



# EXERCISES — Fibo iter

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version #



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# 1 Fibo iter

**Files to submit:**

- fibo\_iter/fibo\_iter.c

**Main function:** none

**Authorized headers:** You are only allowed to use the functions defined in the following headers:

- err.h
- stddef.h
- errno.h
- assert.h

## 1.1 Goal

Write the function that computes the *Fibonacci sequence*. But since the recursive implementation of this function is very slow, we want to have a more optimized version that uses loops and does not recompute every previous value every time.

*Reminder:* The Fibonacci sequence is defined by  $U_n$  as follow:

- $U_0 = 0$
- $U_1 = 1$
- $U_n = U_{n-1} + U_{n-2}$

```
unsigned long fibo_iter(unsigned long n)
```

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