Starts @ 10:15 am.

A CTIVITY:

Guess whose logo is it



Starbucks



Malibu



Atari



Google



CBS



Unilever



Kodak



BiC



beats



You Tube

Constant Operations — includes

f-else condition

- increment/decrement statement
- continue

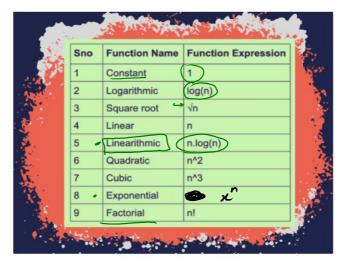
return

Theirs time-complexity is always O(1)

for Ciwi= li ic=N; x++)

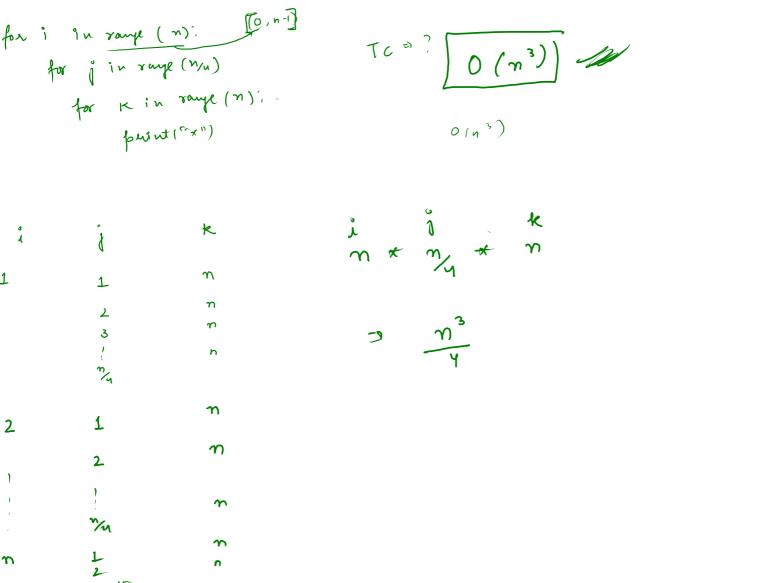
D(N)

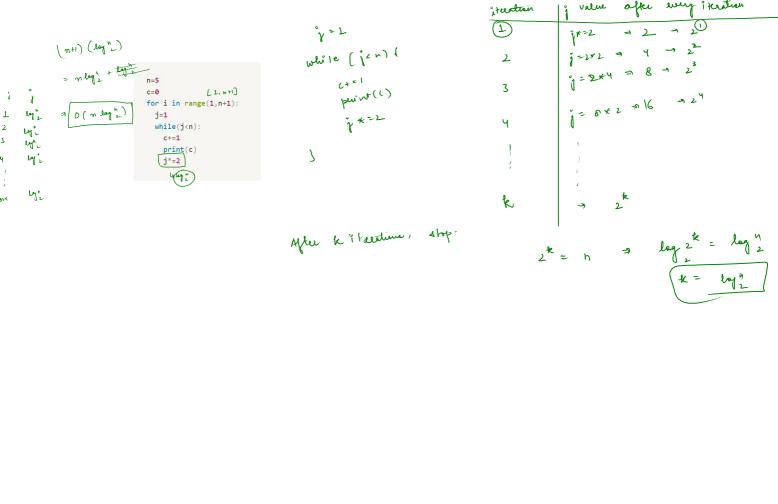
• Time complexities can be represented by any of the mathematical functions we studied in the last class.





10 mine break





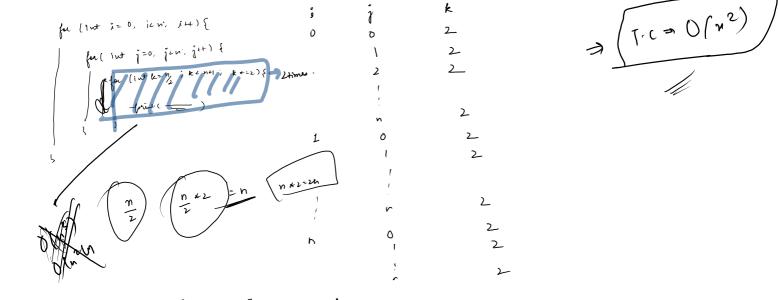
obs:-When 2 loops are independent of each other, for ("uti= 0; ich; i+m (n=2 then take the maximum for i in range(n): ene j=1 while(j<=n): j*=2 for k in range(n): 3 1.1. 0(m2) Υ

```
c=0

for i in range(n):

for j in range(n):
```

for k in range((n/2), n+1, 2): c+=1



り

```
for i in range(n):
    j=1
    while(j<=n):
    j*=2
    for k in range(n):
        print("*")</pre>
```

```
def fun(n):
    count=0
    for i in range(int(n/2),n+1):
        for j in range(1,n+1,2):
            count+=1
    print(count)
```

fun(5)

```
n=5
i=n
x=0
while(i>=1):
    for j in range(1,n+1):
        x+=1
    i=int(i/2)
print(x)
```

Time complexity Problem: Find TC and SC def fun(a,b,c): (1)a q=b 0(1) 0(1) $print(p+q+r) \rightarrow 0(1)$ return a+b+c - p(1) (x) fun(3,4,5) \rightarrow o(1) $print(x) \rightarrow o(1)$

```
count = 0;
for (i = 0; i < N; i++){}
    count++;
j = N;
while(j >= 0){
    count++;
    j--;
```

```
count = 0;
for (i = 0;i<N;i++){
    count++;
}
for (j = 0;j<N;j++){
    count++;</pre>
```

How many times the above code will run?

A N B N² C N(LogN) D Log(N)

```
count = 0;
for (i = 0;i<N;i++){
    for (j = 0;j<N;j++){
        count++;
    }
}
How many times will the above code run?</pre>
```

A N B N² C Log(N) D None Of These