

1. Create a ChaoticParticle class, which is a Particle, randomly changing its movement (Speed). You are not allowed to edit any existing class.
  2. Test the ChaoticParticle through the ParticleSystemMain class
  3. Create a ChickenParticle class. The ChickenParticle class moves like a ChaoticParticle, but randomly stops at different positions for several simulation ticks and, for each of those stops, creates (lays) a new ChickenParticle. You are not allowed to edit an existing class.
- Test the ChickenParticle class through the ParticleSystemMain class.

5. Implement a ParticleRepeller class. A ParticleRepeller is a Particle, which pushes other particles away from it (i.e. accelerates them in a direction, opposite of the direction in which the repeller is). The repeller has an effect only on particles within a certain radius (see Euclidean distance)
6. Test the ParticleRepeller class through the ParticleSystemMain class