

DAA Lab Internal Set 1

- 1) A 2D array of size $N \times N$ will have one column say i th column with all 1s and i th row will have all 0s except i th element. Remaining elements will be randomly filled with 0s and 1s. You are allowed to search for $A[i, i]$ element in an array. Determine the position ' i ' with least number of searches. Write the best case and worst case of your algorithm.

2) Example:-

$$\begin{bmatrix} 1 & 0 & 1 & 0 \\ 0 & 1 & 1 & 1 \\ 0 & 0 & 1 & 0 \\ 1 & 1 & 1 & 0 \end{bmatrix} \quad n=4$$

~~$i=2$~~ $i=3$

20) Given a set of 'n' houses, and their cost to be painted in red, green and blue colours, determine the least cost way of painting all the houses such that no two adjacent houses are in the same colour.

say, $n = 5$

Ans.	1	2	3	4	5
red	4	8	3	5	6
green	7	3	4	6	2
blue	2	5	4	3	5

30) Given a few denominations of currency notes, determine the ~~no.~~ min. no. of notes required to draw the given amount.

Q: ~~denominations 500, 200~~

denominations; - 50, 10, 5, 500, 100, 200

Ans = 650

Ans 500 - One note } use greedy
 100 - one note } method.
 50 - one note }