

Project Summary:

Video Games became a hobby of mine through COVID, so much in-fact that my friends and I attempted to make one. I was in charge of terrain and art direction. I had no idea what to start with, so I looked up ways to automate the process. Tutorials on how to use procedural generation on Unreal Engine appeared. There, I became interested in the concept of procedural generation. I always wanted to make my own take on the procedural generation algorithm, so I decided to do it for my final project. On Unreal Engine, it uses noise maps to create height, biomes, and other things. I have very little experience and knowledge in programming, so I decided to make the generation easier, but a little more random. The program I created randomly generated biomes/masses (colors) on a 100x100 grid based on user input. It then surrounds that with water so the biomes turn into an island. The colors are grouped together, so they are not just a bunch of random squares placed randomly and there are 5 biomes, Lakes (blue), Forests (dark green), Plains (light green), Desert (yellow), and Tundra (gray), (6 if you count the ocean surrounding the island). In the future, I want to add height mapping based on procedural generation to this algorithm. This would allow me to create mountains and hills on the map, which would be fun to implement and experiment with.

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