3	Mathematically derive the average runtime Comparity of the
	non- random pivot version of quicksort.
Solo-	$T(n) = n + \frac{1}{2} \left(T(i) + T(n-i-1)\right)$
	$T(n) = n + \frac{1}{2} \leq (T(i) + T(n-i-1))$
	1=0
	T(n) = Average time Complexity for array Size o
A CAN SAN	March At and Atlanta
	Solve the above relation,
	$T(n) = n + \frac{2}{n} \stackrel{n-1}{\leq} T(i)$
	The state of the s
11111	divide T(i) in terms of n and i
	$T(n) = n + \frac{2}{n} \stackrel{n}{\underset{i=1}{\sum}} (i + T(i))$
37	1=0
No. le	$T(n) = n + \frac{2}{2} + 2$
- 200	7() 2 1(2-1) 2 (1-1)
	$T(n) = n + \frac{2}{n} \times \frac{n(n-1)}{2} + \frac{2}{2} \le \frac{n-1}{2} + \frac{2}{2} \le \frac{n-1}{2}$
	$T(n) = 2nn + n - 1 + \frac{2}{n} \stackrel{n}{\leq} T(i)$
	1=0
	$T(n) = 2n - 1 + \frac{2}{n} \leq T(i)$
	170
	Hence the average time completely for the above examplian
	is O(nlogn).
	The same and the s
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