# Complex Game System

# C++ particle system

# Purpose

The purpose of this particle system to use an advanced algorithm of compute shader to render the particle on the GPU. This will involve using OpenGL (GLM) as a library to run the system.

# Example Test Program

From the main cpp file initialize the particle system class which will create 1000 particles each with a position and a velocity and then in the update function call the update and draw function of the particle system which will store then into a vector array. Storing the vector into the first slot in an SSBO. Then call the update function to dispatch the compute shader of the type of particle to be updated in the compute shader on the GPU. Then call the draw function to render the particles and vertex and fragment shader. This should render in the window particles moving around the screen that has the texture of fire or smoke.

# Mathematical operation

The math needed for this