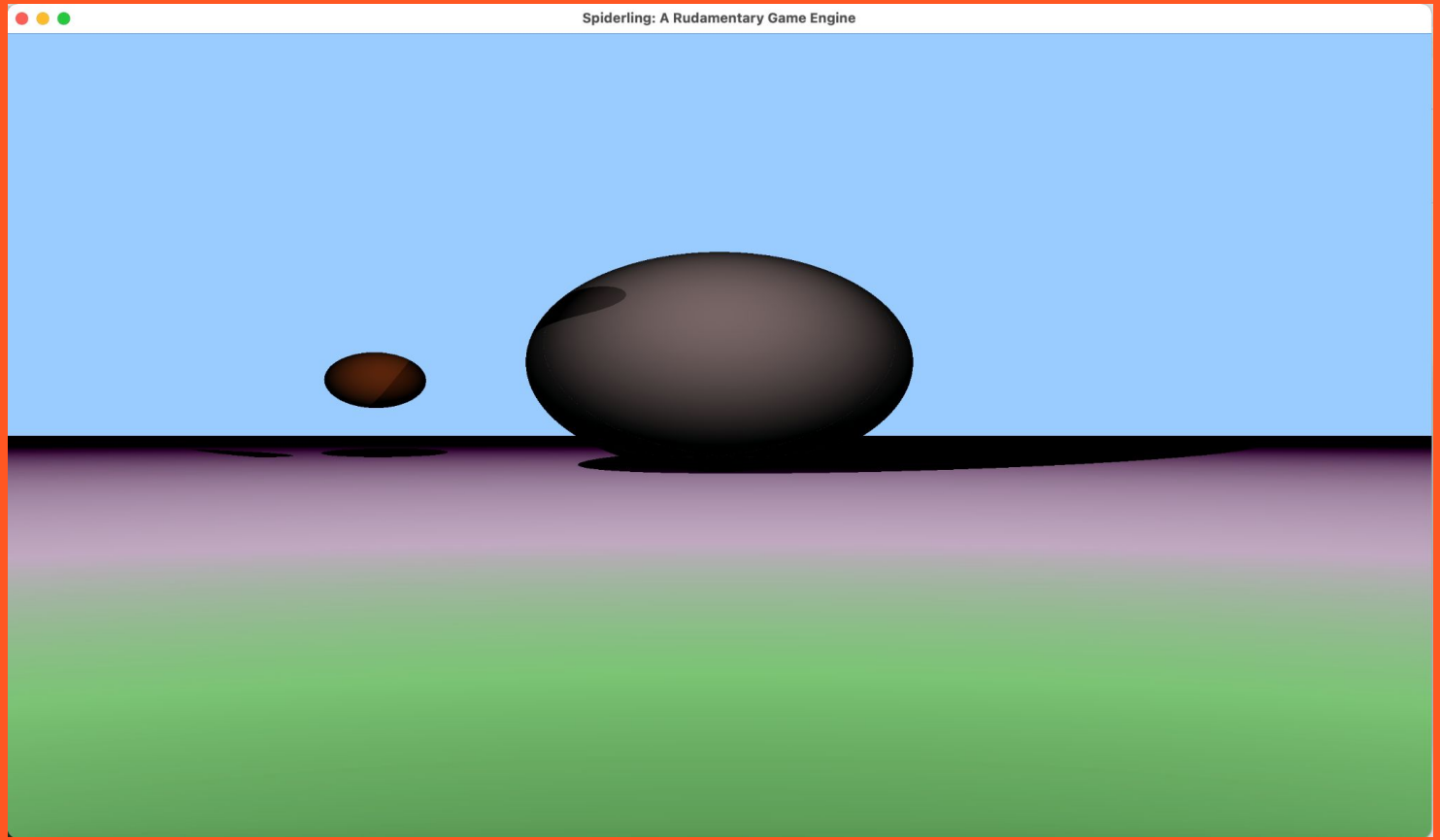
4. The Acne Strikes Back



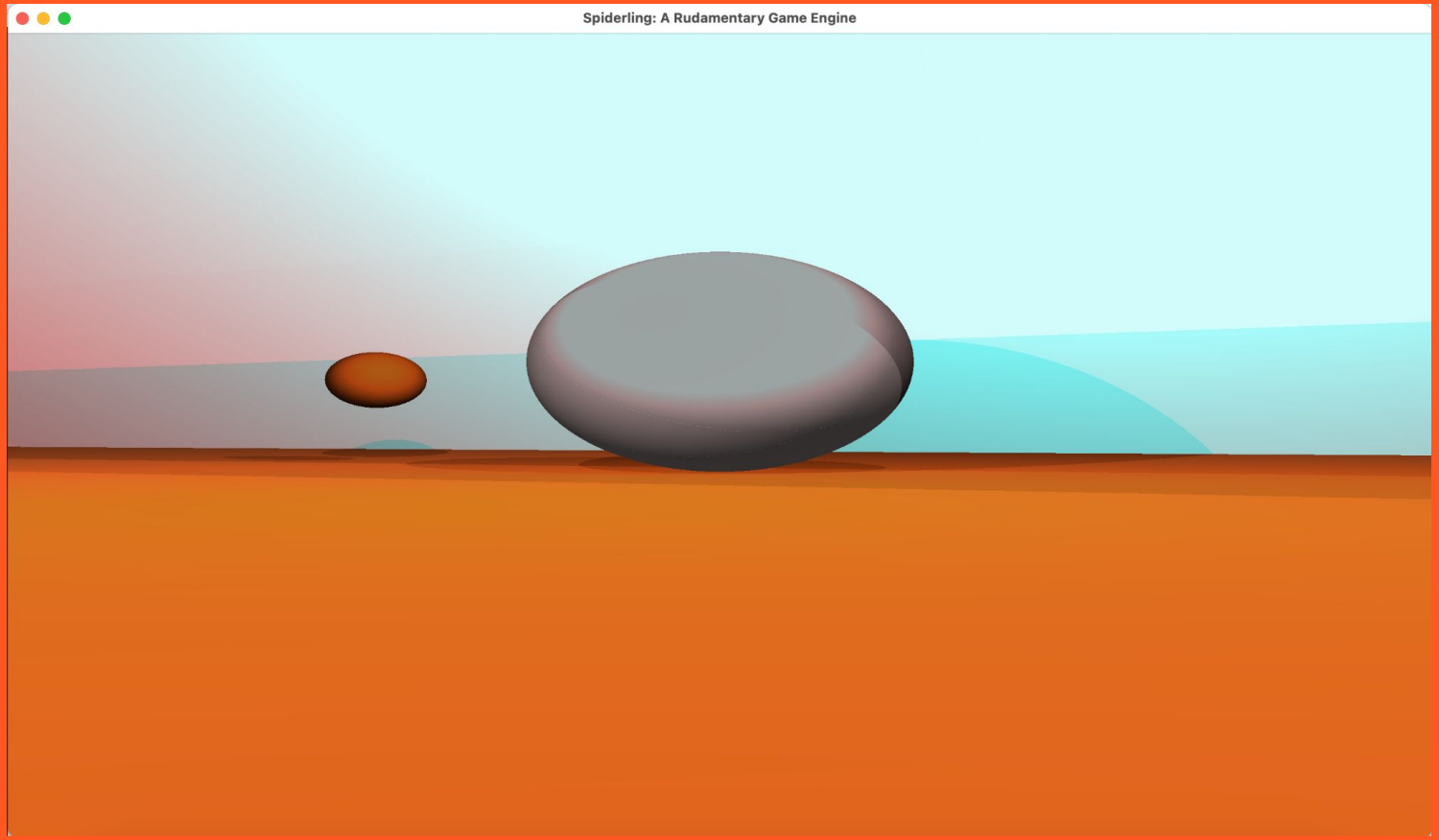
5. Return of the Color



6. The Image Awakens



7. The Last Image



Next Steps

- Fix bugs:
  - Right now our program is a bit inconsistent. Certain scenes will render improperly, and we would like to make sure our program can take any input and generate a good looking image.
- Anti-aliasing and different types of lights

One advanced feature we wish we implemented

Physically Based Animation

How it works

Incorporate motion to our sphere using timing, staging and deformation

How to implement

Use state and physics equations to define the positions of the spheres that change over time

Lessons Learned

- Collaboration and communication is key when working in a group
- Write and test code in small amounts in order to ensure a working program at all times
- Make use of proper data types and object-oriented programming principles
- Touch up your code to make it more efficient whenever you can

Favorite Part

- Being able to work with a team for our programming project
- Seeing our scene come to life
- Finally fixing a tricky bug
- Project requirements changed based on our abilities

Least favorite part

- Realizing that something you wrote is stupid
- Not knowing where your bug is (SEGMENTATION FAULT 11)