GUI Documentation

My scene that I have created is one which is in space. Your camera is flying around a procedurally generated planet, that has two smaller planets around it.

I have added a Graphical User Interface from [ImGUI](). This GUI will allow you to control various aspects of the scene.

The GUI can be broken down into a few sections. These are Light, Realtime Terrain and Reload Terrain. I have added a screenshot below to show all the different options available to the user.

- **FPS**: This is just a simple tracker of the current framerate.
- **Free Camera**: This is a simple checkbox. If this box is checked, you will now control a camera that is free to fly around at your own will. If it is not checked, you will see from the view of a camera orbiting the scene.
- **Light**:
  - **Height**: The height of the light used in the scene. This is a simple slider than can be dragged between the values of -2 and 2. It simply moves the scene's light up and down.
- **Realtime Terrain**: These options change the procedural terrain that is already generated, in real time.
  - **Sea Level**: This is a slider going from 0 to 2. At 0, the planet will be almost entirely grass, while at 2 it will be mostly water.
  - **Size**: A pretty self-explanatory slider. Ranging from 0.1 to 3, this changes the size of the planet.
- **Reload Terrain**: These options below will procedurally reload the terrain in the middle.
  - **Seed**: This seed is a number value associated with the procedural texture. If you use the same seed twice, you will receive the same result.
  - **Octaves**: A slider from 0 to 10. This value is the amount of times the algorithm to generate the perlin noise texture. A higher value will lead to more land and less water, while a lower value will likely create lots of islands.
  - **Persistence**: Slider from 0 to 1. Persistence is the detail and amount of variation within the perlin noise texture. A lower value here will give you a smoother terrain while a higher value will create a highly bumpy texture.
  - **Use Seed**: Generates the new seed with all of the above settings. Note: changing the settings above will not change the texture until you press this button.
  - **Random Seed**: Generates a new seed with all of the above settings, but using a random seed number between 0 and 100000.
  - **Recent Seeds**: Each time you re-generate your terrain, a new buttons will be added to this list that stores the seed. Press one of these buttons to return to a seed you had previously generated.

▼ Debug

59.5 FPS
☐ Free Camera

▼ Light

1.000 ▮ Height

▼ Realtime Terrain

1.000 Sea Level

1.000 Size

▼ Reload Terrain

▮ 28724 Seed

10 ▮ Octaves

▮ 0.300 Persistence

Use Seed Random Seed

Recent Seeds
28724