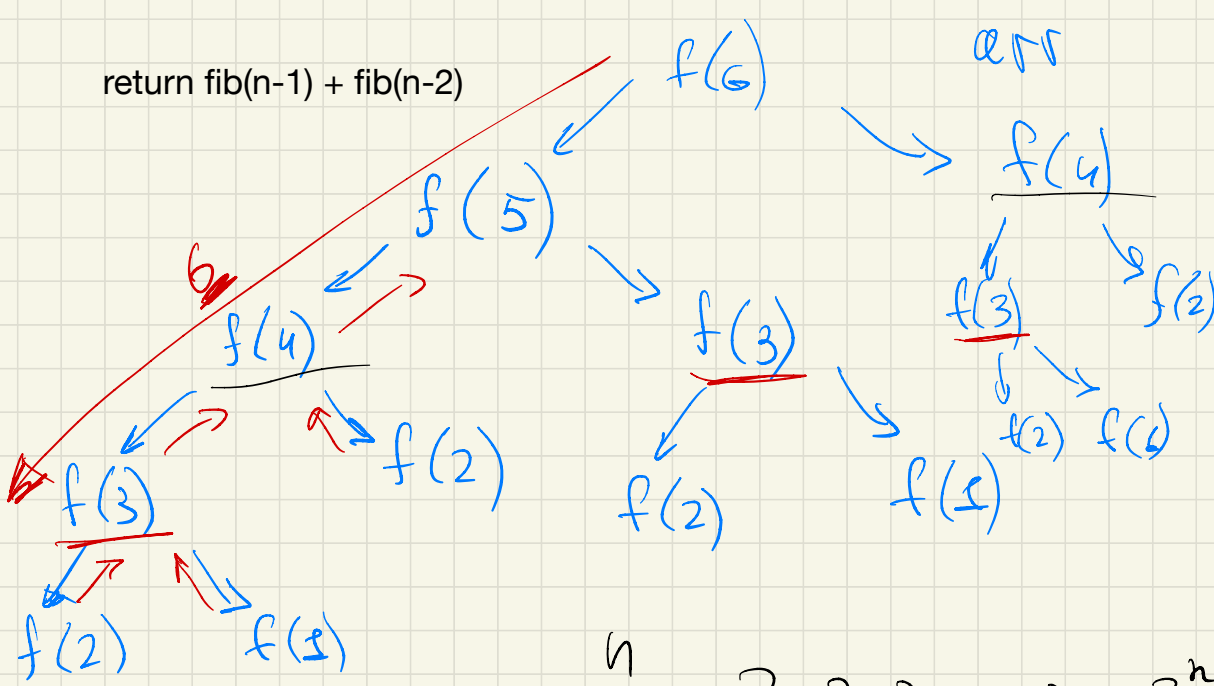
return fib(n-1) + fib(n-2)



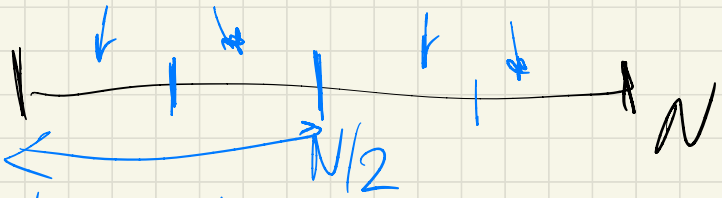
$2^N - n \approx 2^N$

$O(2^N)$

n

$2 \cdot 2 \cdot 2 \cdot \ldots \cdot 2 = 2^n$

n штук



$\frac{N}{4} \to \frac{N}{8} \to \dots \to 1$

$\frac{N}{2^a} = 1$

$N = 2^a \Rightarrow a = \log_2 N$

$2^{3+c} \to N$

$\frac{N}{2^3} = 1$

1. $\log N \to O(\log N)$

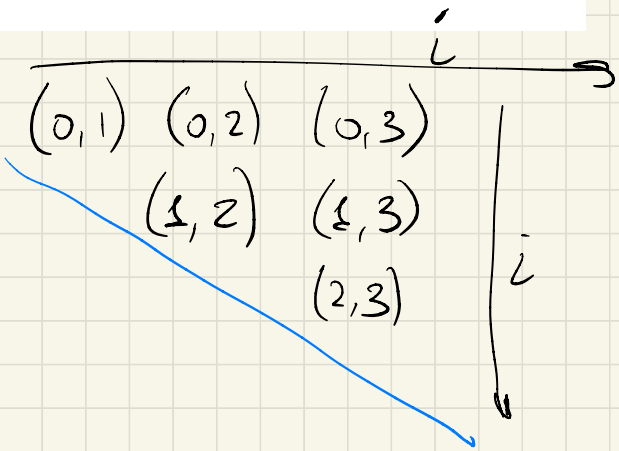
$\log_a b = \frac{\log_c b}{\log_c a}$

$\log_{10} n = \frac{\log_2 n}{\log_2 10}$

$O(\log_2 n) = O(\ln n) = O(\log_{2,013} n)$

$O(\log n)$

```python
def print_unordered_pairs(arr: list):
    for i in range(len(arr)):
        for j in range(i + 1, len(arr)):
            print("({}, {})".format(arr[i], arr[j]))
```



$$\underbrace{(N-1)+(N-2)+(N-3)+\dots+1+0}_{N}$$

$$S = \frac{a_N + a_1}{2} N = \frac{N-1+0}{2} N = \frac{N(N-1)}{2} =$$

$$= \frac{N^2}{2} + \frac{N}{2} \rightarrow O(N)$$