# Accenture Coding Round Practice Problems

Part-2

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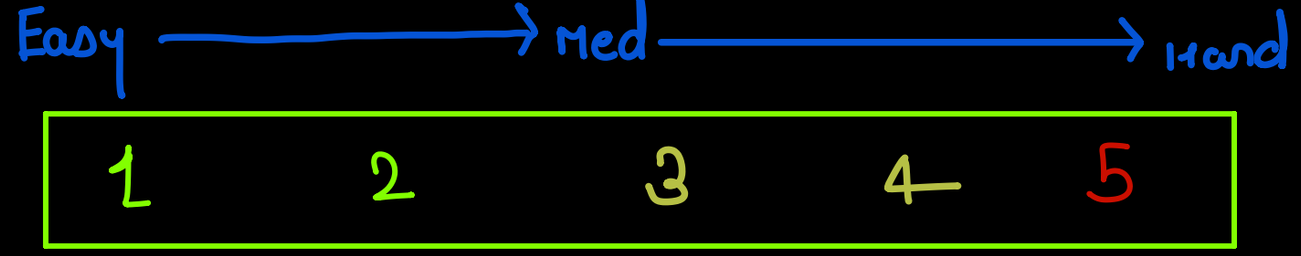
## Instructions :-

- Program should take input from standard input and print output to standard output.
- Your code is judged by an automated system, do not write any additional welcome/greeting messages.

"Save and Test" only checks for basic test cases, more rigorous cases will be used to judge your code while scoring.

- Additional score will be given for writing optimized code both in terms of memory and execution time

⇒ Level Rating



(L-4)

## Prob-1 (sept 2023)

(Pick, Not Pick)

- You are given an array of size N, you have to find the length of longest subsequence, In which the difference of every consecutive element is divisible by k.

Input -> First line having 2 integer N, K (N is size of array)
Next line contain N integers representing array.

o/p -> single Integer. (length of longest subsequence with diff. k)

ex

I/p  N = 3, K = 3  arr = [1, 1, 2]

O/p = 2

I/p: N = 2, K = 2  arr = [2, 4]

O/p = 2

ex  [ 1, 1, 2 ]  temp = [ ]

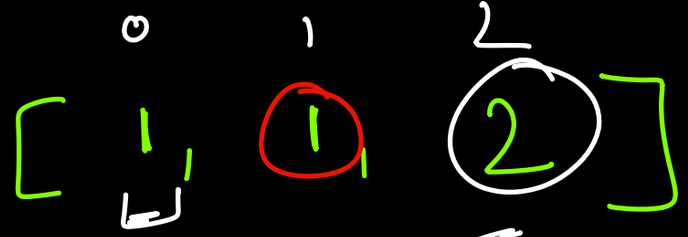
condition for Pick

① if temp.size() == 0  ✓ Pick

idx ② if ( abs ( tmp[tmp.size()-1] - arr[idx] ) % K == 0 )

( Pick ) ✓

ex

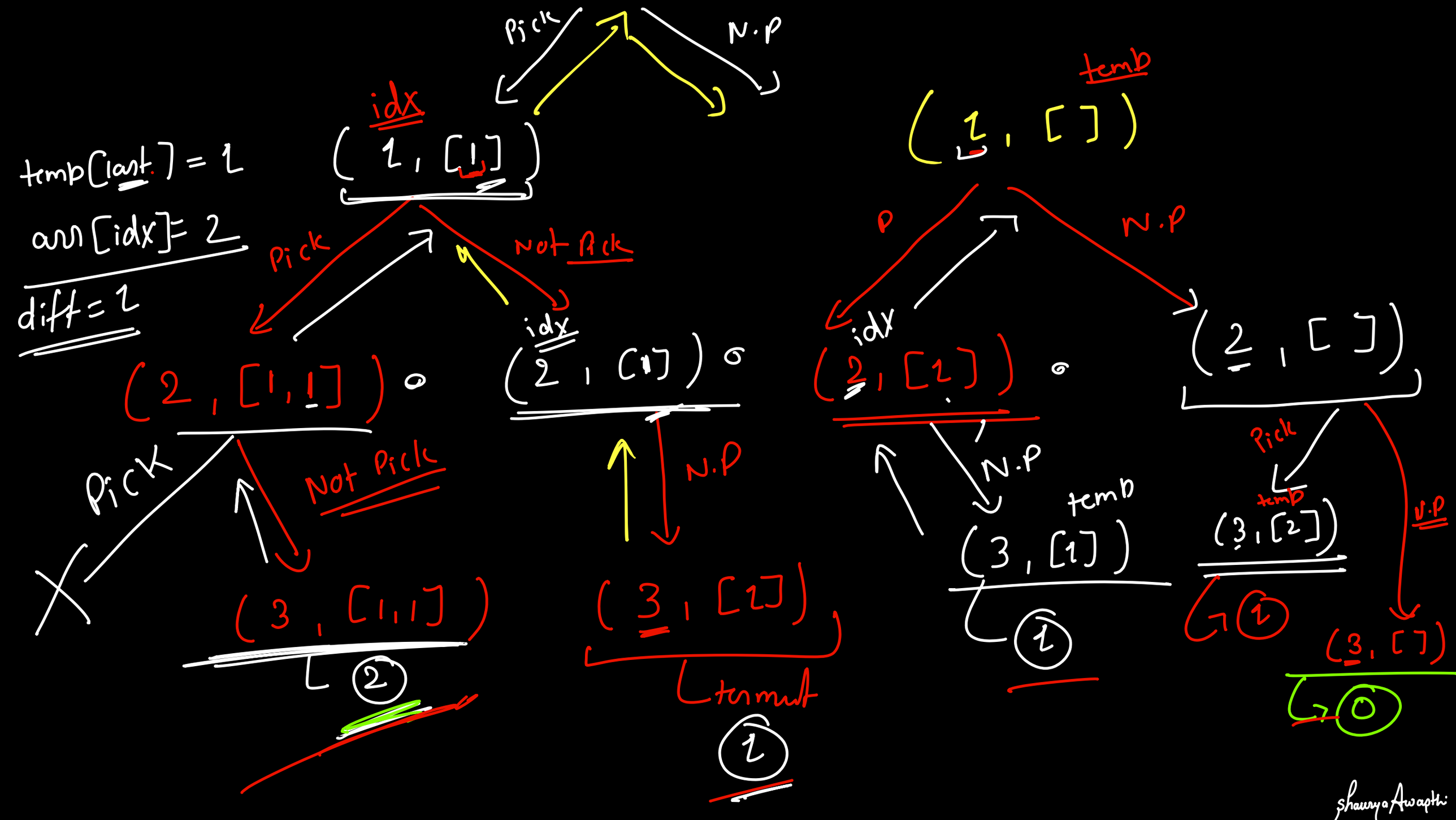



K = 3

idx tmp

( 0 , [ ] )

— Ans = 2


temp[last] = 1
arr[idx] = 2
diff = 1
Pick
N.P
idx
(1, [1])
Pick
Not Pick
(2, [1,1]) ∘
idx
(2, [1]) ∘
Pick
Not Pick
N.P
(3, [1,1])
2
(3, [2])
terminal
1
temp
(1, [])
P
N.P
idx
(2, [2]) ∘
(2, [])
N.P
temp
(3, [1])
1
Pick
temp
(3, [2])
1
N.P
(3, [])
0
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PYQ - Sept 23

# Prob - 8

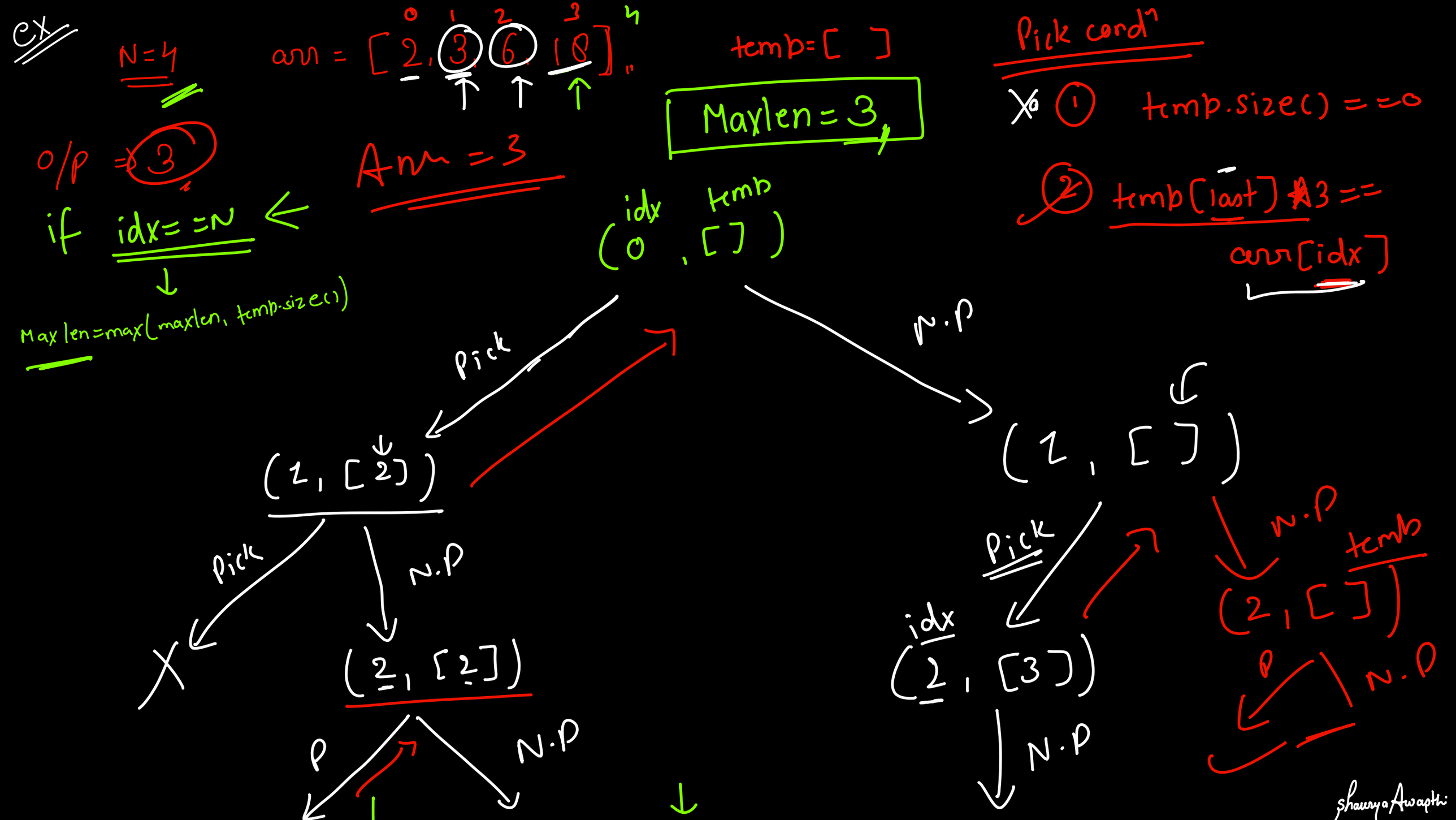
## Triple Subsequence

Pick, Not Pick

- You are given an array of size N, you have to find the length of longest subsequence, such that each element in subsequence is triple of previous.

Input -> First line having Single Integer N ( N is size of array )
Next line contain N integers representing array.

o/p -> single Integer. ( length of longest Triple sequence. )


ex
N=4
arr = [2, 3, 6, 8]
0 1 2 3
temp=[ ]
Maxlen=3
Pick cond^n
① temp.size() == 0
② temp[last] != arr[idx]
o/p = 3
Ans = 3
if idx == N
Maxlen=max(maxlen, temp.size())
idx temp
(0 , [ ])
Pick
N.P
(1, [2])
Pick
N.P
X
(2, [2])
P
N.P
(2, [ ])
Pick
idx
(2, [3])
N.P
(2, [ ])
N.P
temp
P
N.P
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