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)

w	for	döngüsü n=16	→ (n+1) defa	17
while	n=8		n+1	9
while	n=4		n+1	7
wh	n=2		n+1	3
wh	=		n+	2

39

Soru 5)

Master Teorem!

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

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

$a \quad b^d$

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

$\Theta(n^d) \quad a < b^d$

$\Theta(n^d \log n) \quad a = b^d$

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

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

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

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

$a \; ? \; b^d$

$2 = 4^{1/2}$

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

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

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

$a ? b^d$

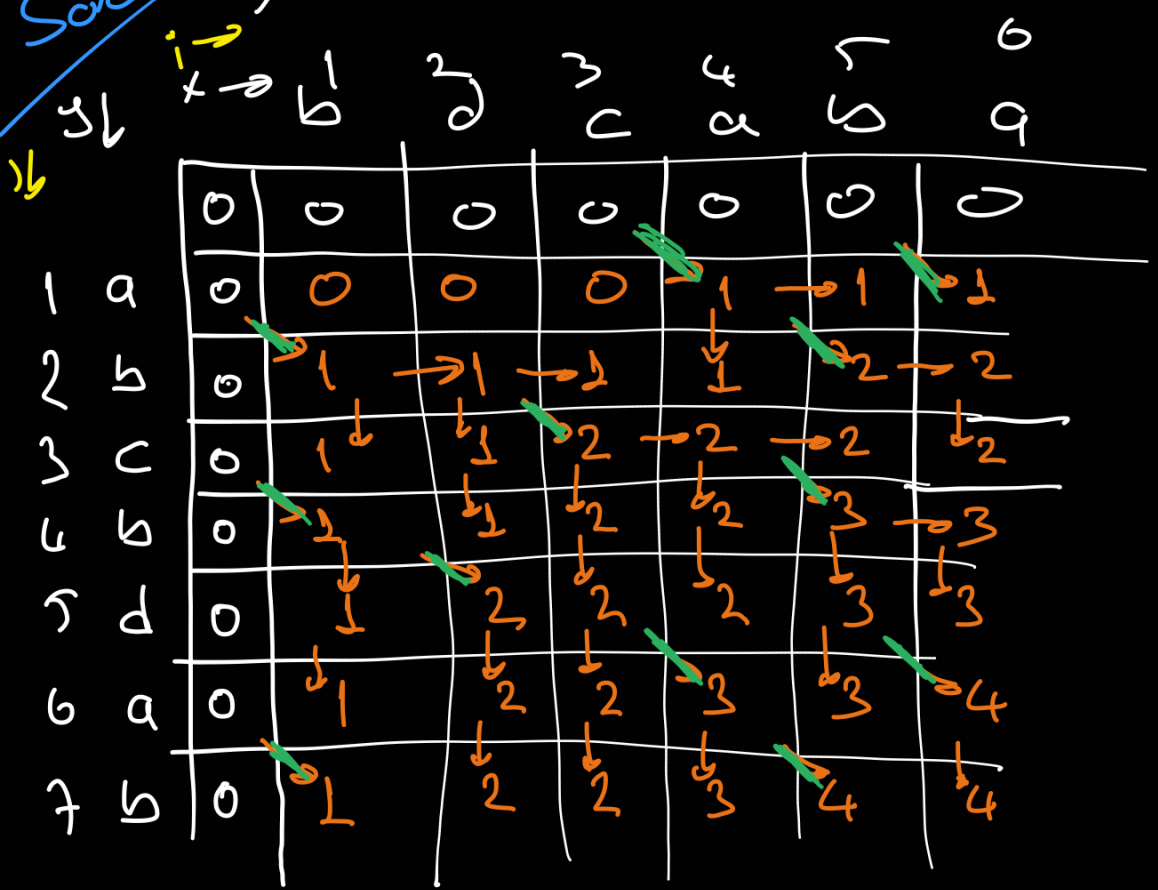
$3 > 2^1$

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

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 (6) 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)

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

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

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

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

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

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

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