

Özyineleme (recursion)

```
void f() {  
    f();  
}
```

Özyineleyen

```
void f2() {  
    while() {  
        ...  
    }  
}
```

iteratif
döngüsel

! faktöriyel

$$5! = 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1$$

$$5 \cdot \underbrace{4 \cdot 3 \cdot 2 \cdot 1}_{4!}$$

$$n=5$$

while
for

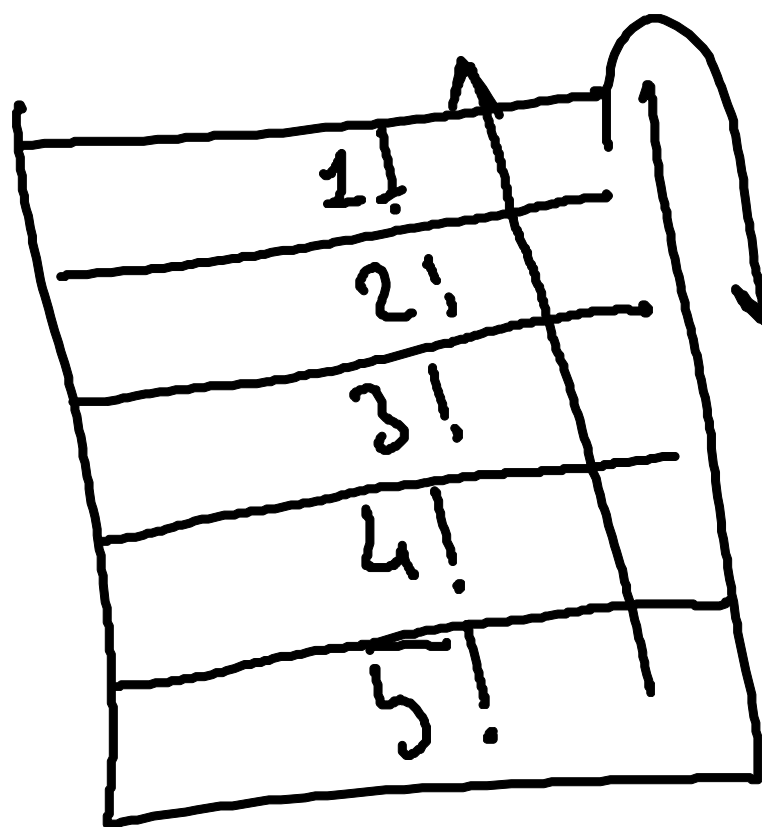
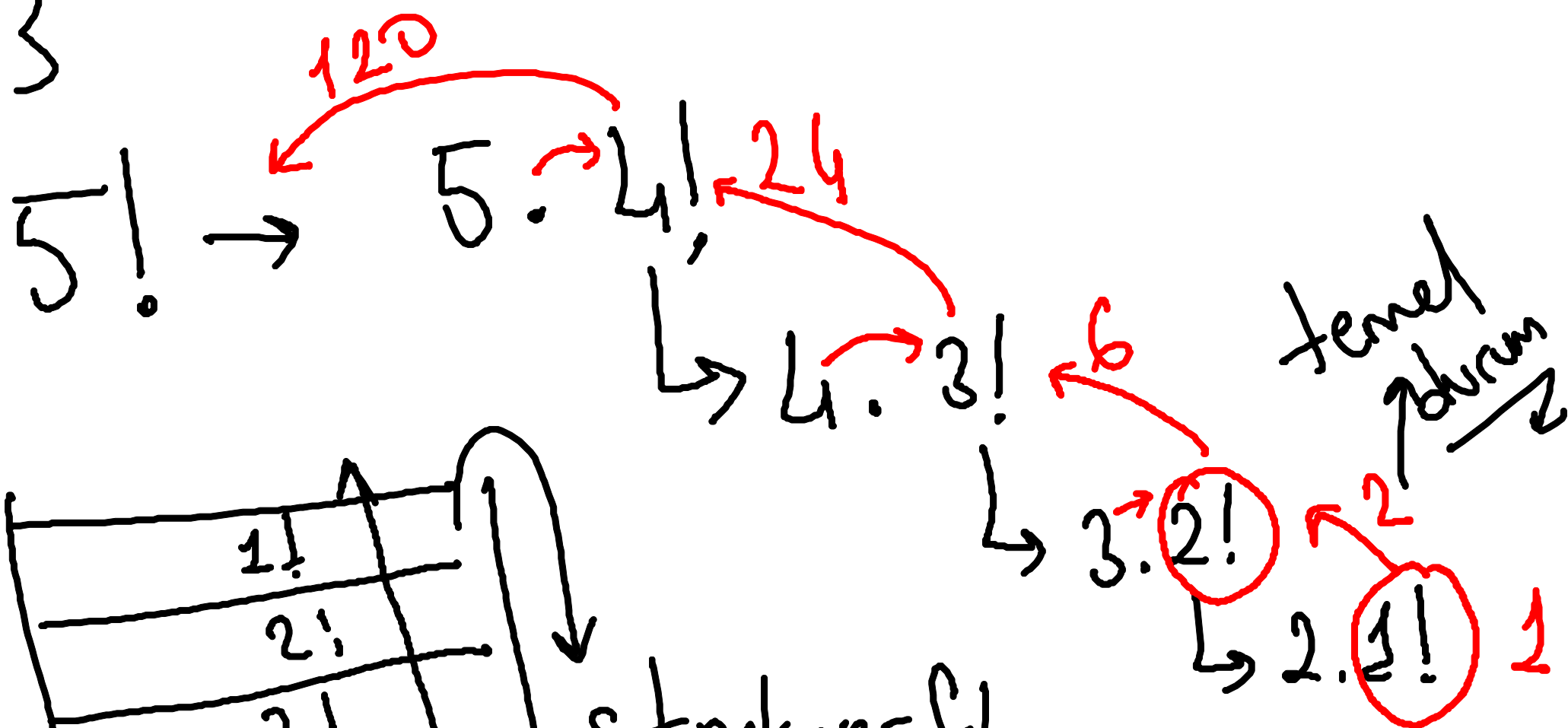
$$4! = 4 \cdot \underbrace{3 \cdot 2 \cdot 1}_{3!}$$

$$n! = n \cdot (n-1)!$$

```
int fact(int n){
```

```
    n * fact(n-1);
```

```
}
```



Stackoverflow

$fact = 1$
 $x = 5$

$fact = 5$ / $fact = 20$ / 60 / 120
 $x = 4$ / $x = 3$ / 2 / 1

Fibonacci

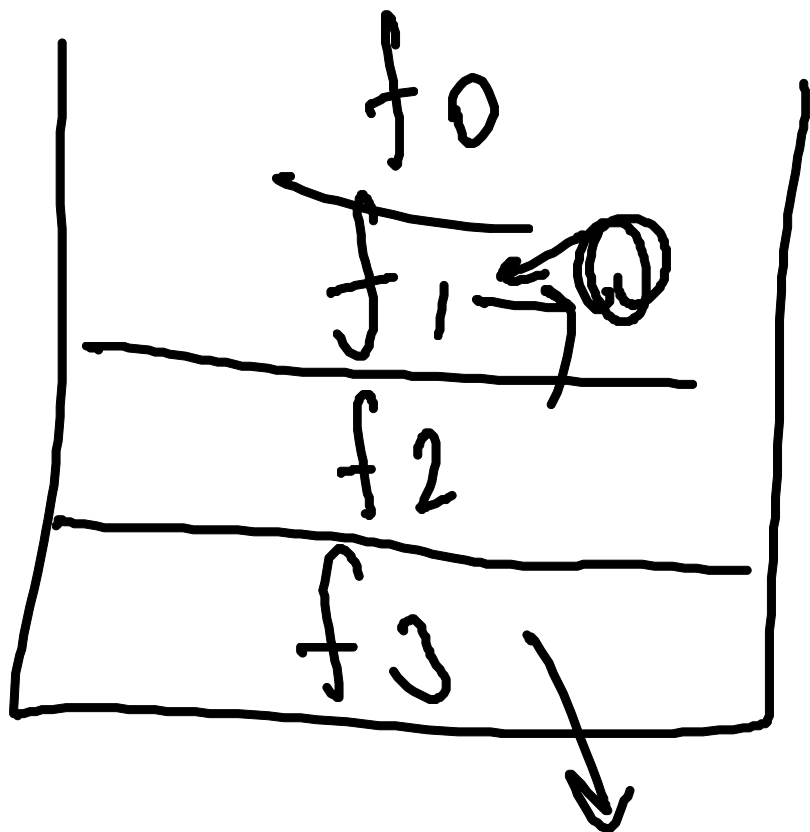
1 2 3 4 5 6
1 1 2 3 5 8 13 ...

fib(x) {

eğer x 1 veya 2 ise
return 1

return fib(x-1) + fib(x-2)
}

fib(3)



dynamic programming