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Rope

Inside the rope constructor, I first created all the necessary masses by linearly interpolating from the beginning position to the end position and assigning the corresponding pinned states and masses. After this, I created a spring to connect every mass and pass in the spring constant.

Euler

I first created a helper function to calculate hooke's law given a spring. Using this, I iterated through every spring and summed hooke's value for every force affecting the masses on each spring. Then, for every mass, I calculated the acceleration by dividing the total force by the mass and adding it to gravitational acceleration. I used this to calculate position and velocity using standard kinematics. The difference between explicit and implicit ended up just being the order in which I calculated velocity and position.

Verlet

I first looped through every spring and moved every mass by half the offset relative to the spring's rest length. Then I iterated through every mass and used gravity as the only source of acceleration which, with damping, turned out much smoother than euler.