The BouncyParticle class uses particle simulation by extending the Particle class which we were provided with. An instance of the BouncyParticle class will take as parameters values for the initial position (\_x and\_y), initial velocity (\_vx and \_vy), a radius \_r, dimensions of the screen (screenWidth and screenHeight), and an elastic coefficient. A bouncy particle behaves exactly like a normal particle except it bounces off of the “walls” created by the edges of the canvas. The elastic coefficient can range from 0.5 to 1 and affects how much height is lost with each bounce, with a value of 1 representing a perfectly elastic collision (i.e. no height lost when bounced). Objects of this type can have forces applied to them and can be displayed. The code for this class has been completed and the UML diagram is shown below.

