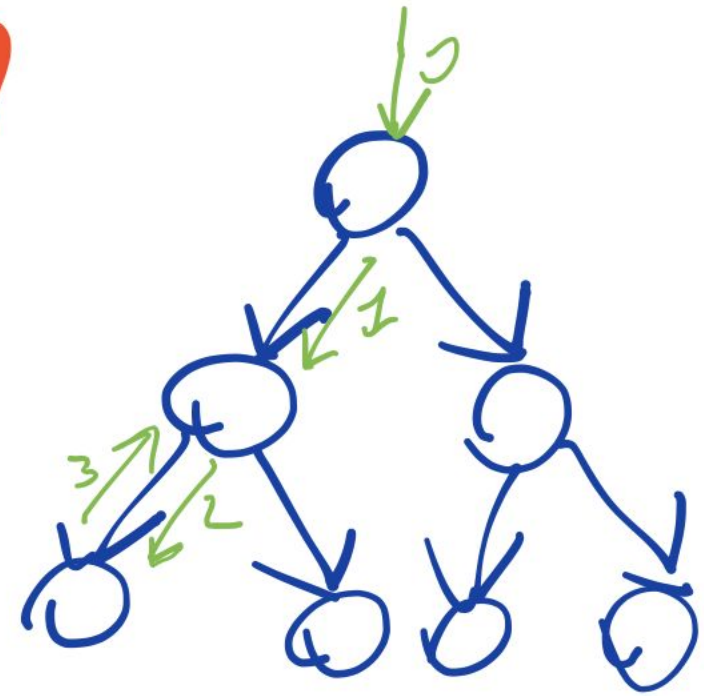
CODING INTERVIEW!



CODING INTERVIEW: what's that?

- You apply for a job
- You get invited for a job interview
- It can be in-person or remote
- It's a one-to-one thing, about one hour long
- THERE'S A WHITEBOARD! (or a text editor)
- The interviewer asks one question, then waits
- …
- Depending on the point above, there's a feedback
- Depending the feedback(s), you might GET the job!

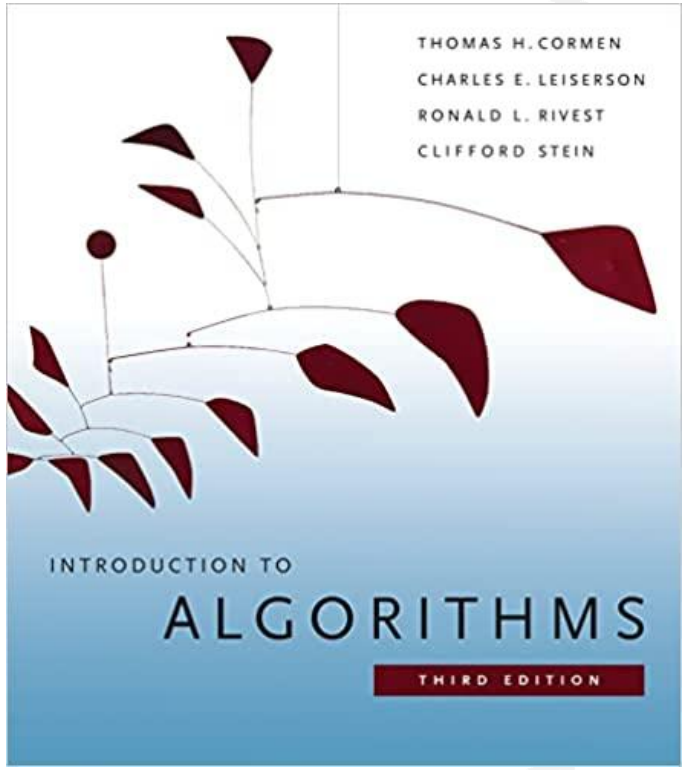
WHITEBOARD CODING: why?

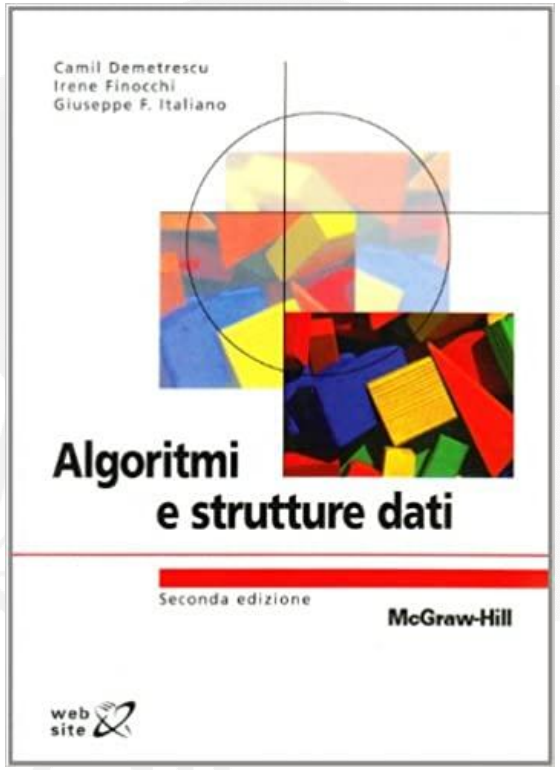
- To get your dream job
- To get your dream job
- To get your dream job

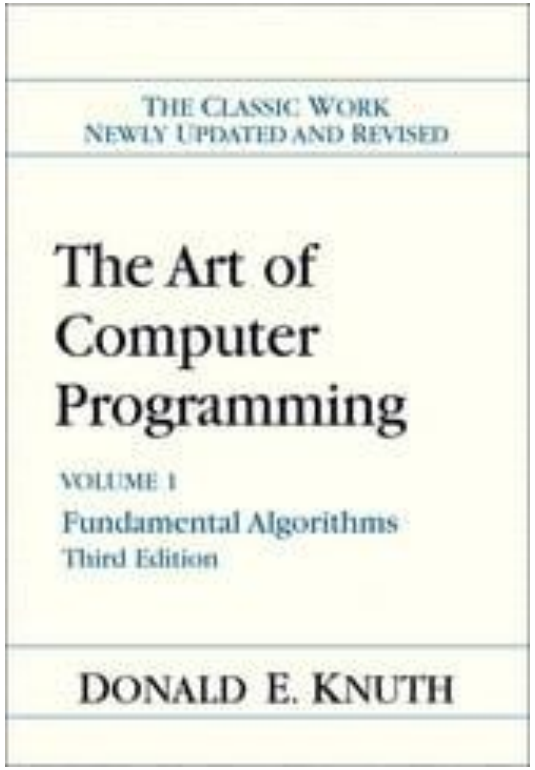
besides that..

- It’s GREAT exercise for coding skills
- It teaches a mindset to exploit those skills
- It makes you a better coder and might save time in the future..
- It’s useful even if you’re not a software engineer
- Maybe one day you’ll be the interviewer!

WHITEBOARD CODING: theory

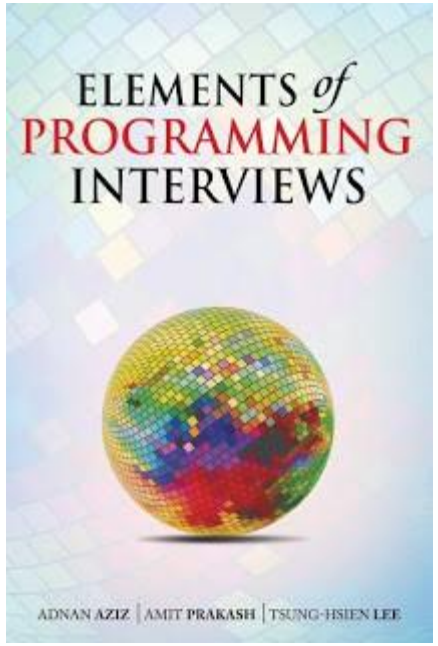


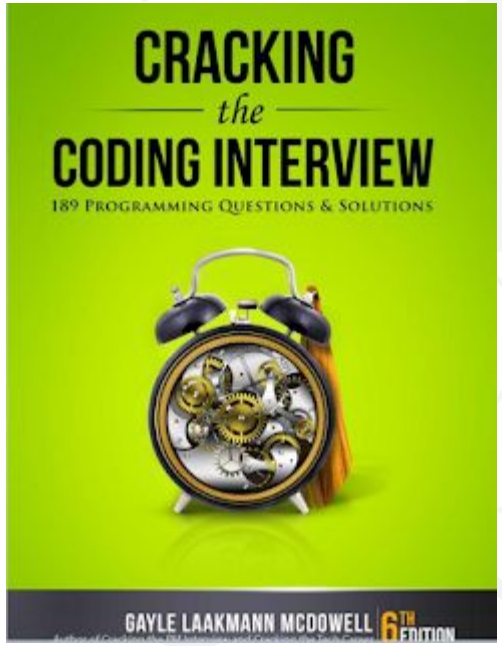


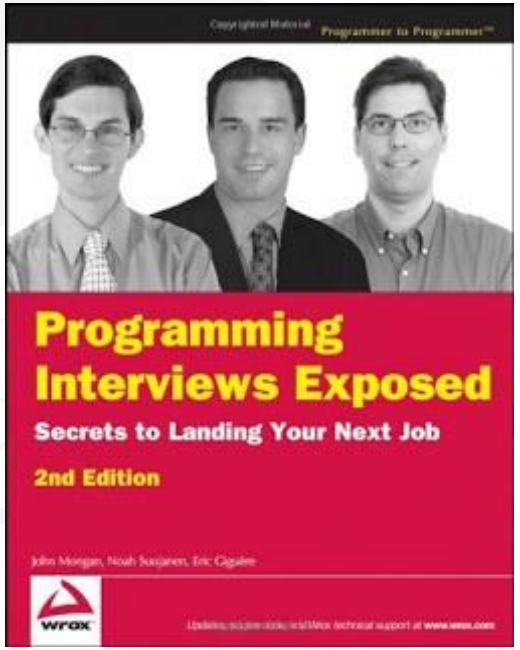


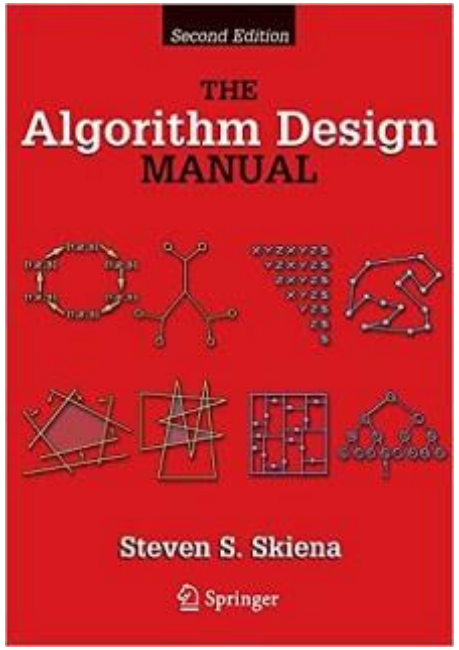
Awesome sources for ‘the fundamentals’, but they lack the ‘problem solving’ mindset.

WHITEBOARD CODING: practice





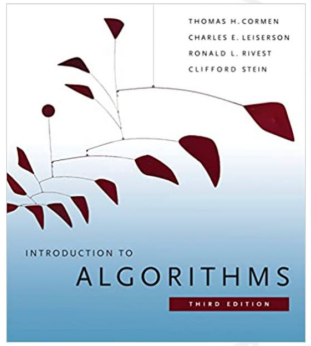


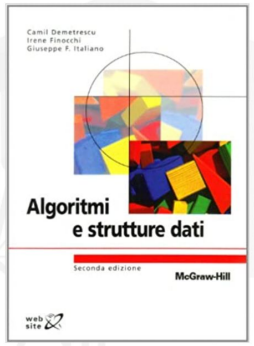


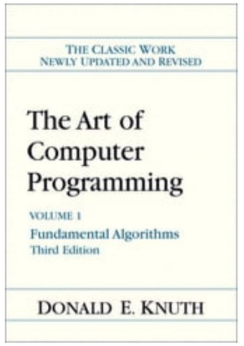
Or websites / coding gyms like LeetCode e Project Euler

WHITEBOARD CODING: our lectures

WHITEBOARD CODING: theory







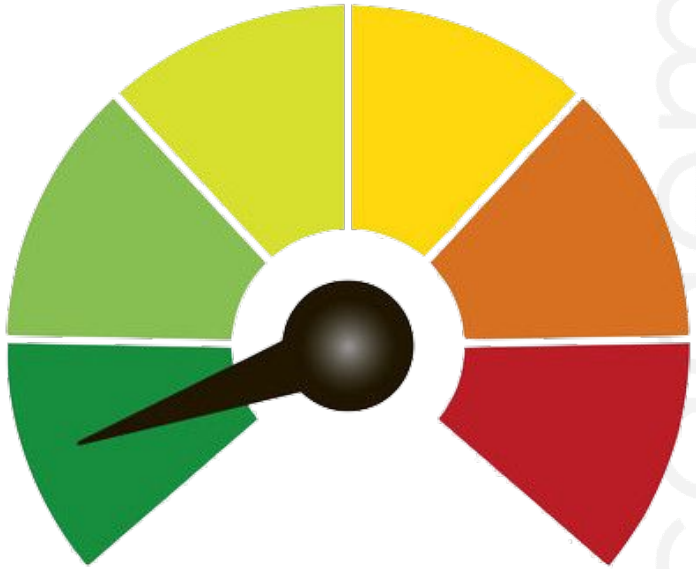
Awesome sources for 'the fundamentals', but they lack the 'problem solving' mindset.

SLIDES

```
In [30]:
def fibonacci_iterativo(n):
    if n<2:
        return n
    else:
        lo,hi=0,1
        for _ in range(n):
            lo,hi=hi,lo+hi
        return lo

In [31]:
def fibonacci_ricorsivo(n):
    if n<2:
        return n
    else:
        return fibonacci_ricorsivo(n-2)+fibonacci_ricorsivo(n-1)

In [34]:
print([fibonacci_iterativo(i) for i in range(20)])

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181]

In [35]:
print([fibonacci_ricorsivo(i) for i in range(20)])

[0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987, 1597, 2584, 4181]

In [36]:
%%time
fibonacci_iterativo(35)

CPU times: user 7 µs, sys: 11 µs, total: 18 µs
Wall time: 18.8 µs

Out[36]: 9227465

In [37]:
%%time
fibonacci_ricorsivo(35)

CPU times: user 2.39 s, sys: 8.84 ms, total: 2.4 s
```

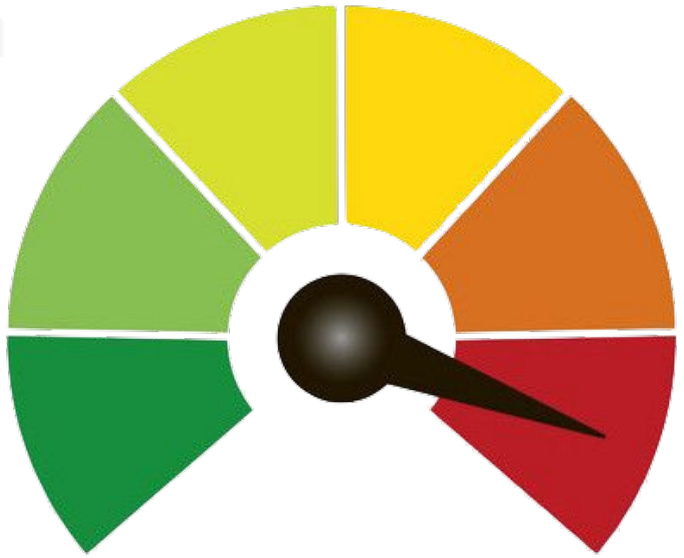
NOTEBOOKS

Course content and schedule



Intro/Theory

Abstract Data Types



Coding Gym!

WHITEBOARD CODING: meta-info

- Allowed: Python, C, Java, sometimes pseudocode
- We'll use **python**
- THINK FIRST, CODE LATER
- It's ok to think aloud, weighing pros and cons
- State your assumptions, ask questions
- Time management is fundamental
- Once you have an algorithm in mind, start coding!
- Don't be too syntax-focused (e.g. imports, sqrt)
- Many times, the answer is a single method