

Programming Techniques II Exercise 8

 $\begin{array}{c} {\rm HS}\ 15 \\ {\rm Prof.}\ {\rm M.}\ {\rm Troyer} \end{array}$

Task 8.1 PennaLV

We want to support an arbitrary number of animals in our simulation class. Extend your code such that it takes any number of animals as template parameter and applies the PennaLV algorithm on them.

Task 8.2 Meta Template List

Use the meta list shown in the lecture (exercise/mtp/meta_list.cpp) and write a meta-function invert_list<L> which inverts the given list L. Maybe you can use this in your PennaLV simulation, in case you are not happy with some ordering.

Task 8.3 Back In Time Challenge (optional)

The task is to find the highest prime number below a given value (value excluded) at compile-time. We implemented a version in C++14 for you. Your challenge is to go back in time and write the same function in either C++11 or, if you are up to a real challenge, C++98/03. Make sure you use the correct compiler flag -std=c++11 or -std=c++98 and replace the current code (which will not compile under these options) with a working alternative.

The submission deadline for this challenge is Wednesday 11.11.15 at 05:00 in the morning. Notify us via the mailing list (pt2_hs15_ta@lists.phys.ethz.ch) with a link to your uploaded solution on your PT2 repository on GitLab.

Additional Notes:

The results of our discussions can be found in the lecture wiki on GitLab: https://gitlab.phys.ethz.ch/progtech2 hs15/lecture/blob/master/wiki/readme.md