

(2) Finding the Sum of matrices MXM 3 x 3 for (i=0; i<n; i++) → n+1 far (j=0; j<m; j++) -> m x (m+1) $c[i,j] = A[i,j] + B[i,j], \rightarrow n \times n$ unts inside the fee loop executes 'n' time. Space function is $3n^2 + 3$

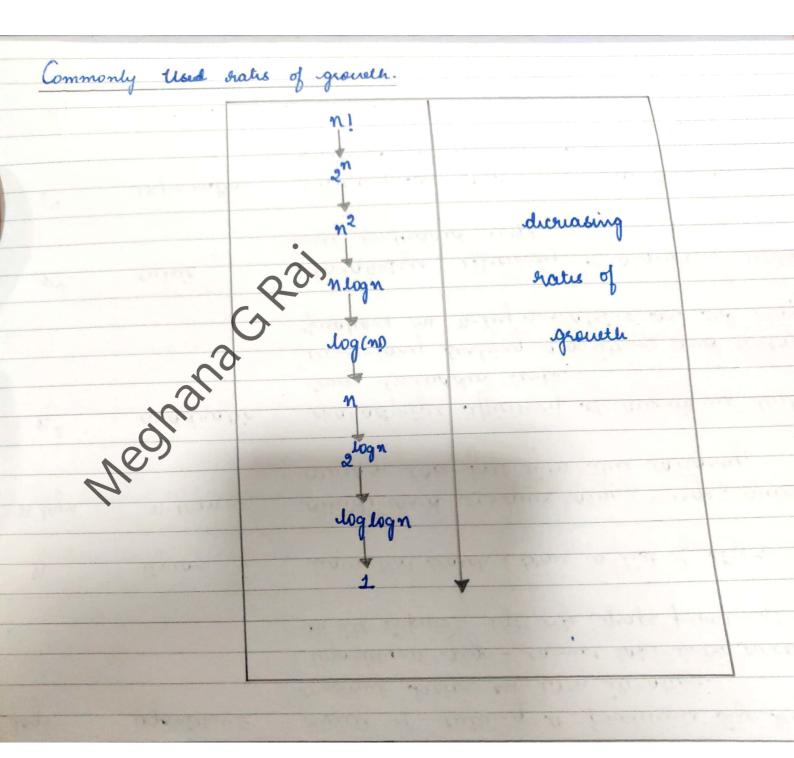
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multiplication of two matrices
                     algorithm multiply (A, B, n)

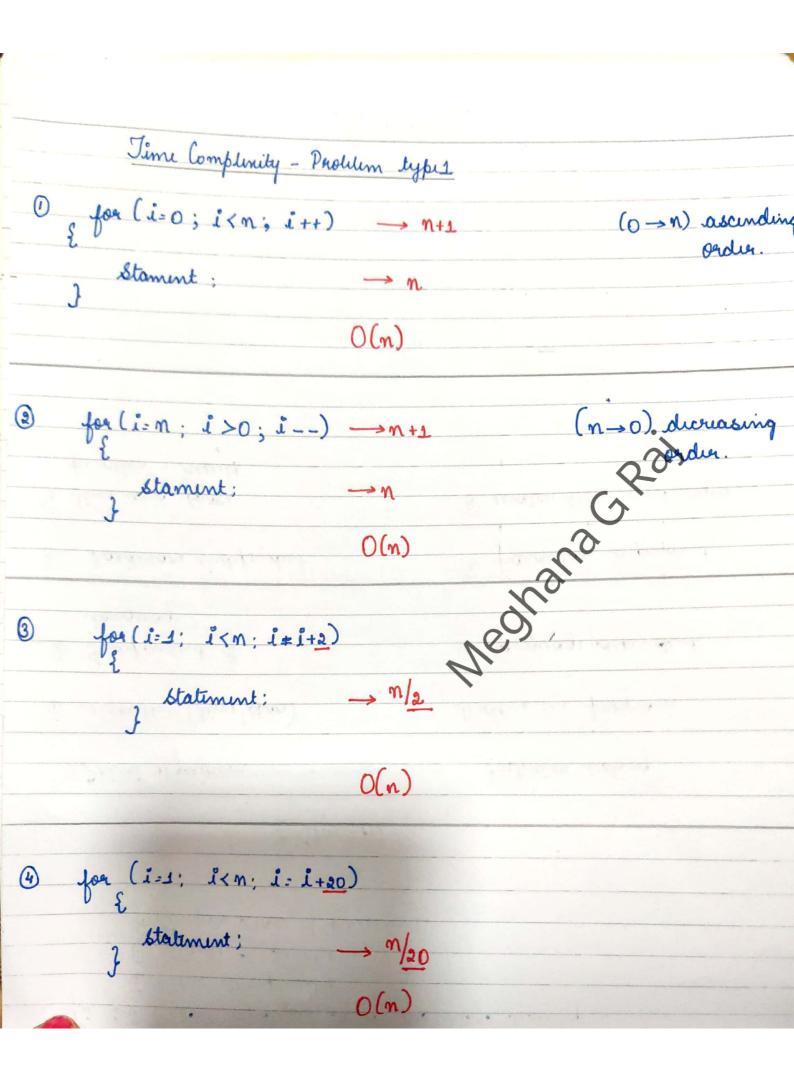
\begin{cases}
for(i=0; i < n; i+1) \longrightarrow m+1 & (m+1) \\
for(j=0; j < n; j+1) \longrightarrow m \times m+1 & (m^2+m)
\end{cases}

                                    C[i,j]=0; \rightarrow n * n (n^2)
for (k=0; k < n; k++) \rightarrow n * n * n+1 (n^3 + n^2)

C[i,j]= C[i,j] + A[i,k] * B[k,j]; \rightarrow n * n * n (n^3)
       Space
                                                                          Scalar
                                                   O(n3)
                                                  O (n2)
```

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4 transpose of matrix.
            { for (i=0; i<n; i++)
             for (j= i+1; j<n; j++)
            swap (a[i][j], a[j][i]); → n x n = n²
numburs)
    j=1;
nehule (j<=n)
                                     W2 + W
                          n (m+1)
    1=1+1;
                                      M
                                f (m)= 3m2+4m+3
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for (i=0; i <n; <="" i++)="" n+1="" p="" →=""></n;>			
$ \begin{cases} \log (j=0; j \leq n; j+t) & \longrightarrow n (n+1) \end{cases} $		اه	
$\frac{1}{J}$ stmt; $\rightarrow n \times n$		50)	
) (m2)	No		- 10
CO CO		tracin	NO of times.
6 for (i=0; i <n; i++)<="" td=""><td>i 0</td><td>0</td><td>O</td></n;>	i 0	0	O
for(j=0; j < i; j++) = 0 < 1 < 1 < 1 < 1 < 1 < 1 < 1 < 1 < 1 <	1	1×-	>(lunale)
Stmt;	2	0	2
J.		2×-	> (duah)
	3	0	3
total = $0+1+2+\cdots+m = \frac{n(n+1)}{2} \frac{n^2+n}{2}$	3,43	2	
		· 3×	+ (huak
(n2)	L M	1	1

for (i=0; i < n; i++)	0(m)
for (i=0; i×n;i=i+2)	$O(n) = O(n) \qquad \frac{n}{200} = O(n)$
for (1:0) (duniminting)	
for (i=n; i>1; i)	20
for (i= 1; 1 < m; 1=1+2)	O(dogn) O
for (i=1; i <n; i="i*3)</th"><th>0.(0.92)</th></n;>	0.(0.92)
	13
for (i=n; l>1; i=i a)	O(logn)