Courses Aalto 2023 Spring Nuance Log out Help

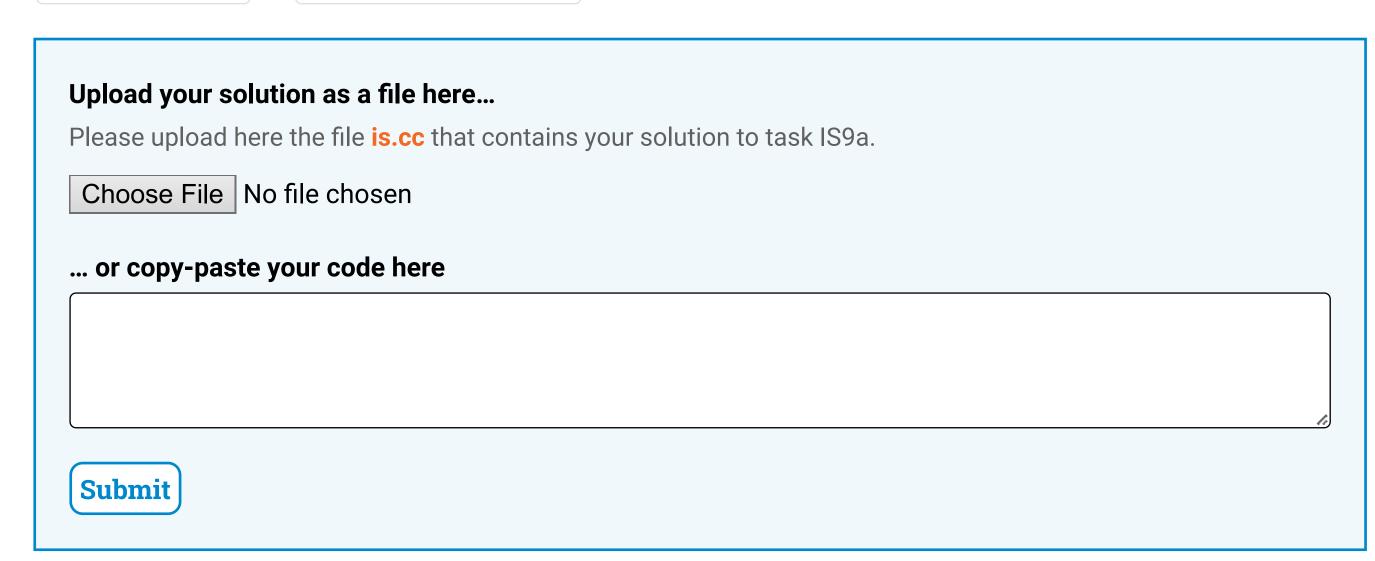
Aalto 2023

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

IS9a: better algorithm ★★★

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 is.cc, and run ./grading test or ./grading benchmark to try it out — see the instructions for more details!



Your submissions

Your submissions to IS9a 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:

Design a more efficient algorithm that (at least in typical cases) does not need to try out all possible locations of the rectangle. Implement the algorithm efficiently on the CPU.

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.

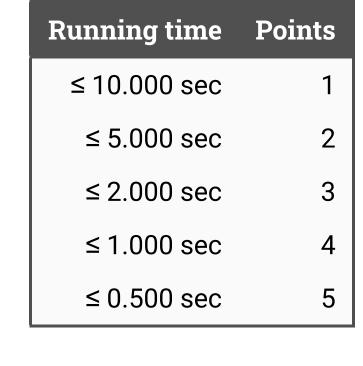
Benchmarks

Name	Parameters
benchmarks/1	nx = 100, ny = 100
the input is a multicolor i	mage with 100 × 100 pixels
benchmarks/2a	nx = 199, ny = 199
the input is a structured l	black-and-white image with 199 × 199 pixels
benchmarks/2b	nx = 200, ny = 200
the input is a structured l	black-and-white image with 200 × 200 pixels
benchmarks/2c	nx = 201, ny = 201
the input is a structured l	black-and-white image with 201 × 201 pixels
benchmarks/3	nx = 400, ny = 400
the input is a multicolor i	mage with 400 × 400 pixels
benchmarks/4	nx = 1000, ny = 1000
the input is a multicolor i	mage with 1000 × 1000 pixels

Grading

In this task your submission will be graded using benchmarks/4: the input is a multicolor image with 1000 × 1000 pixels.

The point thresholds are as follows. If you submit your solution no later than on **Sunday, 04 June 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:

