Prototype 1

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Artist Statement

“This project’s purpose is to allow the user to explore a night sky and trace their own constellations. While the main expected result is entertainment and fun, I think it’s interesting to explore how we find recognizable patterns in millions of objects. Most people nowadays, including myself, don’t often have access to the night sky due to light pollution, and may not have the chance to see the sky clearly at night, and find/recognize constellations and stars.
One of my fondest childhood memory was stargazing while on a camping trip, and wondering how people noticed these patterns in the first place, then how were they inspired to associate them with certain objects.
However, thinking about the purpose of constellations and other means to map the sky, I’m wondering if I should give people a reason to find these patterns. Historically, they’ve been used as navigation guides, as a tool for predictions, and as part of stories (ie Greek Mythology). Alternatively, this project could explore what constellations would look like if purpose wasn’t a factor in their conception.
I know people will try to connect stars to create memes and other modern objects and concepts, which answers the question: What if people from this time and place were in charge of creating these patterns?
So far in my project, the user views everything from a planet’s position in a solar system, but that’s the only reference to a human perspective on stars. The camera can rotate around and see all the stars, unaffected by space and time. My end goal is to enable the user to connect stars and create their own patterns.”

Project Goals

Done:

- ☑ Creating a solar system where planets orbit around a sun
- ☑ Set the camera where Earth is
- ☑ Mapping all the stars around the Solar System in 3D

To do:

- ❑ Allow the user to connect stars in the sky to create new constellations
- ❑ Create a drawing panel where the user can draw an outline on top of their new constellation after connecting the stars.

Initial Design Questions

- How will I map the stars around?
  - Answer: They won’t be mapped, and the result won’t be the same as the night sky as we know it, but I find that it works even better with the idea of exploring and finding constellations if the stars are placed differently every time. At the beginning of the program, the stars are placed randomly in a “sphere” around the center. It works pretty well.
- How will the stars be made?
  - Answer: Right now, the stars are small spheres, so they can be seen from all angles. However, since there’s 100 of them, it’s becoming hard to render/make the program work.
- How will I select stars?
  - Answer: I’ve been exploring the Picking Library, and figured out how to use it with Peasy Cam! However, it’s still not working - possibly due to the large amount of items that can be picked (100-300). It sometimes picks the wrong item or comes up with a number that exceeds the array bounds. I may switch over to Ray Picking instead.

New Design Questions

- Selecting stars is difficult in part because of the camera moves. Is the orbiting camera movement really necessary?
- Ray Picking or Color Picking? How do I make it work?
- How many stars should there be?
- Is there another way to make stars that makes them selectable and viewable from every angle, but is not 100 spheres?
- Should I try to give the users a reason to create patterns? What reason and how would I implement it?
- I once thought of letting the user name stars - should I still implement this?

Thank you!