Courses Aalto 2023 Spring Nuance Log out Help

Aalto 2023

Index	Contest	Submissions	Pre	0	CP	1 2	a 2b	2c	3a	3b	4	5 9	9a	9c	IS	4	6a	6b	9a
MF 1	2 9a	SO 4 5 6 F	9a	X	0a	0b !	9a 9h												

MF1: CPU baseline ★

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 here	
Please upload here the file mf.cc that contains your solution to task MF1.	
Choose File No file chosen	
or copy-paste your code here	
	l.
Submit	

Your submissions

Your submissions to MF1 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:

Implement a simple **sequential** baseline solution. Make sure it works correctly. Do not try to use any form of parallelism yet. You are expected to use a naive algorithm that computes the median separately for each pixel, with a **linear-time median-finding algorithm**.

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.

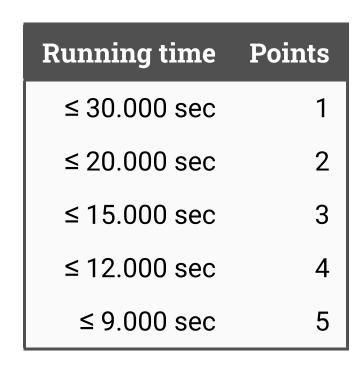
Benchmarks

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 the input contains 500	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 1500×1500 pixels and the window dimensions are 21×21 pixels.

The point thresholds are as follows. If you submit your solution no later than on **Sunday, 30 April 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:

