

# Course of events of the Lëtzebuerger Informatiksolympiad (LIO) 2023

The Lëtzebuerger Informatiksolympiad (LIO) 2023 competition is held in 4 rounds:

## Round I - qualification



The participants have to solve (program) at home the tasks stated in the tasks description (in English language) of the qualification round. The tasks description consists of 4 tasks of varying degrees of difficulty. All 4 tasks are scored out of 100 points. In order to participate in the competition, at least one task must be solved.

The programming languages accepted for the qualification are the current versions of C/C++ and Java as well as Python 3.

**In order to participate in the competition, you must:**

- register by means of an online registration form;
- submit the solutions (source programs) of the tasks to the automated judge CMS (Contest Management System) - the login data (username + password) are communicated to the participants shortly after their online registration. The file extensions for the source programs are \*.CPP, \*.PY or \*.java.

**The deadline for submitting the online registration form is Sunday, February 19, 2023 (midnight) at the latest.**

The registration form and the tasks description of the qualification round are available on the website

**[www.infosolympiad.lu](http://www.infosolympiad.lu)**

Important: Since the programs are evaluated in real time in an automated way by means of the Contest Management System (CMS), submitted programs that do not comply with the layouts and formats requested in the tasks description will not be considered! It is imperative to program console only applications!

The algorithm chosen for the solution of the problems is not evaluated and solutions can be submitted to the CMS as many times as desired.

The participants with the highest scores in the qualification round are admitted to the semi-finals.

## Round II - semi-finals



The semi-finals consists of a practical test where participants must individually solve 3 tasks of varying degrees of difficulty within a given time. The participants have 4 hours to design the solutions to the algorithmic problems and to implement the corresponding programs. All 3 tasks are scored out of 100 points. The programs are evaluated in real time in an automated way using the Contest Management System (CMS).

The semi-finals will take place on Thursday, March 23, 2023 from 3:00 p.m. to 7:00 p.m. in a computer room at a public high school.

Programming languages admitted for the semi-finals: current versions of C/C++, Java and Python 3.

The semi-final will select a maximum of 15 participants who will be admitted to the third round of the competition.

### Round III - programming and algorithmic training



The programming and algorithmic training allows the selected participants to deepen their knowledge of programming, to acquire algorithmic methods and to learn - if necessary - the C++ programming language required in the finals. It is a direct preparation for the finals. The training, which can be organized in several face-to-face sessions in a computer room of a high school or carried out online, takes place during the months of March and April 2023.

In principle, all participants who have taken part in the training are admitted to the finals.



### Round IV - finals



The finals consist of a practical test where participants must individually solve 2 tasks of varying degrees of difficulty within a given time. The participants have 4 hours to design the solutions to the algorithmic problems and to implement the corresponding programs. The 2 problems are scored out of 100 points. The programs are evaluated in real time using the Contest Management System (CMS). The problems require the implementation of the algorithmic methods covered during the programming and algorithmic training of round III.

ATTENTION: Programming language admitted for the finals: only the current version of C/C++, official language of the international competitions.

The finals will take place on Thursday, April 27, 2023 from 3:00 p.m. to 7:00 p.m. in a computer room at a public high school.

### And the best...

- The 4 winners of the LIO 2023 are automatically selected to participate as contestants in the 35<sup>th</sup> International Olympiad in Informatics (IOI). This international contest will take place from 28.08.2023 to 04.09.2023 in Szeged (Hungary).
- At most 4 of the best girls of the LIO 2023 will participate as a contestant in the 3<sup>rd</sup> European Girls' Olympiad in Informatics (EGOI). This international contest will take place from 15.07.2023 to 21.07.2023 in Lund (Sweden).
- Up to 6 of the best finalists of the LIO 2023 will participate as contestants in the 1<sup>st</sup> West European Olympiad in Informatics (WEOI). This international contest will take place from 16.06.2023 to 18.03.2023 in Eindhoven (Netherlands).

### And finally...

All finalists present at the finals as well as all participants in the international competitions (EGOI, IOI, WEOI) receive a certificate and a prize which are awarded at an award ceremony in mid September.