The current version of our engine has five classes made which are:

1. MyParticle
2. MyVector
3. PhysicsWorld
4. RenderParticle
5. Utils

MyParticle is the object in our world. MyParticle can vary on what object it can be. MyParticle also contains all the properties it has. For example, its particle’s velocity, mass, position, acceleration, dampening value, etc..

MyVector is more on the mathematical aspect that are used for our physics. MyVector class handles the mathematical operation that are necessary for our PhysicsWorld to Update. This class has operator overloading functions that lets the engine perform Vector classes operations.

PhysicsWorld is used to add Physics to our Particle. This means that the physics world is the one that adds gravity to our particle. It also checks whether the particles are over their lifespan value, thus deletes the particle’s memory.

RenderParticle is used to render the particles that we create. This means that the RenderParticle display what is happening to our Particle. It is also responsible for the position update of the particles that were moving in the simulation.

Utils is primarily used to add an offset value to the position of our object.

We have two public function in our main which are Randomfloat and instantiateParticles. Randomfloat function randomizes a value from a given min and max value. We used this in order to set the x Direction of force between -0.3 and 0.3. The instantiateParticles is used to easily instantiate a Particles without setting values one by one. In addition, this function is only called when the number of Particles per frame is less than 25.