Computer Simulation of N-Body Interactions CURTIS MCCULLY, NATHANIEL TROUTMAN, Southern Nazarene University — We set up a model universe consisting of \( N \) particles, whose interactions we can specify. With the equations of motion and the Euler-Cromer method to predict the next time step, so far we have simulated the dynamics of the present solar system on a millennial time scale. A work in progress, we have taken steps to create a simulation of Saturnian rings, solar system formation, and other systems.