



THE **100**  
DAYS IN  
**CODELAND**  
*Survival guide*

# WELCOME ON BOARD

Welcome, brave adventurers, to the "**100 Days in Codeland**" program, organized by the IEEE ENSIAS Student Branch. This Survival Guide is your key to navigating the coding wilderness and emerging victorious.

You will embark on a journey to sharpen your coding skills by solving **100 challenging coding problems**. Along the way, you will benefit from workshops, coding simulations, and interviews to help you prepare for the ultimate test: the final contest.

Don't let the obstacles and the unknown territory discourage you. With this **Survival Guide** by your side, you will have the knowledge and resources you need to overcome any hurdle. Remember, the reward for completing this program is not only a certificate, but also the valuable skills and experience you will gain.

So strap on your backpack, sharpen your sword (keyboard), and let's set off on an epic adventure through **the realm of Codeland!**

## Day 0 : CODEFORCES

For day 0 , you should register on Codeforces, the platform where you will be solving the problems. On **Monday**, we will send you a link to join the event group on this platform. In this group, you will find all the problems that you will be solving throughout the program. We will send **new problems every Monday**, and the **corrections will be provided on Sundays**.



1 Go to the Codeforces website ([www.codeforces.com](http://www.codeforces.com))



2 Click on the "**Register**" button located on the top right corner of the homepage , Fill out the registration form and log in to your account once you have registered



3 Join our **program group** via the link that we will send you on monday



4 To submit a problem , click on the problem you want to submit , Select the programming language you used to solve the problem , Drag your code file and click on the "Submit" button to submit your solution

# The Adventure's Road map

1

**Big O & Complexity**

2

**Array & Linked Lists**

3

**Stack & Queue**

4

**Hash Table / HashMap**

5

**Tree & Graphs**

6

**Dynamic Programming**

7

**String Manipulation**

**How to Crack the coding  
interview ?**

6

# THE WARRIOR TIPS

- \* Choose a programming language for the coding interviews you do , That **you're comfortable with** . We recommend : C++ , Java , Python or JavaScript
- \* Enjoy the process , don't make pressure on yourself . Coding will be your future craft.
- \* Don't memorize the solutions , try to understand the solutions , you won't remember it all but you will remember the practices
- \* Don't memorize the solutions , try to understand the solutions , you won't remember it all but you will remember the practices
- \* Start doing coding interview questions while you're learning ,**You need to apply** what you're learning to solving problems or you'll forget everything you learned
- \* Don't hesitate to ask questions , be active with other participants and **challenge yourself**

# First thing First Big O and complexity

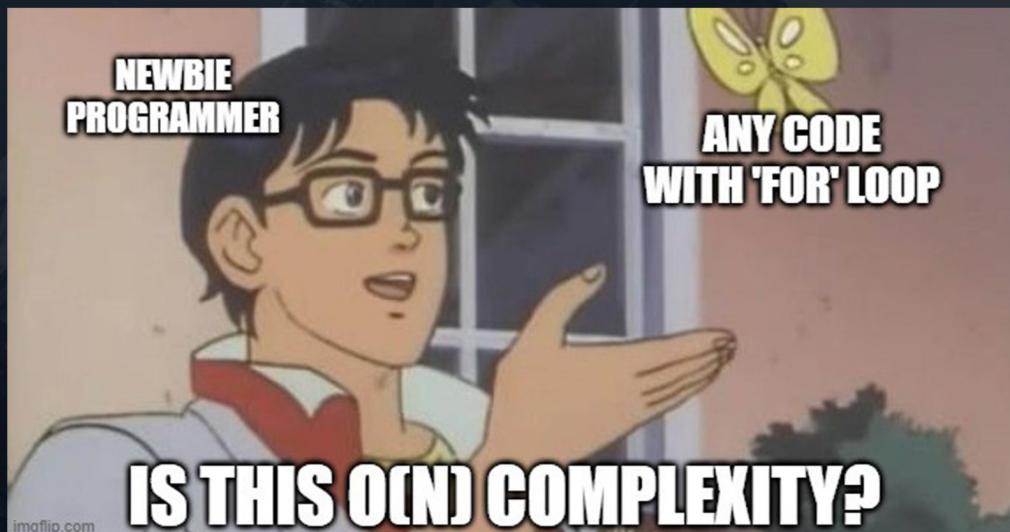
**N**othing to implement here, you're just watching videos and taking notes! Yay! Don't worry if you **don't understand all the math** behind it. You just need to understand how to express the complexity of an algorithm in terms of Big-O.

**Complexity** refers to the amount of resources (such as time or memory) required for an algorithm to solve a problem.

**Big O** notation is a way to express the complexity of an algorithm, specifically the worst-case scenario. It describes how the number of operations an algorithm performs grows as the size of the input data grows.



**For example**, if an algorithm has a time complexity of  $O(n)$ , it means that the number of operations performed grows linearly with the size of the input data.  $O(1)$  means the number of operation is constant and  $O(n^2)$  means it grows with the square of the size of the input data.



This was just a **short introduction** about the topic . Follow our workshop about the Big O & Complexity given by the Amazing **Hamza Mouhcine**. Also , Take a look on the resources that will be given to you .

# THE 100 DAYS IN CODELAND



*See you next week . Warrior!*