

# Report for Exercise 12

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## 1 Task 1

For this task, I implemented the one dimensional contact dynamics simulation which is in "1d-contact-dynamics.ipynb". I used the algorithm to create a simulation which can be seen in "1d-animation.mov". In figure 1 one can see the total energy of the system plotted over time. As expected the energy is not conserved as there is energy lost in the restoration of the particles when they collide.

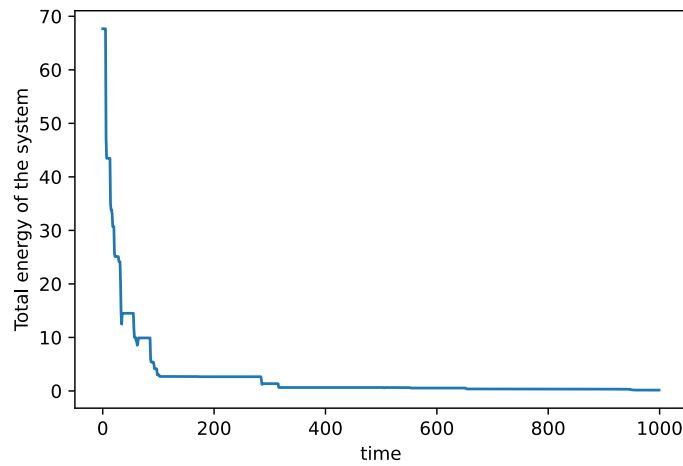


Figure 1: Total energy of the system over time.