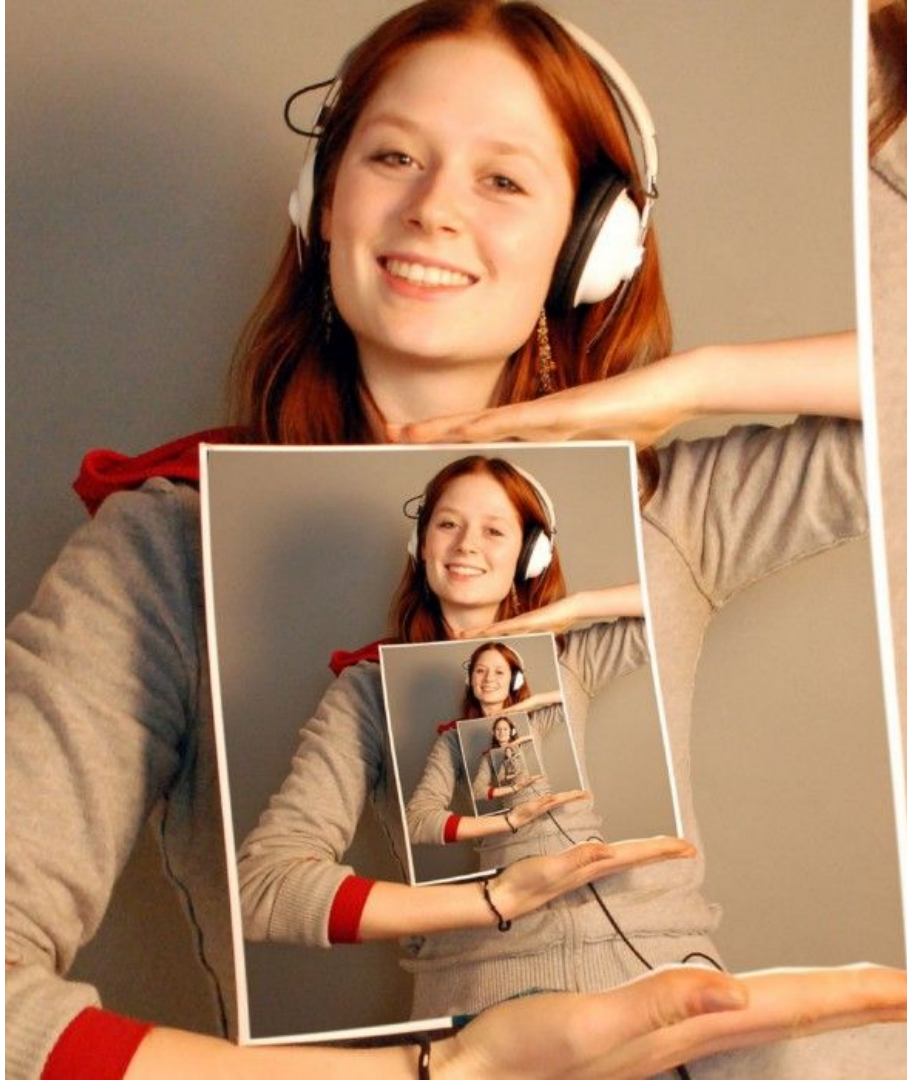
[15-112] Lecture 21



MC3. [2pt] What is the efficiency of the following code? Select the best answer (fill in one circle).

```
def bigOh3(L):
    n = len(L)
    x = y = 0
    while (x < n**2):
        while (y < n**2):
            print("y")
            y += 3
        print("x")
        x += 4
```

- ○ O(1)
- ○ O(N)
- ○ O(N^2)
- ○ O(N^3)
- ○ O(N^4)

Lecture 21: Poll 1
Which option(s) describe how you're feeling about TP season? Choose all that apply.

A. Excited to make something technically cool
B. Nervous that my workload will go up
C. Excited to do something with my creativity
D. Nervous that I won't get as far as I want
E. Excited to see what other students create
F. Nervous that my project won't be as good as others
G. Confident that I can create the idea on my head
H. Nervous about not getting the grade I want
I. No particularly strong feelings at the moment

Lecture 21: Poll 2 (SOLO)
How many times is f(n) called when n=5?

```
def fib(n):
    if (n < 2):
        return 1
    else:
        return fib(n-1) + fib(n-2)
```

A. 5
B. 10
C. 15
D. 30
E. None of the above
F. I don't know

Lecture 21: Poll 2 (GROUP)
How many times is f(n) called when n=5?

```
def fib(n):
    if (n < 2):
        return 1
    else:
        return fib(n-1) + fib(n-2)
```

A. 5
B. 10
C. 15
D. 30
E. None of the above
F. I don't know

fibonacci

5

4 3

3 2 2 1

2 1 0 1 0 1

0 1

$O(1.6180^n)$

5 → 15 complex

Lecture 21: Poll 3 (SOLO)
Which is better?

A.

```
def fib(n):
    if (n < 2):
        return 1
    else:
        return fib(n-1) + fib(n-2)
```

B.

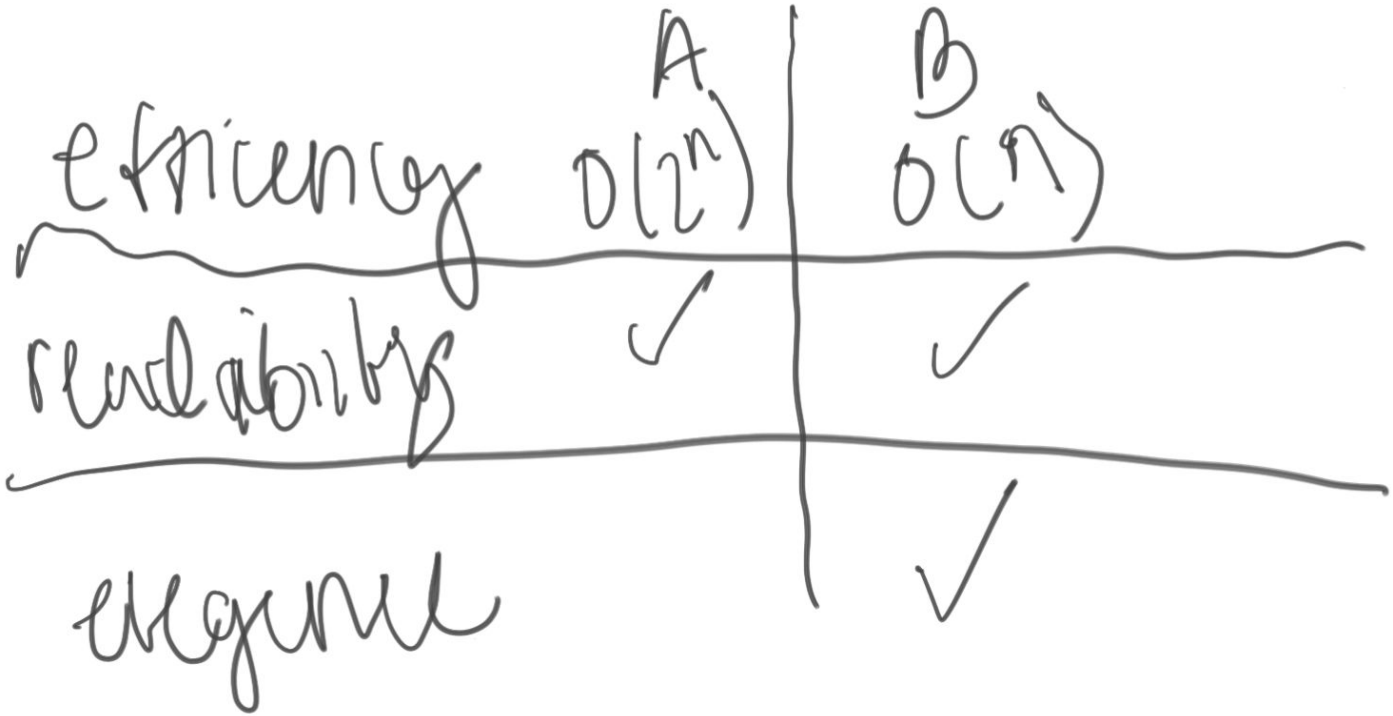
```
def fib(n):
    a,b = 1,1
    for i in range(n):
        a,b = b,a+b
    return a
```

C. Neither

D. Both are equally good

E. I don't know

dimensions of better?



Lecture 21: Poll 3 (GROUP)
Which is better?

A.

```
def fib(n):
    if (n < 2):
        return 1
    else:
        return fib(n-1) + fib(n-2)
```

B.

```
def fib(n):
    a,b = 1,1
    for i in range(n):
        a,b = b,a+b
    return a
```

C. Neither

D. Both are equally good

E. I don't know