7.7.2020

Soru2

a-) 124

124

b-) $\left(M_1.\left(M_2.M_3.M_4\right)\right)M_5 \longrightarrow \left(M_1.\left(M_2(M_3.M_4)\right)\right)M_5$

Soru3-)

	n=1	n=2	n=4	n=8	n=16
2^{n^2}	2	16	256	65.536	
$n^{3/4}$	$\sqrt[4]{1}$	$\sqrt[4]{2}$	$\sqrt[4]{2^2}$	$\sqrt[4]{2^3}$	
$\sqrt{n}$	$\sqrt{1}$	$\sqrt{2}$	$\sqrt{3}$	$\sqrt{4}$	
1000	1000	1000	1000	1000	
loglogn	0	0	1	1.5	
n!	1	2	24	40.320	
logn	0	1	2	3	
n^2	1	4	16	64	
nlogn	0	1	8	24	
n	1	2	4	8	
2^n	2	4	16	256	

Soru 4)

wh for döngüsü → $(n+1)$ defa 17
$n=16$

39

while $n=8$ $n+1$ 9

while $n=4$ $n+1$ 5

while $n=2$ $n+1$ 3

wh $=$ $n+1$ 2

wh

Soru 5) Master Teorem!

$T(n) = aT\left(\frac{n}{2}\right) + \frac{1}{2}n^2 + n$

$a=1$ $b=2$ $c=\frac{1}{2}$ $d=2$

a b^d

$1 < 2^2$ $\Theta(n^2)$

$O(n^d)$ $a < b^d$

$O(n^d \log n)$ $a = b^d$

$O(n^{\log_b a})$ $a > b^d$

$a \geq 1$
$b \geq 2$
$c > 0$
$d \geq 0$
olmalı

$T(n) = 2T(n/4) + \sqrt{n} + 42$

$a=2$ $b=4$ $c=1$ $d=1/2$

a ? b^d

$2 = 4^{1/2}$

$O(\sqrt{n}\log n)$

$T(n) = 3T(\frac{n}{2}) + \frac{3}{4}n + 1$

$a = 3 \quad b = 2 \quad c = \frac{3}{4} \quad d = 1$

$a ? b^d$

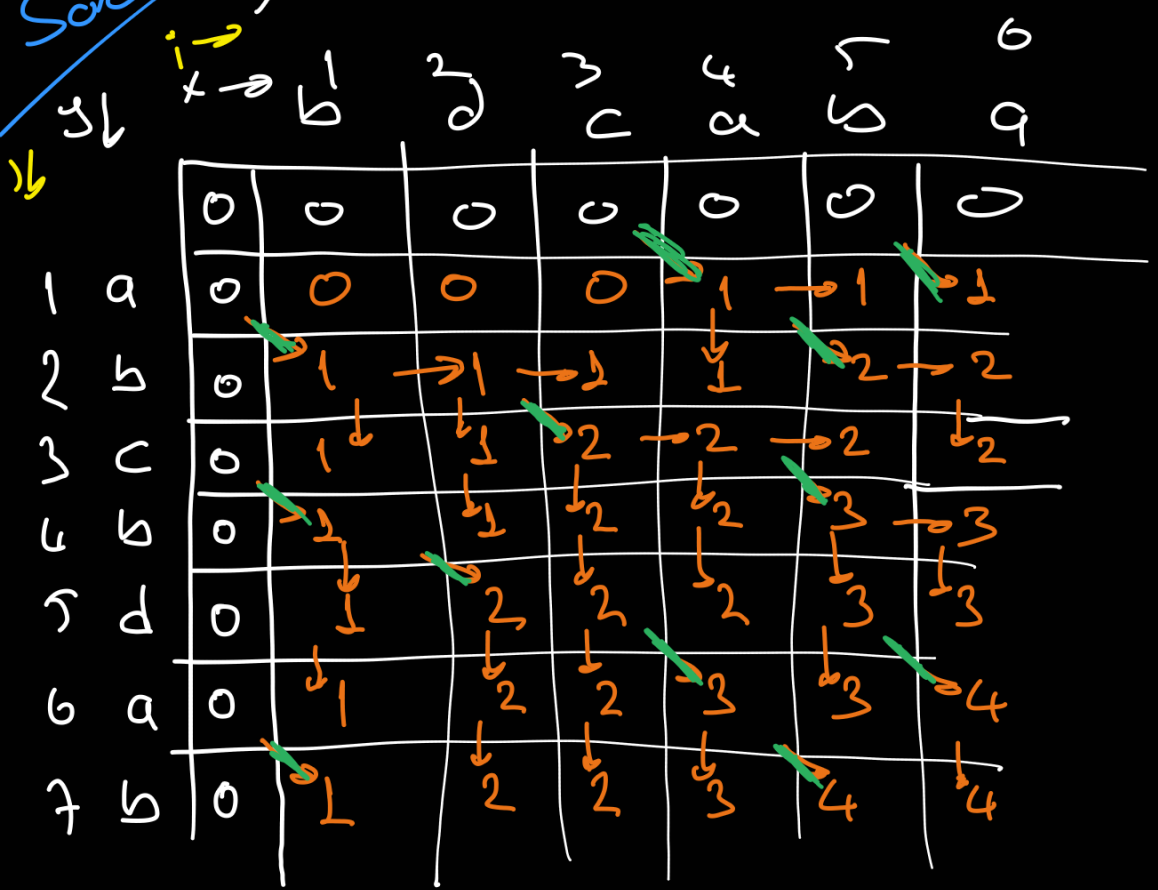
$3 > 2^1$

$O(n^{\log_2 3})$ ///

2016

Soru 3

$x = bdcaba$ $\quad y = abcbdab$



bcba

bdab

2015

$X(i, j) = X(i, k) + X(k+1, j) + p_{i-1} p_k p_j$

Soru 1

M_1	M_2	M_3	M_4	M_5
5x10	10x4	4x6	6x10	10x2

p_0, p_1, p_2, p_3, p_4, p_5

i ↓ \ j →	1	2	3	4	5
5			96 k=3	48 k=4	0
4		480 k=2	240 k=3	0	
3	360 k=1	240 k=2	0		
2	200 k=1	0			
1	0				

1,4 = 1,1 (0) + 2,4 (480) — 0 1 4 (5, 10, 10) = 980

1,2 (200) + 3,4 (240) — 0 2 4 (4) = 640 →

1,3 (360) + 4,4 (0) — 0 3 4 (6) = 660

2,5 = 2,2 + 3,5 — 1 2 5 (10, 4, 2)

2,3 + 4,5 — 1 3 5 (6)

2,4 + 5,5 — 1 4 5 (10)

$M(1,3) = (1,1) + (2,3) + P_0 P_2 P_3 = 360$ ✓
$(1,2) + (3,3) + P_0 P_1 P_3 = 500$

$M(2,4) = (2,2) + (3,4) \quad P_1 P_2 P_4 = 480$ ✓
$(2,3) \quad (4,4) \quad P_1 P_3 P_4 = 640$

$M(3,5) = (3,3) \quad (4,5) \quad P_2 P_3 P_5 = 96$ ✓
$(3,4) \quad (5,5) \quad P_2 P_4 P_5 = 320$

$M(1,2) = M(1,2) = (1,1) + (2,2) + P_0 P_1 P_2 = 200$

$M(2,3) = (2,2) + (3,3) + P_1 P_2 P_3 = 240$

$M(3,4) = (3,3) + (4,4) = P_2 P_3 P_4 = 240$

$M(4,5) = 44 + 55 = P_3 P_4 P_5 = 48$