Courses Aalto 2023 Spring Nuance Log out Help

## Aalto 2023

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### MF2: multicore parallelism ★

Please note that you can still submit, but as the course is already closed, your submissions will not be graded.

To get started with the development, download the code templates, unzip the file, edit mf.cc, and run ./grading test or ./grading benchmark to try it out — see the instructions for more details!

Upload your solution as a file l	ere		
Please upload here the file mf.co	that contains your solu	ition to task MF2.	
Choose File No file chosen			
or copy-paste your code her	9		
Submit			

#### Your submissions

Your submissions to MF2 will appear here; you can simply reload this page to see the latest updates.

#### What you will need to do in this task

Please read the **general instructions for this exercise** first. Here are the additional instructions specific to this task:

Parallelize your solution to MF1 with the help of **OpenMP** so that you are exploiting multiple CPU cores in parallel.

### What I will try to do with your code

I will first run all kinds of tests to see that your code works correctly. You can try it out locally by running ./grading test, but please note that your code has to compile and work correctly not only on your own computer but also on our machines.

If all is fine, I will run the benchmarks. You can try it out on your own computer by running ./grading benchmark, but of course the precise running time on your own computer might be different from the performance on our grading hardware.

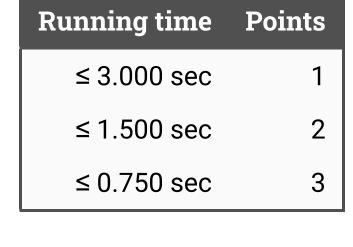
### Benchmarks

Name	Parameters
benchmarks/1 the input contains 100	hx = 10, $hy = 10$ , $nx = 100$ , $ny = 1000 × 100 pixels and the window dimensions are 21 × 21 pixels$
benchmarks/2	hx = 10, $hy = 10$ , $nx = 500$ , $ny = 5000 × 500 pixels and the window dimensions are 21 × 21 pixels$
benchmarks/3 the input contains 100	hx = 10, $hy = 10$ , $nx = 1000$ , $ny = 100000 \times 1000 pixels and the window dimensions are 21 × 21 pixels$
benchmarks/4 the input contains 150	hx = 10, $hy = 10$ , $nx = 1500$ , $ny = 150000 \times 1500 pixels and the window dimensions are 21 \times 21 pixels$

# Grading

In this task your submission will be graded using benchmarks/4: the input contains  $1500 \times 1500$  pixels and the window dimensions are  $21 \times 21$  pixels.

The point thresholds are as follows. If you submit your solution no later than on **Sunday, 07 May 2023, at 23:59:59 (Helsinki)**, your score will be:



If you submit your solution after the deadline, but before the course ends on **Sunday, 04 June 2023, at 23:59:59** (**Helsinki**), your score will be:

