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**Assessment ADGP 201 - Graphics**

### **Graphics Assessment Documentation for “Procedural Generation”**

#### **Purpose:**

Introduce the steps needed to generate the perlin noise map and use a vertex shader to sample said map.

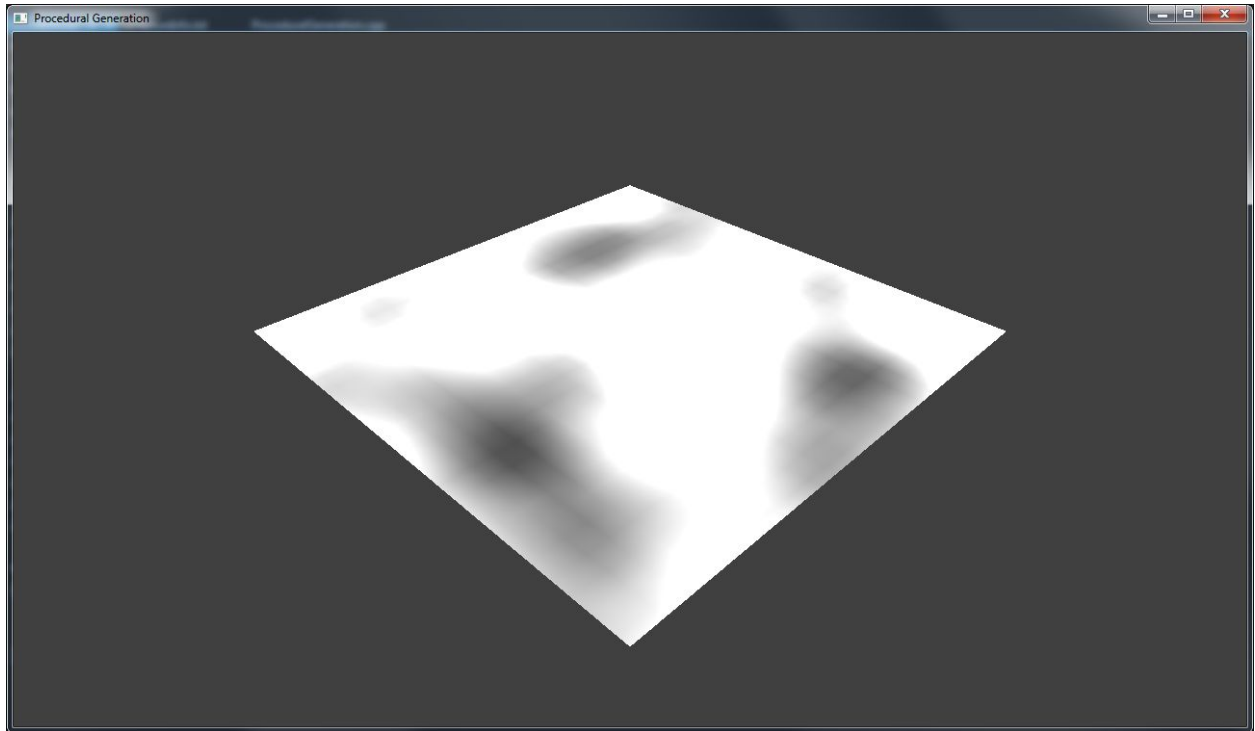
#### **Learning Outcomes:**

- 1) Generate Perlin Noise map.
- 2) Vertex Shader sampling Perlin Noise map.

#### **Evidence:**

This project has the ability to generate perlin noise map and use a vertex shader that samples said noise. The ProceduralGeneration class has a generatePerlin function that takes in a const int variable. This function returns the perlin noise map data. The function uses dimension and octave data to perform calculations. Using the x and y dimension data, the perlin data is calculated by taking the scale value and multiply it by x and y.

Using the octave data, the perlin data is calculated by taking the perlin sample value and multiplying it by the amplitude. In the vertex shader, the location of the position and texcoord are labeled. A uniform view\_proj and perlin\_texture are defined and the frag\_texcoord is broadcasted out. In the main function, the frag\_texcoord variable is set equal to the texcoord variable and the gl\_Position variable is set equal to the view\_proj variable times the position.



\*Picture of the perlin noise map