Bonus Assignment

Due Saturday by 12:01pm **Points** 1 **Submitting** a file upload

Also, there is a bonus assignment opportunity:

- The bonus assignment will be due at noon on Saturday, May 2nd. There is no late option. If you are late, you will not get any bonus marks.
- The bonus will be a zero or 100% opportunity - you either succeed, or you get a mark of zero.
- The bonus will give you a boost of 15% on your final grade.

The bonus project will be to implement the simulation discussed in class.

At simulation start, a collection of balls will be held in position above a collection of randomly sized boxes resting on the ground. Upon simulation start, the balls will fall to the ground.

You are to simulate gravity, ball-ball collisions, ball-box collisions and ball-ground collisions.

Requirements:

- You may implement the simulation in terms of particles or rigid bodies. The choice is yours. Choose based on ease of implementation. Hint: If you have rigid bodies working, then this bonus is trivial.
- The boxes do not need to move. They are rigid portions of the scene.
- Your submission should include a working executable containing a README.txt file as well as a link to a commit sha on github.
- You are free to take shortcuts in your simulation, but the behaviour of the simulation must be in-line with the physics studied in the course.
- If you can compose this scene with your rigid body project, you will be granted the 15% bonus. There is no need to provide a separate submission. Note that you will be penalized late marks on your project if you do not submit until Saturday.
- The collisions must be processed as rigid bodies - if you use particles, the particles must collide when the ball first touches the ground or box, not when the centre of mass collides.

Good luck and have fun!