Project Prototype

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**Current Features**

Basic terrain generation has been implemented using the Square-Diamond algorithm. Basic lighting and materials have been set up for the terrain. A camera class has been added with basic functions including rotation around the y-axis and zoom in/out. Penguin, wolf, and pine tree models have been found and are to be later added to the scene. The models are all .obj files and can all be loaded to OpenGL using objLoader.cpp.

**Features Needed**

Surface normals still need to be calculated for the terrain. Animal and vegetation classes still need to be implemented. Once animals are added to the scene, animation also must be added as well. A skybox also needs to be added to the scene. The lightning will be updated in order to create a daytime and nighttime scene. A snow and wind feature will be added later, which will be done using a particle system. The camera class needs to be updated with more advanced controls and the view of the scene needs to be improved. A new camera mode will be added, which will give a first-person perspective of the terrain. Textures need to be added to the terrain and models.

**Commands**

* Run *make* command while in Project folder to run program
* Right-arrow/Left-arrow => rotate around y-axis
* Up-arrow/Down-arrow => zoom in/out
* Run make command while in Models folder to test out objLoader.cpp, the default model that will be loaded is penguin.obj, change file name in line 188 to view other models